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Work Absences Due to Injury or Illness and Employee Retention in the Child Care Services Industry Before the COVID-19 Pandemic

by René Morissette and Hanqing Qiu

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Abstract

Despite evidence showing that early childhood educators and assistants (ECEAs) are at risk of contracting infectious or non-infectious diseases or suffering physical injuries, no Canadian study has investigated the degree to which:

- a) ECEAs incur work absences due to injury or illness in a given year
- b) such absences are associated with an increased likelihood of leaving the child care sector during that year or subsequent years.

This study fills this information gap. Using Statistics Canada's Longitudinal Worker File (LWF) and the 2016 Census of Population, the study quantifies the degree to which ECEAs employed in the child care services industry in 2016 left that sector after experiencing work absences due to injury or illness.

The study shows that about 8% of women employed as ECEAs in the child care services industry had work absences due to injury or illness in 2016. Having such absences in a given year was associated with a greater likelihood of leaving the child care sector during that year and subsequent years. At most 14% of ECEAs who were ill or injured in 2016 left the child care sector that year. Combined with the fact that work absences due to injury or illness are relatively infrequent, this finding has important implications. It suggests that efforts to reduce injury- or illness-related work absences or to eliminate them entirely may reduce, on an annual basis, employees' departures from the child care sector by at most 1.1 percentage point from a baseline departure rate of 11%. This finding in turn suggests that strategies to increase overall employee retention in this sector will likely have to rely on a broader set of tools than those aimed solely at reducing work absences due to injury or illness.

Lastly, the study shows—using the Labour Force Survey—that the COVID-19 pandemic increased the full-week work absences of ECEAs due to illness or disability by about 2 percentage points in 2020/2021, from a long-term average of 2.2%.

1 Introduction

Early learning and child care (ELCC) delivery is primarily under provincial and territorial jurisdiction. Provinces and territories design, fund and manage ELCC programs for their residents. Acknowledging the importance of ELCC for families and the economy, the Government of Canada has been making significant investments in this area since 2017.

In recognition of their shared commitment to increasing access to high-quality, affordable, flexible and inclusive ELCC for children in Canada, federal, provincial and territorial governments signed the Multilateral Early Learning and Child Care Framework in 2017, with the exception of Quebec, which supports the principles of the framework but intends to preserve its sole responsibility within its territory.¹ A complementary distinctions-based Indigenous Early Learning and Child Care Framework was co-developed with Indigenous peoples and released in 2018, which supports a vision for happy and safe Indigenous children and families; strong cultural identity; and a comprehensive and coordinated system that is anchored in self-determination, centred on children and grounded in culture.

The 2020 Fall Economic Statement (FES) laid the groundwork for an accessible, affordable, inclusive and high-quality Canada-wide ELCC system by making Budget 2017 investments in ELCC permanent and ongoing, at 2027/2028 levels, starting in 2028/2029. The 2020 FES also included investments of \$420 million in 2021/2022 for provincial and territorial initiatives to improve the recruitment and retention of early childhood educators to increase the trained and skilled workforce needed to support a Canada-wide ELCC system.

In its Budget 2021, the federal government laid out its plan for a Canada-wide ELCC system, with the goal “to provide Canadian parents with, on average, \$10-a-day regulated child care spaces for children under six years old, within the next five years, including a 50 per cent reduction in average fees for regulated child care by the end of 2022”.²

The Canada-wide ELCC system builds on the five principles of the Multilateral Early Learning and Child Care Framework: affordability, accessibility, inclusivity, flexibility and quality. The federal government is working with provincial, territorial and Indigenous partners to build the Canada-wide ELCC system.

Providing high-quality child care requires, among other things, hiring and retaining well-educated child care workers. This task can be challenging in the current Canadian labour market, where job vacancies have reached record levels in recent quarters.³ Furthermore, as of September 2022, Canada’s Labour Force Survey (LFS) estimated that the employment level among early childhood educators and assistants (ECEAs) in Canada was more than 11% below pre-COVID-19 pandemic levels, with over 29,000 fewer people, mostly women, working in this occupation. At the same time, Canada’s overall employment levels surpassed pre-pandemic levels (+2.1%), suggesting that many of these workers may have moved to different occupations in the last two years.

While several factors, such as competitive wages and benefits, adequate facilities, appropriate child–educator ratios, promotion opportunities, and adequate training of co-workers, predict the retention of child care workers (Totenhagen et al. 2016), other factors may induce these workers

1. <https://www.canada.ca/en/employment-social-development/programs/early-learning-child-care/reports/2017-multilateral-framework.html>

2. <https://www.canada.ca/en/department-finance/news/2021/12/a-canada-wide-early-learning-and-child-care-plan.html>

3. Statistics Canada’s Job Vacancy and Wage Survey estimates that the overall number of job vacancies increased from 581,785 in the second quarter of 2019 to 1,031,955 in the second quarter of 2022. The corresponding estimates for early childhood educators and assistants equal 5,060 and 12,795, respectively (Statistics Canada, Table 14-10-0328-01).

to leave the child care sector. Work absences caused by injuries or illnesses are likely one of these factors. Injuries or illnesses may oblige some employees to leave the labour market altogether (for health reasons) and may lead other employees to move to sectors where jobs' tasks, pay and working conditions better match their preferences. For example, ECEAs who recently suffered a back injury may choose to leave the child care sector for jobs that do not involve any lifting.

When interacting with children, ECEAs are at risk of contracting infectious or non-infectious diseases or suffering physical injuries such as lower back injuries (Gratz and Claffey 1996; Bright and Calabro 1999; McGrath and Huntington 2007; Randall et al. 2022). Excessive workload or difficult working conditions may lead them to experience burnout (Goelman and Guo 1998). All these scenarios increase the likelihood of ECEAs being absent because of illnesses or injuries and subsequently leaving the child care sector. Despite this evidence, no Canadian research has investigated the degree to which:

- a) ECEAs employed in the child care services industry incur work absences due to injury or illness in a given year
- b) such absences are associated with an increased likelihood of leaving the child care sector during that year or subsequent years.

This study fills this information gap. Using Statistics Canada's Longitudinal Worker File (LWF) and the 2016 Census of Population—both of which predate the COVID-19 pandemic and the Canada-wide ELCC investments mentioned above—the study quantifies the degree to which ECEAs employed in the child care services industry in 2016 left that sector after experiencing work absences due to injury or illness.⁴ Using data from the LFS, the study documents the evolution of these work absences from 2000 to 2022, a period that includes the onset of the COVID-19 pandemic. By providing such information, the study may inform discussions about strategies to foster the retention of a high-quality workforce in the child care sector.

2 Previous studies

Several studies show that child care workers are at risk of contracting infectious or non-infectious diseases or experiencing physical injuries or burnout (Brown and Goodwin Gerberich 1993; Gratz and Claffey 1996; Goelman and Guo 1998; Bright and Calabro 1999; McGrath and Huntington 2007; Randall et al. 2022) but do not investigate the degree to which injuries or illnesses increase the likelihood of child care workers leaving the child care sector.

Other studies document a positive association between a poor safety climate or workplace injuries and illnesses, on the one hand, and the **intention** to leave one's job, on the other hand. This positive association is found among health care workers (McCaughey et al. 2013; McGhan et al. 2020), home health workers (McCaughey et al. 2012; Lee and Jang 2016; Jang et al. 2016; McCaughey et al. 2017) and a national sample of U.S. workers (Smith 2018). Doherty and Forer (2005) assemble Canadian survey data on child care workers and find that "... indicators of burnout predict an individual's intent to leave the (child care) centre, the proportion of staff in a centre intending to leave, and an individual who intends to leave the field altogether." Taken together, these studies suggest that work absences caused by injuries and illnesses may be

4. In this study, the child care services industry refers to industry group 6244 in the 2012 North American Industry Classification System.

associated with a greater likelihood of child care workers **actually** leaving the child care sector subsequently.⁵

To the best of the authors' knowledge, no Canadian study has documented the prevalence of work absences caused by injuries or illnesses among child care workers or has investigated the degree to which such absences are associated with an increased likelihood of leaving the child care sector in the current year or in subsequent years. This study fills this gap using the following datasets.

3 Data, samples and concepts

3.1 Data

The study uses Statistics Canada's LWF and the linked LWF–2016 Census to examine work absences and employee retention in the child care services industry **before the COVID-19 pandemic**. Because the LWF currently ends in 2019, it cannot assess the impact of the COVID-19 pandemic on work absences due to injury or illness. To examine this issue, the study uses the LFS—a monthly survey of the Canadian labour market—and shows how the work absences of ECEAs due to illness or disability evolved from 2000 to the first nine months of 2022.

The LWF is a longitudinal administrative dataset that currently tracks all Canadian employees from 1989 to 2019. It has information on several variables, such as workers' age, sex, province of residence, union status, industry of employment, coverage by a registered pension plan or deferred profit sharing plan (measured by an indicator of positive pension adjustment on individuals' income tax records), annual wages and salaries, annual workers' compensation (WC) benefits, and annual income from Canada Pension Plan (CPP) or Quebec Pension Plan (QPP) disability benefits. It also gathers information from the Record of Employment (ROE) file. The ROE provides job-level information on employees' earnings interruptions that occur because of injury, illness, layoffs, quits, retirement, maternity leave, return to school, leave for compassionate care or other reasons.⁶ As shown below, the study uses information on workers' receipt of ROEs due to injury or illness, on their receipt of WC benefits, and on their receipt of CPP or QPP disability benefits to define work absences due to injury or illness.

In general, the LWF can distinguish whether a person leaves her employer temporarily or permanently after an earnings interruption.⁷ However, the ability to make this distinction is more limited in the public sector than in the private sector, because when public sector organizations report to tax authorities, some group several operational units together while others report separately for each operational unit. For example, hospitals in one province report separately to tax authorities, while hospitals in other provinces are grouped by health region for such reporting. As a result, a public sector "firm" or "organization" in the LWF may in some cases refer to separate operational units, whereas it may refer to a group of operational units in other cases. It is impossible to distinguish the former cases from the latter. The same issue is likely to arise for child care centres and may affect interprovincial comparisons of worker turnover among child care workers. In sum, the LWF is well-suited for analyzing the degree to which child care workers leave

5. Other studies—reviewed by Totenhagen et al. (2016)—investigate the association between numerous factors (e.g., wages and benefits, job satisfaction, demographics, and alternative employment opportunities) and the retention of child care workers but do not explicitly consider the impact of injuries or illnesses on employee retention.

6. The ROE is the form—whether electronic or paper—that employers complete for employees receiving insurable earnings who stop working and experience an interruption of earnings.

7. An earnings interruption is deemed to be **permanent** when the employee leaves a firm in year t and goes back to the firm neither that year nor the following year—otherwise it is deemed to be **temporary**. In this study, earnings interruptions because of injury or illness include both types.

the child care sector but not the degree to which they leave specific child care centres. For this reason, the study analyzes the first outcome but not the second.

The LWF has no information on workers' education, occupation, population group, full-time status and **weekly** wages. To overcome this limitation, the study integrates the LWF with records from the 2016 Census of Population. This linkage allows the construction of a detailed profile of individuals employed as child care workers in 2016. Because the 2016 Census has information on the aforementioned variables for about 25% of the population, the resulting number of observations is smaller than that obtained from the LWF. The study uses this linked LWF–2016 Census dataset to examine in detail which child care workers tend to experience injuries or illnesses, and leave the child care sector in the year they experience such injuries or illnesses.

Since census data are not available on an annual basis, the linked LWF–2016 Census dataset cannot be used to conduct a **survival analysis** of the likelihood of leaving the child care sector after entering the child care services industry. To perform this task, the study uses the LWF.

3.2 Samples

The study focuses on women who are **employees** in the **child care services industry**, identified by code 6244 in the 2012 North American Industry Classification System (NAICS). Most of these women likely work in day care centres (Guevremont 2021). Child care workers who are self-employed or who work in elementary and secondary schools (NAICS 6111) or in private households (NAICS 8141) are excluded from all samples.⁸ The following considerations motivate this choice.

Child care workers can be defined in various ways. One possibility is to focus on individuals employed as **ECEAs** or **home child care providers** (identified by codes 4214 and 4411, respectively, in the 2016 National Occupational Classification), as Choi (2022) does. This definition requires having data on occupations, a requirement that the LWF does not satisfy.

An alternative strategy is to focus on **employees** working in the **child care services industry**, the vast majority of whom (96%) are women.⁹ Since the LWF has information on workers' industry of employment, this alternative strategy is feasible. It provides a unified empirical framework, which allows for survival analyses of the likelihood of employees leaving the child care sector (with the LWF) and separate analyses of employees working in the child care services industry by broad occupational group (with the LWF–2016 Census or the LFS).

To ensure that these broad occupational groups have sufficient sample sizes, the study considers employees in two occupational categories: ECEAs and other employees (subsequently denoted as “other child care workers”).¹⁰ Since sample sizes for men in this industry are too small to allow robust multivariate analyses, the study restricts attention to women.¹¹ For these reasons, the focus of this study is—unless otherwise noted—on women aged 18 to 60 who are **employees** in the **child care services industry** in a given year. For simplicity, these women will be subsequently referred to as “child care workers” throughout the study.

8. These workers provide an important source of child care for many families and should be considered in future research.

9. As of May 2016, according to census data.

10. Because ECEAs represent the vast majority of women in the child care services industry, most of the discussion in the study focuses on this occupational category. The category “other child care workers” includes home child care providers and individuals employed in other occupations (e.g., cooks and janitors). Because sample sizes for home child care providers are too small to support robust multivariate analyses, the study provides overall descriptive statistics for this group for selected key outcomes.

11. Choi (2022) provides descriptive statistics for men and women employed as ECEAs or home child care providers but does not perform multivariate analyses.

In a first step, the study examines work absences (Section 4) and employee retention (Section 5) among child care workers **employed in 2016**. To do so, the study uses the linked LWF–2016 Census data. To ensure the robustness of results, the analysis is conducted for a narrow sample and a broad sample.

The narrow sample consists of women aged 18 to 60 who:

- 1a) were employed as paid workers in the child care services industry in their main job—the job with the highest annual wages and salaries—in 2016
- 2) were paid workers in May 2016
- 3) had wages and salaries and positive weeks worked in 2015 but no income from self-employment in 2015
- 4) were permanent residents
- 5) lived in one of the 10 provinces in 2016
- 6) knew English, French or both languages.

The broad sample consists of women aged 18 to 60 who:

- 1b) were employed as paid workers in the child care services industry in any job in 2016
- 5) lived in one of the 10 provinces in 2016
- 6) knew English, French or both languages.¹²

The two samples differ in important ways. The broad sample includes women employed in the child care services industry in **any job** in 2016 and, therefore, includes those with jobs of short duration and jobs that ended early in the year. In contrast, the narrow sample restricts attention to women employed in this industry in their **main job**. In addition, conditions 2 to 4 imply that the narrow sample consists of women who were permanent residents and employed as paid workers not only in May 2016 but also in 2015. Because the narrow sample focuses on the main job held in 2016 by women who have been employed for at least two years (instead of only one year), it likely includes women who have a higher degree of attachment to the labour market and to the child care sector than those included in the broad sample. If so, the percentage of women leaving the child care sector in a given year will likely be lower in the narrow sample than in the broad sample. Whether this is the case will be investigated in Section 5.

In a second step, the study uses the LWF to conduct a survival analysis of the likelihood of leaving the child care sector (Section 6). In this case, the sample consists of women who **started a new job** in the child care services industry between 2000 and 2015 and were aged 18 to 44 when starting this new job. More details are provided below. As is the case for the first step, the data used in this second step predate the COVID-19 pandemic and the Canada-wide ELCC investments.

Lastly, the study examines the degree to which work absences in the child care services industry increased during the COVID-19 pandemic (see the Appendix). To perform this task, the study uses the LFS and documents the evolution of work absences due to illness or disability from 2000 to the first nine months of 2022. In this case, the sample selected consists of women aged 18 to 60 employed in the child care services industry as their main job.

12. Both samples are linked to the 2016 Census of Population after Condition 1a (or 1b) is imposed. Indigenous people are excluded from both samples. Specific histories and circumstances pertaining to Indigenous people and established working relationships between Statistics Canada and Crown-Indigenous Relations and Northern Affairs Canada, Indigenous Services Canada, and national Indigenous organizations necessitate a separate analysis. Women who speak neither English nor French are excluded, because very few employees in the child care services industry speak neither of these official languages.

3.3 Concepts

Leaving the child care sector

In this study, departures from the child care sector are measured using two concepts: leaving the child care sector for at least one year or leaving the child care sector for at least two years. The rationale for using two concepts is that many child care workers may—for reasons such as maternity leave, a return to school or a temporary exit from the labour market—return to the child care sector after a one-year absence. The second concept allows for this possibility. A person is deemed to have left the child care sector in year t for at least two years if she was:

- 1) employed in the child care services industry (NAICS 6244) in year t
- 2) not observed with her employer in the two following years (years $t+1$ and $t+2$)
- 3) not employed in the child care services industry (NAICS 6244), elementary and secondary schools (NAICS 6111), or private households (NAICS 8141) in the two following years.

Conditions 1 and 2 are self-explanatory. Condition 3 allows for the possibility that some child care workers may leave the child care services industry for other child care positions in elementary schools or in private households (as home child care providers). Since some former child care workers who work in elementary schools do not hold child care positions, this **primary definition** of “leaving the child care sector” will underestimate the true rate of departures from the child care sector.

To deal with this issue, results will also be shown for an **alternative definition** of “leaving the child care sector” in which Condition 3 is replaced by a simple requirement that individuals should not be employed in the child care services industry (NAICS 6244) in the two following years. Since this alternative definition does not allow for the possibility that some child care workers may leave the child care services industry for other child care positions in elementary schools or in private households, it will overestimate the true rate of departures from the child care sector.¹³

Lastly, it should be noted that leaving the child care sector for at least one year can be defined by simply replacing “in the two following years” (in conditions 2 and 3) by “in the following year.”

Work absences due to injury or illness

The concept of ROE-based earnings interruptions is one of the key concepts used in this study. With respect to injuries or illnesses, subsection 14(2) of the Employment Insurance Regulations defines earnings interruptions as a decline in earnings that represents more than 40% of an employee’s normal weekly earnings:

“(2) An interruption of earnings from an employment occurs in respect of an insured person at the beginning of a week in which a reduction in earnings that is more than 40% of the insured person’s normal weekly earnings occurs because the insured person ceases to work in that employment by reason of illness, injury or quarantine [...]”

An interruption of earnings can occur when employees leave an employer permanently or temporarily stop working for this employer. When this happens, employers are requested to issue an ROE. For example, a child care worker who stops working for three months for her employer because of burnout will experience an earnings interruption and should receive an ROE stating

13. These underestimation and overestimation issues would not arise if the LWF had data on workers’ occupation.

that “illness or injury” is the reason for the earnings interruption.^{14,15} The ROE will contain no information about the nature of the illness or injury, however. For this reason, ROEs cannot be used to assess whether the earnings interruptions of child care workers are caused by infectious diseases, non-infectious diseases, physical injuries or burnout. This limitation should be kept in mind throughout the analysis.

A second limitation of ROE-based earnings interruptions is that they do not cover all absences caused by injuries or illnesses. This can happen for a variety of reasons.

First, employees who have paid sick leaves in their job and did not use all of them can use these paid sick leaves to fully cover their short-term work absences (e.g., one week) induced by injuries or illnesses, thereby avoiding an earnings interruption. In such cases, ROEs will not be issued.

Second, employees who do not have paid sick leaves in their job and are absent for a short duration because of injury or illness may still be unlikely to request an ROE if they are not planning on claiming Employment Insurance sickness benefits (even though they would be entitled to one ROE).

Third, workers may experience work-related injuries or illnesses that lead them to receive lower weekly earnings that do **not** fall below 60% of their regular weekly earnings. In this case, such workers will not receive an ROE (because, technically, they do not experience an earnings interruption) but may receive benefits from their province’s Workers’ Compensation Board (WCB).

The notion that child care workers may receive WC benefits even though they do not receive an ROE because of injury or illness is a likely possibility. In 2018, 6,475 women aged 18 to 60 employed in the child care services industry in their main job received WC benefits (Table 1). Results not shown indicate that the vast majority (5,936) did **not** receive an ROE because of injury or illness. Likewise, most women who were issued ROEs due to injury or illness in 2018 (4,328 out of 4,867) did **not** receive WC benefits that year. Few women (273) received CPP or QPP disability benefits that year. Overall, slightly more than 11,000 women had work absences because of injury or illness, as measured by the receipt of ROEs, WC benefits, or CPP or QPP disability benefits.

14. Employers who commit fraud—for example, by falsifying or selling an ROE—may have to pay up to \$12,000 per ROE. <https://www.canada.ca/en/employment-social-development/programs/ei/ei-list/reports/fraud-serious.html#h2.4-h3.1>

15. Service Canada uses the information on the ROE to determine whether a person who has experienced an interruption of earnings is eligible to receive Employment Insurance (EI) benefits (e.g., EI sickness benefits), what the benefit amount will be, and how long the person is eligible to receive these benefits. The ROE is also used to ensure that no one misuses EI funds or receives them in error. <https://www.canada.ca/en/employment-social-development/programs/ei/ei-list/reports/roe-guide.html>

Table 1**Number and percentage of women receiving records of employment because of injury or illness, workers' compensation benefits, or Canada Pension Plan or Quebec Pension Plan disability benefits in a given year, selected years, 2000 to 2018**

	2000	2010	2016	2018
	number			
Number of women receiving:				
ROEs because of injury or illness	1,323	2,442	3,910	4,867
WC benefits	2,784	4,500	5,021	6,475
CPP or QPP disability benefits	59	177	206	283
ROEs, WC benefits, or CPP or QPP disability benefits	4,059	6,939	8,731	11,051
Number of women employed	65,389	102,325	126,936	142,018
	percent			
Percentage of employed women receiving:				
ROEs because of injury or illness	2.0	2.4	3.1	3.4
WC benefits	4.3	4.4	4.0	4.6
CPP or QPP disability benefits	0.1	0.2	0.2	0.2
ROEs, WC benefits, or CPP or QPP disability benefits	6.2	6.8	6.9	7.8

Notes: ROE = record of employment; WC = workers' compensation; CPP = Canada Pension Plan; QPP = Quebec Pension Plan. The statistics shown refer to women aged 18 to 60 working in child care services (North American Industry Classification System code 6244) in their main job.

Source: Statistics Canada, Longitudinal Worker File.

These patterns are observed in all years of the 2000-to-2018 period. They imply that a comprehensive measure of work absences due to injury or illness should include individuals who receive ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits.

For these reasons, the study uses this comprehensive measure of work absences for analyses that rely on the LWF or the LWF–2016 Census.

When the study uses the LFS, a different concept of work absences is analyzed: full-week absences due to illness or disability experienced by workers during the LFS reference week.¹⁶ The use of a different concept is dictated by the fact that information about whether workers received ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits in a given year is not available in the LFS.

The ROEs and the LFS often capture the same work absences, but this is not always the case. For example, individuals who experience a full-week absence because of illness or disability during the LFS reference week and use their paid sick leaves to fully cover this absence will not experience an earnings interruption and, therefore, will not receive an ROE due to injury or illness. Conversely, ROEs will capture some work absences that lead to earnings interruptions and that workers experience outside the LFS reference week. In sum, the LFS measure of work absences and the ROE-based measure of work absences complement each other but are not comparable.

It is also impossible to rigorously compare the percentage of workers who receive WC benefits across years or across provinces, because the criteria used by provincial WCBs to accept claims may vary across provinces and, within a given province, may change over time. Thus, even though estimates using the comprehensive measure of work absences will be presented by province, interprovincial comparisons of these estimates should be avoided **for analytical purposes**. Within a given province, comparisons of estimates across years should be made with great caution.

16. The LFS reference week is the week for which information is collected in a given month. For example, the LFS estimates for September 2022 were for the week of September 11 to 17, 2022.

4 Work absences due to injury or illness

4.1 Trends, 2000 to 2018

In 2018, 7.8% of women employed in the child care services industry in their main job received ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits, up from 6.2% in 2000 (Table 1).¹⁷ This 1.6 percentage point increase may reflect a growing incidence of work absences due to injury or illness, a growing propensity of workers to file WC claims for work-related injuries or illnesses, or changes over time in the criteria used by provincial WCBs to accept such claims.

4.2 Descriptive evidence and multivariate analyses, 2016

Table 2 uses the LWF–2016 Census dataset and shows the percentage of child care workers who had work absences due to injury or illness in 2016 (i.e., who received ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits in 2016). The percentages are shown for the narrow sample and the broad sample defined above and for the three following groups: 1) all child care workers; 2) ECEAs; 3) other child care workers.

17. For women employed in elementary and secondary schools (NAICS 6111) and in nursing and residential care facilities (NAICS 623) in 2018, the corresponding percentages equal 4.2% and 10.6%, respectively.

Table 2
Percentage of women who received records of employment because of injury or illness, workers' compensation benefits, or Canada Pension Plan or Quebec Pension Plan disability benefits, by selected characteristics, 2016

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
			percent			
All	7.4	8.5	4.1	6.1	8.1	3.3
Age in 2016						
18 to 24	5.1	6.6	1.7	3.6	6.1	1.5
25 to 34	11.8	13.2	6.0	9.5	12.2	4.4
35 to 44	6.4	7.0	4.3	5.7	6.7	3.7
45 to 60	5.4	6.0	4.0	5.1	5.8	3.9
Education						
High school or less	6.1	7.3	4.1	4.8	7.2	3.1
Some postsecondary education	8.8	9.6	5.4	7.8	9.2	4.4
Bachelor's degree or higher education	4.4	5.6	1.6	3.5	5.2	1.7
Immigrant status						
Canadian-born	7.9	9.2	4.2	6.6	8.8	3.4
Landed in Canada from 2005 to 2015	8.0	9.0	4.0	6.3	8.4	3.0
Landed in Canada before 2005	4.8	5.2	3.4	4.3	5.1	2.9
Non-permanent resident	...	...	...	2.9	5.4	x
Population group						
South Asian	4.5	5.4	x	3.5	4.6	1.7
Chinese	3.7	3.8	x	2.4	2.9	x
Black	6.8	7.3	5.0	6.1	8.1	3.1
Filipino	2.9	3.3	x	2.4	3.6	x
Latin American	6.9	7.9	x	5.5	7.2	x
Arab	11.4	12.8	x	8.9	11.1	5.2
Southeast Asian						
Other	5.6	6.3	x	4.2	5.6	2.1
White	7.9	9.2	4.3	6.7	8.8	3.6
Knowledge of official languages						
English only	4.6	5.1	3.4	3.7	4.6	2.5
French only	12.4	13.8	6.2	11.5	13.7	6.3
English and French	8.6	10.3	4.0	7.2	10.2	3.2
Province of residence in 2016						
Newfoundland and Labrador	9.2	11.6	x	8.3	9.4	x
Prince Edward Island	11.0	12.0	x	7.4	9.0	x
Nova Scotia	7.3	8.1	x	5.3	7.0	x
New Brunswick	6.5	7.9	x	6.0	7.4	4.1
Quebec	11.3	12.9	5.3	10.2	12.9	4.9
Ontario	4.2	4.7	3.1	3.4	4.2	2.2
Manitoba	4.3	5.0	x	3.3	4.3	2.1
Saskatchewan	4.9	4.8	x	3.2	4.3	2.3
Alberta	4.6	5.2	3.6	3.6	4.8	2.4
British Columbia	5.9	6.2	4.9	4.5	5.4	3.2

... not applicable

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 2
Percentage of women who received records of employment because of injury or illness, workers' compensation benefits, or Canada Pension Plan or Quebec Pension Plan disability benefits, by selected characteristics, 2016 (continued)

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	percent					
All	7.4	8.5	4.1	6.1	8.1	3.3
Full-time status						
Part-time	5.8	6.8	3.9	...	...	...
Full-time	7.8	8.9	4.1	...	...	...
Weekly wages in 2015						
Less than \$400	7.2	8.9	3.9	...	...	...
\$400 to \$599	9.2	10.2	5.4	...	...	...
\$600 to \$799	8.0	8.7	4.7	...	...	...
\$800 or more	5.2	6.2	3.0	...	...	...
Employment status and earnings in 2015						
Had no earnings in 2015	...	...	...	4.3	8.7	2.4
Had earnings in 2015, worked part time and earned less than \$600 per week	...	...	...	4.4	6.1	2.9
Had earnings in 2015, worked full time and earned less than \$600 per week	...	...	...	8.4	10.7	3.8
Had earnings in 2015, worked part time and earned \$600 or more per week	...	...	...	4.5	5.9	3.2
Had earnings in 2015, worked full time and earned \$600 or more per week	...	...	...	6.2	7.5	3.2
Had earnings in 2015, but weekly earnings are unknown	...	...	...	5.5	6.8	4.9
Positive pension adjustment in 2016?						
No	6.1	6.9	3.8	4.9	6.4	2.8
Yes	9.5	10.9	4.5	8.5	10.8	4.3
Unionized in 2016?						
No	7.0	8.1	3.8	5.7	7.6	3.1
Yes	9.8	10.5	6.1	9.1	10.5	5.3
Tenure						
1 to 2 years	7.0	8.5	3.8	4.9	7.5	2.7
3 to 5 years	8.6	9.6	4.6	7.5	9.1	4.0
6 years or more	6.9	7.8	3.9	6.8	7.8	4.1
	number					
Sample size	21,924	16,435	5,489	35,065	21,186	13,879
Weighted population counts	91,698	68,658	23,041	148,280	88,974	59,306

... not applicable

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Of all ECEAs employed in the child care services industry in 2016, 8.5% had work absences because of injury or illness in the narrow sample and 8.1% had such absences in the broad sample. The corresponding percentages for other child care workers were 4.1% and 3.3%, respectively, thereby indicating that work absences due to injury or illness (**henceforth, work absences**) were less frequent among this group than among ECEAs.¹⁸

In both samples, some groups of ECEAs were absent in greater proportions than others. For example, between 12% and 13% of ECEAs aged 25 to 34 had work absences in 2016, about twice the rates of 6% to 7% observed among their older or younger counterparts.¹⁹ ECEAs with some postsecondary education or with at most a high school diploma were absent in greater proportions (7% to 10%) than those with a bachelor's degree or higher education (5% to 6%). White ECEAs had work absences to a greater extent (9%) than those who self-identified as Filipino (3% to 4%). Compared with ECEAs in other provinces, those residing in Quebec were absent in greater proportions. As mentioned above, it is impossible to give a precise interpretation of these interprovincial differences since they may largely reflect differences in the criteria used by various provincial WCBs to accept claims.

To assess whether these patterns hold in multivariate analyses, logit models of the likelihood of having work absences were estimated for each of the two samples and for each of the three groups of workers shown in Table 2. Each of these logit models includes the following set of regressors: age, education, immigrant status, population group, province of residence, full-time status, weekly wages, pension coverage, union status and tenure with the employer. The results are shown in Table 3.

18. Of all home child care providers employed in the child care services industry in 2016, 3.4% received ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits in the narrow sample and 3.1% did so in the broad sample.

19. In the samples considered in this study, ECEAs aged 25 to 34 represent about 28% of all ECEAs.

Table 3
Average partial effects for the likelihood of receiving a record of employment because of injury or illness, workers' compensation benefits, or Canada Pension Plan or Quebec Pension Plan disability benefits, by selected characteristics, 2016

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	average partial effects					
Age in 2016						
18 to 24	-0.059 ***	-0.058 ***	-0.048 ***	-0.051 ***	-0.052 ***	-0.033 ***
25 to 34	...	...	...	...	...	...
35 to 44	-0.052 ***	-0.060 ***	-0.016 †	-0.041 ***	-0.057 ***	-0.010 *
45 to 60	-0.055 ***	-0.062 ***	-0.020 *	-0.043 ***	-0.059 ***	-0.011 *
Education	-0.055 ***					
High school or less	-0.014 **	-0.012 †	-0.005	-0.012 **	-0.008	-0.003
Some postsecondary education	...	...	...	...	...	...
Bachelor's degree or higher education	-0.034 ***	-0.028 ***	-0.034 ***	-0.031 ***	-0.026 ***	-0.023 ***
Immigrant status						
Canadian-born	...	...	...	...	...	...
Landed in Canada from 2005 to 2015	0.020 **	0.019 *	0.007	0.018 **	0.018 *	0.005
Landed in Canada before 2005	-0.009	-0.013 *	-0.004	-0.004	-0.010 †	0.000
Non-permanent resident	...	...	...	-0.013	-0.010	-0.025 **
Population group						
South Asian	-0.003	0.004	-0.018	-0.006	-0.001	-0.013 †
Chinese	-0.026 *	-0.031 *	-0.005	-0.029 ***	-0.039 ***	-0.012
Black	-0.007	-0.009	0.004	-0.004	0.001	-0.005
Filipino	-0.032 **	-0.033 *	-0.024 †	-0.027 **	-0.022	-0.025 ***
Latin American	-0.012	-0.011	-0.016	-0.013 *	-0.014	-0.013 †
Arab	0.014	0.016	0.004	0.005	0.004	0.007
Southeast Asian	-0.006	-0.010	0.003	-0.016	-0.006	-0.018
Other	-0.011	-0.009	-0.007	-0.011 *	-0.011	-0.009
White	...	...	...	...	...	...
Province of residence in 2016						
Newfoundland and Labrador	-0.036 †	-0.035	...	-0.023	-0.048 *	0.020
Prince Edward Island	-0.012	-0.028	0.039	-0.025	-0.047 †	0.012
Nova Scotia	-0.044 ***	-0.057 ***	-0.010	-0.045 ***	-0.063 ***	-0.018 *
New Brunswick	-0.054 ***	-0.064 ***	-0.019	-0.040 ***	-0.063 ***	-0.001
Quebec	...	...	...	...	...	...
Ontario	-0.066 ***	-0.083 ***	-0.014 †	-0.059 ***	-0.084 ***	-0.016 ***
Manitoba	-0.065 ***	-0.078 ***	-0.024 *	-0.059 ***	-0.083 ***	-0.019 ***
Saskatchewan	-0.063 ***	-0.086 ***	0.007	-0.061 ***	-0.087 ***	-0.015 †
Alberta	-0.060 ***	-0.075 ***	-0.010	-0.054 ***	-0.076 ***	-0.013 *
British Columbia	-0.052 ***	-0.071 ***	0.004	-0.046 ***	-0.071 ***	-0.004

... not applicable

* significantly different from reference category (p < 0.05)

** significantly different from reference category (p < 0.01)

*** significantly different from reference category (p < 0.001)

† significantly different from reference category (p < 0.10)

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 3

Average partial effects for the likelihood of receiving a record of employment because of injury or illness, workers' compensation benefits, or Canada Pension Plan or Quebec Pension Plan disability benefits, by selected characteristics, 2016 (continued)

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	average partial effects					
Full time status						
part-time	-0.012 *	-0.012 *	0.002	...	...	...
full-time	...	...	...	...	...	...
Weekly wages in 2015						
Less than \$400	0.009	0.014 †	0.002	...	...	...
\$400 to \$599	0.019 ***	0.021 ***	0.010	...	...	...
\$600 to \$799	...	...	...	...	...	...
\$800 or more	-0.016 ***	-0.013 **	-0.010	...	...	...
Employment status and earnings in 2015						
Had no earnings in 2015	...	...	...	-0.010 †	0.005	0.001
Had earnings in 2015, worked part time and earned less than \$600 per week	...	...	...	-0.002	0.000	0.008 †
Had earnings in 2015, worked full time and earned less than \$600 per week	...	...	...	0.023 ***	0.026 ***	0.010 *
Had earnings in 2015, worked part time and earned \$600 or more per week	...	...	...	-0.003	-0.006	0.008
Had earnings in 2015, worked full time and earned \$600 or more per week	...	...	...	...	...	...
Had earnings in 2015, but weekly earnings are unknown	...	...	...	0.004	-0.008	0.025 **
Positive pension adjustment in 2016?						
No	...	...	...	...	...	...
Yes	-0.005	-0.006	-0.003	-0.003	-0.005	0.002
Unionized in 2016?						
No	...	...	...	...	...	...
Yes	0.010 *	0.006	0.014	0.008 *	0.005	0.009 †
Tenure						
1 to 2 years	0.003	0.004	0.006	-0.009 *	-0.004	-0.004
3 to 5 years	0.015 ***	0.018 ***	0.009	0.013 **	0.016 **	0.006
6 years or more	...	...	...	...	...	...
	number					
Sample size	21,924	16,435	5,489	35,065	21,186	13,879
Weighted population counts	91,698	68,658	23,041	148,280	88,974	59,306

... not applicable

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

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

*** significantly different from reference category ($p < 0.001$)

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

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Regardless of the samples considered, these results indicate that compared with younger and older ECEAs, ECEAs aged 25 to 34 were, all else equal, between 5.2 and 6.2 percentage points more likely to be absent in 2016, on average (Table 3, columns 2 and 5). Since about 8% of ECEAs had work absences in 2016, this difference is quantitatively important.

Other patterns are worth noting. ECEAs who had some postsecondary education were, all else equal, between 2.6 and 2.8 percentage points more likely than their counterparts with a bachelor's degree or higher education to have work absences in 2016 (Table 3, columns 2 and 5). In contrast, differences between ECEAs with some postsecondary education and those with at most a high school diploma were not statistically significant, thereby suggesting that both groups had roughly the same likelihood of being absent. White ECEAs were, on average, between 3.1 and 3.9 percentage points more likely than Chinese ECEAs to have work absences. Compared with all provinces except Newfoundland and Labrador and Prince Edward Island, the likelihood of ECEAs having work absences was at least 5.7 percentage points higher in Quebec. Compared with ECEAs working full time and earning at least \$600 per week, ECEAs working full time and earning less than \$600 per week were—in the broad sample—2.6 percentage points more likely to be absent in 2016.

In sum, ECEAs aged 25 to 34, those with no bachelor's degree and those earning relatively low weekly wages in full-time jobs had a relatively high likelihood of experiencing work absences due to injury or illness in 2016, as measured by the receipt of ROEs, WC benefits, or CPP or QPP disability benefits that year. Qualitatively similar differences are observed across age groups and education levels for other child care workers (Table 3, columns 3 and 6).

4.3 Trends with Labour Force Survey data

The results shown so far use data from the LWF or the linked LWF–2016 Census. The Appendix uses LFS data and shows that the COVID-19 pandemic increased the full-week work absences of ECEAs due to illness or disability by about 2 percentage points in 2020–2021, from a long-term average of 2.2%. The remainder of the paper uses data from the LWF or the linked LWF–2016 Census.

5 Women leaving the child care sector in 2016

This section analyzes whether work absences due to injury or illness experienced in a given year are associated with a greater likelihood of leaving the child care sector **during that year**. The next section (Section 6) will analyze the degree to which such work absences are associated with a greater likelihood of leaving the child care sector **during that year or in subsequent years**, using survival analyses.

5.1 Descriptive evidence, 2016

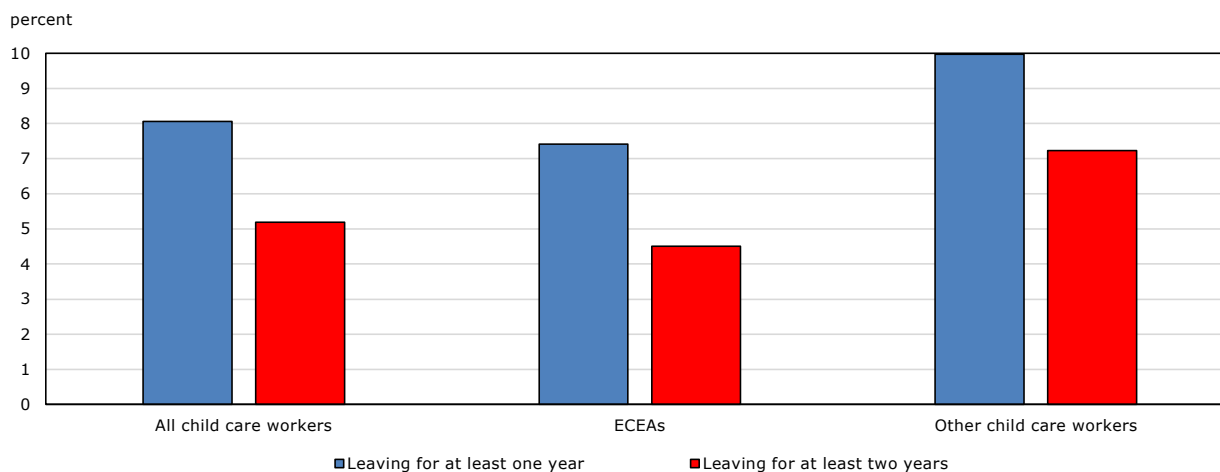
Women who leave the child care sector in a given year may return to the sector after a one-year absence for maternity leave, a return to school, leave for compassionate care or other reasons. If so, the percentage of women leaving the child care sector for at least two years may be substantially lower than the percentage of women leaving the sector for at least one year.

Chart 1 investigates whether this is the case. It uses the narrow sample—which focuses on women whose **main job** is in the child care services industry—and compares the percentage of women leaving the child care sector for at least one year with the percentage of women leaving this sector for at least two years.²⁰ In 2016, 7.4% of ECEAs left the child care sector for at least

20. The primary definition of “leaving the child care sector” is used for this comparison.

one year, while 4.5% left the sector for at least two years, thereby indicating that 2.9% (7.4% minus 4.5%) of ECEAs left the sector for only one year. As a result, the proportion of ECEAs leaving the child care sector for at least two years was 39% (2.9% divided by 7.4%) lower than the proportion leaving for at least one year. The corresponding drop for other child care workers amounts to 28%. Thus, the percentage of child care workers leaving the sector for at least one year substantially overestimates the percentage of women leaving the sector for a prolonged period of time.²¹ For this reason, the focus of the remainder of the study is on child care workers leaving the child care sector for at least two years.

Chart 1
Percentage of child care workers leaving the child care sector in 2016, by duration—narrow sample



Notes: Includes women aged 18 to 60 employed in child day-care services (North American Industry Classification System code 6244) in 2016. See main text for sample definition. ECEAs = early childhood educators and assistants.
Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 4 uses the LWF–2016 Census and shows the percentage of child care workers who left the child care sector in 2016 for at least two years (i.e., 2017 and 2018). The numbers are based on the **primary** definition of “leaving the child care sector” and are shown for both samples and for the three groups of workers considered in Tables 2 and 3.

Table 4 highlights the importance of using several samples to quantify departures from the child care sector. The percentage of child care workers leaving this sector for at least two years is substantially higher in the broad sample (11.0%) than in the narrow sample (5.2%). This conclusion holds for ECEAs and other child care workers. For example, 7.1% of ECEAs in the broad sample left the child care sector for at least two years, compared with 4.5% of those in the narrow sample.²²

For both samples, the degree to which ECEAs left the child care sector for at least two years varied across specific individual and job characteristics.

In line with the notion that worker mobility falls with age, ECEAs younger than 35 years were more likely to leave the child care sector than their older counterparts. ECEAs with at most a high school diploma also left the child care sector in greater proportions (8.0% to 12.0%) than their counterparts with some postsecondary education (3.5% to 5.7%) (Table 4, columns 2 and 5).

21. This finding holds in the broad sample.

22. Home child care providers left the child care sector for at least two years in greater proportions than ECEAs in the narrow sample (10.4% versus 4.5%) and the broad sample (17.3% versus 7.1%).

Table 4
Percentage of women who left the child care sector in 2016 for at least two years, by
selected characteristics—primary definition of leaving the child care sector

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	percent					
All	5.2	4.5	7.2	11.0	7.1	16.7
Age in 2016						
18 to 24	9.1	7.2	13.3	17.2	10.8	22.3
25 to 34	6.2	5.7	8.4	12.0	8.6	18.2
35 to 44	3.8	3.1	6.1	8.2	5.5	13.4
45 to 60	3.4	3.2	4.1	7.3	4.9	11.2
Education						
High school or less	8.8	8.0	10.0	17.6	12.0	21.8
Some postsecondary education	3.9	3.5	5.4	8.3	5.7	14.3
Bachelor's degree or higher education	6.1	5.3	7.8	11.2	8.0	14.8
Immigrant status						
Canadian-born	5.2	4.4	7.6	11.1	6.9	17.2
Landed in Canada from 2005 to 2015	6.5	5.8	9.3	12.6	9.1	18.2
Landed in Canada before 2005	4.0	3.9	4.5	8.5	5.9	13.2
Non-permanent resident	...	...	...	16.3	16.3	16.3
Population group						
South Asian	5.0	4.7	5.9	10.0	7.3	14.2
Chinese	7.5	7.7	6.9	14.0	9.9	19.6
Black	4.3	3.8	5.9	11.0	7.0	16.9
Filipino	3.7	2.7	x	11.6	6.5	18.5
Latin American	4.5	4.0	x	10.2	7.3	15.6
Arab	6.5	6.5	x	14.5	11.0	20.5
Southeast Asian	x	x	x	8.6	x	12.9
Other	8.1	6.4	13.4	14.0	10.0	19.9
White	5.1	4.3	7.2	10.6	6.7	16.5
Knowledge of official languages						
English only	6.7	6.1	8.5	13.3	9.2	18.7
French only	2.2	2.0	2.7	5.6	3.6	10.1
English and French	4.7	3.6	7.8	10.5	6.1	16.3
Province of residence in 2016						
Newfoundland and Labrador	9.1	9.6	x	16.8	15.3	19.1
Prince Edward Island	9.5	x	x	19.0	12.3	27.1
Nova Scotia	5.2	5.2	x	12.8	7.8	22.1
New Brunswick	10.5	9.2	13.7	18.0	13.5	23.8
Quebec	2.5	2.2	4.0	6.3	3.7	11.3
Ontario	5.7	4.8	8.3	12.3	7.5	18.7
Manitoba	7.0	7.0	6.8	14.1	11.2	17.8
Saskatchewan	11.4	11.2	12.0	20.2	14.4	25.9
Alberta	9.4	9.5	9.2	15.8	13.0	18.6
British Columbia	7.7	6.8	10.5	13.8	10.9	17.9

... not applicable

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 4
Percentage of women who left the child care sector in 2016 for at least two years, by selected characteristics—primary definition of leaving the child care sector (continued)

	Occupation					
	Narrow sample			Broad sample		
	Early childhood educators and assistants			Early childhood educators and assistants		
	All	assistants	Other	All	assistants	Other
All	5.2	4.5	7.2	11.0	7.1	16.7
			percent			
Full-time status						
Part-time	8.1	6.6	11.0	...	...	...
Full-time	4.3	4.0	5.6	...	...	...
Weekly wages in 2015						
Less than \$400	10.5	9.5	12.6	...	...	...
\$400 to \$599	6.2	5.7	8.0	...	...	...
\$600 to \$799	3.0	2.6	5.3	...	...	...
\$800 or more	2.7	2.2	3.6	...	...	...
Employment status and earnings in 2015						
Had no earnings in 2015	...	...	...	19.1	18.3	19.4
Had earnings in 2015, worked part time and earned less than \$600 per week	...	...	...	15.7	11.0	19.9
Had earnings in 2015, worked full time and earned less than \$600 per week	...	...	...	12.6	9.1	19.9
Had earnings in 2015, worked part time and earned \$600 or more per week	...	...	...	12.4	8.0	16.9
Had earnings in 2015, worked full time and earned \$600 or more per week	...	...	...	5.5	3.6	9.9
Had earnings in 2015, but weekly earnings are unknown	...	...	...	17.4	11.8	20.0
Positive pension adjustment in 2016?						
No	7.6	6.8	9.9	14.7	10.2	20.9
Yes	1.3	1.0	2.2	3.9	2.0	7.4
Unionized in 2016?						
No	5.9	5.2	7.8	12.2	8.1	17.8
Yes	1.2	1.1	2.0	3.0	2.1	5.5
Tenure						
1 to 2 years	9.3	8.3	11.6	16.7	12.2	20.5
3 to 5 years	5.8	5.0	8.9	10.1	6.9	17.1
6 years or more	2.1	2.0	2.5	3.6	2.7	5.8
Received a record of employment because of injury or illness in 2016?						
No	4.8	4.1	6.9	10.8	6.8	16.7
Yes	15.4	14.3	21.8	17.1	15.5	23.6
Received income from WC in 2016?						
No	5.2	4.5	7.2	11.1	7.2	16.7
Yes	5.2	4.5	10.6	8.3	5.7	17.9
Received CPP or QPP disability benefits in 2016?						
No	5.2	4.5	7.2	11.0	7.1	16.7
Yes	x	x	x	31.2	x	x
Received ROEs, WC benefits, or CPP or QPP disability benefits in 2016?						
No	4.8	4.1	6.9	10.9	6.9	16.6
Yes	10.1	9.1	16.3	12.3	10.2	20.1
			number			
Sample size	21,924	16,435	5,489	35,065	21,186	13,879
Weighted population counts	91,698	68,658	23,041	148,280	88,974	59,306

... not applicable

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

As expected, ECEAs who had relatively low wages, had no employer-sponsored pension plan (or deferred profit sharing plan), were not unionized and had been with their employer for only a few years left the child care sector in greater proportions than other ECEAs. For example, between 6.8% and 10.2% of ECEAs with no pension coverage left the child care sector for at least two years in 2016. In contrast, at most 2.0% of their counterparts with pension coverage did so (Table 4, columns 2 and 5).

The propensity to leave the child care sector varied substantially across provinces. ECEAs residing in Quebec left the child care sector to a lesser extent (2.2% to 3.7%) than those in other provinces, especially those living in Newfoundland and Labrador (9.6% to 15.3%), New Brunswick (9.2% to 13.5%), Saskatchewan (11.2% to 14.4%), and Alberta (9.5% to 13.0%).

ECEAs who received ROEs because of injury or illness in 2016 left the child care sector for at least two years in far greater proportions (14.3% to 15.5%) than other ECEAs (4.1% to 6.8%). In contrast, ECEAs who received WC benefits in 2016 left the child care sector for at least two years no more often than other ECEAs, even though the former group left the child care sector for at least one year to a much greater extent than the latter.²³ This finding suggests that a large proportion of ECEAs who received WC benefits in 2016 returned to the child care sector after a full-year absence. Overall, ECEAs who received ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits left the child care sector for at least two years at a greater rate (9.1% to 10.2%) than other ECEAs (4.1% to 6.9%). Therefore, work absences due to injury or illness experienced in 2016 were associated with a greater propensity to leave the child care sector in 2016 for at least two years (2017 and 2018).

5.2 Multivariate analyses, 2016

To assess whether this conclusion holds in a multivariate setting, logit models of the likelihood of leaving the child care sector for at least two years are estimated. In addition to the set of explanatory variables used in Table 3, these logit models include a binary indicator for whether child care workers received ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits in 2016. The results are shown in Table 5.

23. For instance, 22.5% of ECEAs with WC benefits left the child care sector for at least one year in the narrow sample, more than three times the rate of 6.6% observed for other ECEAs.

Table 5
Average partial effects for the likelihood of leaving the child care sector in 2016 for at least two years, by selected characteristics—primary definition of leaving the child care sector

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	average partial effects					
Age in 2016						
18 to 24	-0.003	-0.008 †	0.011	-0.004	-0.011 *	-0.007
25 to 34	...	...	...	...	...	...
35 to 44	-0.011 **	-0.015 ***	0.003	-0.022 ***	-0.017 ***	-0.033 ***
45 to 60	-0.009 *	-0.010 †	-0.008	-0.017 ***	-0.015 **	-0.034 ***
Education						
High school or less	0.019 ***	0.017 ***	0.016 †	0.038 ***	0.025 ***	0.029 ***
Some postsecondary education	...	...	...	...	...	...
Bachelor's degree or higher education	0.017 ***	0.011 **	0.023 **	0.015 **	0.008 †	-0.003
Immigrant status						
Canadian-born	...	...	...	...	...	...
Landed in Canada from 2005 to 2015	-0.005	-0.004	-0.003	-0.016 **	-0.007	-0.017
Landed in Canada before 2005	-0.005	0.001	-0.022 *	-0.018 **	-0.007	-0.029 **
Non-permanent resident	...	...	...	-0.016	0.020	-0.054 **
Population group						
South Asian	-0.018 **	-0.016 **	-0.026 †	-0.024 ***	-0.018 **	-0.027 †
Chinese	0.017	0.022 †	-0.006	0.013	0.010	0.023
Black	-0.006	-0.002	-0.019	0.005	0.003	0.000
Filipino	-0.025 ***	-0.028 ***	-0.014	-0.007	-0.023 *	0.017
Latin American	-0.002	0.000	-0.012	0.007	0.011	0.002
Arab	0.013	0.022 *	-0.017	0.040 ***	0.039 ***	0.041 †
Southeast Asian	-0.031 *	-0.016	...	-0.029	-0.024	-0.044
Other	0.014 †	0.006	0.040 †	0.012	0.007	0.021
White	...	...	...	...	...	...
Province of residence in 2016						
Newfoundland and Labrador	0.025 †	0.032 *	-0.010	0.040 *	0.058 **	-0.005
Prince Edward Island	0.024	0.024	0.020	0.064 **	0.039	0.075 *
Nova Scotia	-0.002	0.005	-0.026	0.013	0.008	0.026
New Brunswick	0.026 **	0.024 **	0.027	0.039 ***	0.041 ***	0.024
Quebec	...	...	...	...	...	...
Ontario	0.007	0.007	0.003	0.015 **	0.010 *	0.011
Manitoba	0.041 ***	0.055 ***	0.010	0.048 ***	0.077 ***	0.014
Saskatchewan	0.043 ***	0.051 ***	0.020	0.070 ***	0.059 ***	0.069 ***
Alberta	0.033 ***	0.041 ***	0.013	0.038 ***	0.048 ***	0.007
British Columbia	0.014 **	0.015 *	0.010	0.022 **	0.030 ***	0.001

... not applicable

* significantly different from reference category (p < 0.05)

** significantly different from reference category (p < 0.01)

*** significantly different from reference category (p < 0.001)

† significantly different from reference category (p < 0.10)

Notes: ROE = record of employment; WC = workers' compensation; CPP = Canada Pension Plan; QPP = Quebec Pension Plan. Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 5
Average partial effects for the likelihood of leaving the child care sector in 2016 for at least two years, by selected characteristics—primary definition of leaving the child care sector (continued)

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	average partial effects					
Full-time status						
Part-time	0.001	-0.003	0.009	...	...	...
Full-time	...	...	...	...	...	...
Weekly wages in 2015						
Less than \$400	0.036 ***	0.035 ***	0.028 *	...	...	...
\$400 to \$599	0.013 ***	0.014 ***	0.007	...	...	...
\$600 to \$799	...	...	...	...	...	...
\$800 or more	0.002	0.002	-0.009	...	...	...
Employment status and earnings in 2015						
Had no earnings in 2015	...	...	...	0.048 ***	0.066 ***	0.016
Had earnings in 2015, worked part time and earned less than \$600 per week	...	...	...	0.041 ***	0.033 ***	0.032 **
Had earnings in 2015, worked full time and earned less than \$600 per week	...	...	...	0.026 ***	0.021 ***	0.039 ***
Had earnings in 2015, worked part time and earned \$600 or more per week	...	...	...	0.039 ***	0.028 **	0.033 **
Had earnings in 2015, worked full time and earned \$600 or more per week	...	...	...	...	...	...
Had earnings in 2015, but weekly earnings are unknown	...	...	...	0.053 ***	0.041 **	0.034 **
Positive pension adjustment in 2016?						
No	...	...	...	...	...	...
Yes	-0.043 ***	-0.041 ***	-0.053 ***	-0.068 ***	-0.056 ***	-0.099 ***
Unionized in 2016?						
No	...	...	...	...	...	...
Yes	-0.022 ***	-0.017 **	-0.037 **	-0.051 ***	-0.023 ***	-0.085 ***
Tenure						
1 to 2 years	0.034 ***	0.029 ***	0.046 ***	0.083 ***	0.052 ***	0.107 ***
3 to 5 years	0.020 ***	0.013 **	0.046 ***	0.044 ***	0.022 ***	0.093 ***
6 years or more	...	...	...	...	...	...
Received ROEs, WC benefits, or CPP or QPP disability benefits in 2016?						
No	...	...	...	...	...	...
Yes	0.075 ***	0.068 ***	0.112 ***	0.050 ***	0.057 ***	0.061 **
	number					
Sample size	21,924	16,435	5,489	35,065	21,186	13,879
Weighted population counts	91,698	68,658	23,041	148,280	88,974	59,306

... not applicable

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

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

*** significantly different from reference category ($p < 0.001$)

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

Notes: ROE = record of employment; WC = workers' compensation; CPP = Canada Pension Plan; QPP = Quebec Pension Plan. Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

They confirm that the aforementioned conclusion holds: all else equal, ECEAs who received ROEs, WC benefits, or CPP or QPP disability benefits in 2016 were on average between 5.7 and 6.8 percentage points more likely than other ECEAs to leave the child care sector for at least two years (Table 5, columns 2 and 5). The corresponding difference for other child care workers amounts to at least 6.0 percentage points (Table 5, columns 3 and 6).

Table 5 also confirms other relationships. All else equal, ECEAs who had relatively low wages, had no employer-sponsored pension plan (or deferred profit sharing plan), were not unionized or had been with their employer for only a few years were more likely than others to leave the child care sector. For example, ECEAs with no pension coverage were between 4.1 and 5.6 percentage points more likely than other ECEAs to leave the child care sector for at least two years in 2016. For both samples, ECEAs residing in Manitoba, Saskatchewan and Alberta were at least 4.1 percentage points more likely to leave the child care sector than those residing in Quebec. ECEAs with at most a high school diploma were between 1.7 and 2.5 percentage points more likely to leave the sector than those with some postsecondary education. White women were, on average, between 2.3 and 2.8 percentage points more likely to leave the sector than women who self-identified as Filipino.

The results shown so far in Sections 5.1 and 5.2 are based on the **primary** definition of leaving the child care sector. Tables 6 and 7 use the **alternative** definition of leaving the child care sector, whereby child care workers are deemed to have left the child care sector if, among other conditions, they are not employed in the child care services industry (NAICS 6244) in the two years following their departure. While the percentage of ECEAs leaving the child care sector is higher under this alternative definition than under the primary definition, all patterns documented above hold with this alternative definition. For example, ECEAs who received ROEs, WC benefits, or CPP or QPP disability benefits in 2016 were, all else equal, between 6.6 and 8.5 percentage points more likely than other ECEAs to leave the child care sector for at least two years.

Table 6
Percentage of women who left the child care sector in 2016 for at least two years, by selected characteristics—alternative definition of leaving the child care sector

	Occupation					
	Narrow sample		Broad sample			
	Early childhood educators and All assistants	Other	Early childhood educators and All assistants	Other	Other	
	percent					
All	7.2	6.5	9.3	15.9	10.8	23.6
Age in 2016						
18 to 24	12.9	11.0	17.2	23.9	16.7	29.7
25 to 34	9.1	8.4	11.7	18.3	13.0	28.1
35 to 44	5.3	4.5	7.7	12.2	8.5	19.3
45 to 60	4.4	4.2	4.8	10.1	7.0	15.2
Education						
High school or less	10.4	9.6	11.7	21.3	15.2	25.9
Some postsecondary education	5.5	5.2	6.7	12.2	8.8	20.0
Bachelor's degree or higher education	9.7	8.8	11.7	19.7	13.6	26.5
Immigrant status						
Canadian-born	7.2	6.4	9.5	16.1	10.5	24.2
Landed in Canada from 2005 to 2015	9.5	8.6	12.9	18.1	13.4	25.9
Landed in Canada before 2005	5.7	5.5	6.4	12.6	9.0	19.1
Non-permanent resident	...	...	...	20.0	19.6	20.4
Population group						
South Asian	7.9	7.5	9.1	16.1	12.4	21.8
Chinese	9.4	9.7	8.8	17.5	13.8	22.6
Black	6.6	6.1	8.1	16.0	10.5	24.1
Filipino	4.9	3.5	9.1	14.9	8.3	23.6
Latin American	6.6	5.7	10.0	15.3	10.5	24.3
Arab	9.6	10.2	7.4	20.7	16.0	28.5
Southeast Asian	x	x	x	14.8	x	21.0
Other	10.4	8.6	15.8	18.2	13.7	25.0
White	7.0	6.2	9.2	15.5	10.2	23.4
Knowledge of official languages						
English only	9.3	8.6	11.1	18.9	13.7	26.0
French only	3.3	3.2	3.5	8.3	5.7	14.3
English and French	6.6	5.6	9.6	15.6	9.5	23.7
Province of residence in 2016						
Newfoundland and Labrador	10.5	11.3	x	21.1	17.2	27.1
Prince Edward Island	15.5	15.3	x	27.1	19.1	36.7
Nova Scotia	6.4	6.7	x	18.3	11.2	31.5
New Brunswick	11.9	10.0	16.7	20.5	15.6	26.9
Quebec	3.7	3.4	4.9	9.4	5.9	16.2
Ontario	8.4	7.4	11.0	18.6	12.5	26.8
Manitoba	9.2	8.7	10.6	19.7	14.4	26.3
Saskatchewan	12.7	12.8	12.6	25.5	17.9	32.8
Alberta	13.3	13.9	12.2	22.6	18.7	26.5
British Columbia	10.4	9.4	13.4	18.9	15.3	24.1

... not applicable

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 6
Percentage of women who left the child care sector in 2016 for at least two years, by selected characteristics—alternative definition of leaving the child care sector (continued)

	Occupation					
	Narrow sample			Broad sample		
	Early childhood educators and All assistants		Other	Early childhood educators and All assistants		Other
	percent					
All	7.2	6.5	9.3	15.9	10.8	23.6
Full-time status						
Part-time	11.0	9.4	14.0	...	...	...
Full-time	6.2	5.8	7.3	...	...	...
Weekly wages in 2015						
Less than \$400	13.8	12.7	16.0	...	...	...
\$400 to \$599	8.6	8.2	10.4	...	...	...
\$600 to \$799	4.7	4.1	7.6	...	...	...
\$800 or more	3.8	3.6	4.3	...	...	...
Employment status and earnings in 2015						
Had no earnings in 2015	...	...	...	23.9	24.4	23.6
Had earnings in 2015, worked part time and earned less than \$600 per week	...	...	...	22.7	16.9	27.9
Had earnings in 2015, worked full time and earned less than \$600 per week	...	...	...	17.5	13.2	26.5
Had earnings in 2015, worked part time and earned \$600 or more per week	...	...	...	20.8	12.4	29.3
Had earnings in 2015, worked full time and earned \$600 or more per week	...	...	...	8.6	5.8	15.1
Had earnings in 2015, but weekly earnings are unknown	...	...	...	24.6	17.5	28.0
Positive pension adjustment in 2016?						
No	10.2	9.4	12.3	19.6	14.5	26.6
Yes	2.5	2.1	3.8	8.9	4.5	16.9
Unionized in 2016?						
No	8.2	7.5	10.0	17.6	12.2	25.0
Yes	1.9	1.8	2.9	4.6	3.2	8.3
Tenure						
1 to 2 years	13.4	12.4	15.5	24.2	18.8	28.8
3 to 5 years	8.1	7.2	11.3	14.8	10.4	24.7
6 years or more	2.7	2.6	2.9	4.9	3.7	8.1
Received a record of employment because of injury or illness in 2016?						
No	6.8	6.1	9.0	15.8	10.5	23.5
Yes	18.7	17.8	23.6	21.1	19.3	28.4
Received income from WC in 2016?						
No	7.2	6.5	9.3	16.0	10.8	23.6
Yes	8.2	7.5	13.2	12.7	9.6	24.5
Received CPP or QPP disability benefits in 2016?						
No	7.2	6.5	9.3	15.9	10.8	23.6
Yes	x	x	x	31.2	x	x
Received ROEs, WC benefits, or CPP or QPP disability benefits in 2016?						
No	6.8	6.0	9.0	15.9	10.5	23.5
Yes	13.2	12.4	18.5	16.5	14.0	25.9
	number					
Sample size	21,924	16,435	5,489	35,065	21,186	13,879
Weighted population counts	91,698	68,658	23,041	148,280	88,974	59,306

... not applicable

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 7
Average partial effects for the likelihood of leaving the child care sector in 2016 for at least two years, by selected characteristics—alternative definition of leaving the child care sector

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	average partial effects					
Age in 2016						
18 to 24	0.000	-0.006	0.014	-0.010 *	-0.011 *	-0.021 *
25 to 34	...	...	...	...	...	...
35 to 44	-0.019 ***	-0.023 ***	-0.006	-0.037 ***	-0.024 ***	-0.058 ***
45 to 60	-0.021 ***	-0.020 ***	-0.021 *	-0.038 ***	-0.026 ***	-0.068 ***
Education						
High school or less	0.014 ***	0.012 *	0.012	0.028 ***	0.019 ***	0.012
Some postsecondary education	...	...	...	...	...	...
Bachelor's degree or higher education	0.035 ***	0.028 ***	0.047 ***	0.054 ***	0.028 ***	0.052 ***
Immigrant status						
Canadian-born	...	...	...	...	...	...
Landed in Canada from 2005 to 2015	-0.005	-0.007	0.010	-0.021 ***	-0.014 *	-0.012
Landed in Canada before 2005	-0.003	0.000	-0.013	-0.019 **	-0.011	-0.024 †
Non-permanent resident	...	...	...	-0.038 **	0.001	-0.079 ***
Population group						
South Asian	-0.024 ***	-0.021 **	-0.036 **	-0.037 ***	-0.024 **	-0.047 **
Chinese	0.006	0.015	-0.023	-0.013	0.003	-0.029
Black	-0.004	0.003	-0.026 *	0.004	0.003	0.000
Filipino	-0.042 ***	-0.045 ***	-0.032	-0.040 ***	-0.048 ***	-0.026
Latin American	-0.004	-0.003	-0.010	0.006	0.007	0.010
Arab	0.024 *	0.042 ***	-0.037 †	0.061 ***	0.059 ***	0.068 **
Southeast Asian	-0.034 †	-0.023	-0.066 **	-0.033	-0.026	-0.050
Other	0.007	0.001	0.023	-0.009	-0.002	-0.013
White	...	...	...	...	...	...
Province of residence in 2016						
Newfoundland and Labrador	0.029 †	0.036 †	-0.009	0.071 **	0.063 **	0.059
Prince Edward Island	0.063 **	0.061 *	0.064	0.134 ***	0.081 **	0.175 ***
Nova Scotia	0.000	0.006	-0.026	0.056 ***	0.024 †	0.111 ***
New Brunswick	0.029 **	0.020 †	0.051 *	0.056 ***	0.045 ***	0.052 *
Quebec	...	...	...	...	...	...
Ontario	0.019 ***	0.017 **	0.023 *	0.060 ***	0.039 ***	0.072 ***
Manitoba	0.050 ***	0.056 ***	0.041 *	0.077 ***	0.083 ***	0.072 ***
Saskatchewan	0.049 ***	0.057 ***	0.029	0.111 ***	0.079 ***	0.128 ***
Alberta	0.055 ***	0.064 ***	0.036 *	0.088 ***	0.083 ***	0.070 ***
British Columbia	0.027 ***	0.025 ***	0.033 *	0.060 ***	0.054 ***	0.054 ***

... not applicable

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

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

*** significantly different from reference category ($p < 0.001$)

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

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

Table 7
Average partial effects for the likelihood of leaving the child care sector in 2016 for at least two years, by selected characteristics—alternative definition of leaving the child care sector (continued)

	Occupation					
	Narrow sample			Broad sample		
	All	Early childhood educators and assistants	Other	All	Early childhood educators and assistants	Other
	average partial effects					
Full-time status						
Part-time	0.000	-0.004	0.008	...	...	...
Full-time	...	...	...	...	...	...
Weekly wages in 2015						
Less than \$400	0.040 ***	0.040 ***	0.029 *	...	...	...
\$400 to \$599	0.015 **	0.017 ***	0.004	...	...	...
\$600 to \$799	...	...	...	...	...	...
\$800 or more	0.000	0.004	-0.024 †	...	...	...
Employment status and earnings in 2015						
Had no earnings in 2015	...	...	...	0.047 ***	0.075 ***	0.008
Had earnings in 2015, worked part time and earned less than \$600 per week	...	...	...	0.059 ***	0.047 ***	0.054 ***
Had earnings in 2015, worked full time and earned less than \$600 per week	...	...	...	0.034 ***	0.028 ***	0.049 ***
Had earnings in 2015, worked part time and earned \$600 or more per week	...	...	...	0.070 ***	0.036 ***	0.084 ***
Had earnings in 2015, worked full time and earned \$600 or more per week	...	...	...	0.000	0.000	0.000
Had earnings in 2015, but weekly earnings are unknown	...	...	...	0.077 ***	0.054 **	0.063 ***
Positive pension adjustment in 2016?						
No	...	...	...	...	...	...
Yes	-0.040 ***	-0.042 ***	-0.038 **	-0.017 **	-0.040 ***	-0.010
Unionized in 2016?						
No	...	...	...	...	...	...
Yes	-0.032 ***	-0.026 ***	-0.048 ***	-0.085 ***	-0.045 ***	-0.136 ***
Tenure						
1 to 2 years	0.059 ***	0.054 ***	0.070 ***	0.139 ***	0.100 ***	0.166 ***
3 to 5 years	0.032 ***	0.024 ***	0.061 ***	0.074 ***	0.043 ***	0.137 ***
6 years or more	...	...	...	...	...	...
Received ROEs, WC benefits, or CPP or QPP disability benefits in 2016?						
No	...	...	...	...	...	...
Yes	0.091 ***	0.085 ***	0.124 ***	0.053 ***	0.066 ***	0.060 ***
	number					
Sample size	21,924	16,435	5,489	35,065	21,186	13,879
Weighted population counts	91,698	68,658	23,041	148,280	88,974	59,306

... not applicable

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

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

*** significantly different from reference category ($p < 0.001$)

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

Notes: Includes women aged 18 to 60 employed in child care services (North American Industry Classification System code 6244) in 2016. See main text for sample definitions.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

6 Women leaving the child care sector in subsequent years

The multivariate analyses presented in Tables 5 and 7 assess the degree to which work absences experienced in 2016 are associated with departures from the child care sector in 2016. However, these multivariate analyses do not quantify the degree to which work absences that are experienced in, say, 2016 are associated with departures in subsequent years. The survival analysis used in this section overcomes this limitation.

To conduct this survival analysis, the study uses LWF data from 2000 to 2017. The sample consists of women aged 18 to 44 who

- 1) started a new job in the child care services industry (NAICS 6244) in year t ($t = 2000$ to 2015)
- 2) were employed in this industry for at least two years
- 3) did not receive ROEs because of injury or illness, WC benefits, or CPP or QPP disability benefits during these two years.

These women are followed over time until 2017 (the last year for which a two-year absence can be determined in the 1989-to-2019 LWF) or until they leave the child care sector for at least two years. Condition 1 shows that 16 cohorts are considered: the first cohort starts a new job in 2000 while the last cohort starts a new job in 2015. Conditions 2 and 3 ensure that women in these cohorts spent a minimum amount of time in the child care services industry (two years) and that they were “healthy” during that period (i.e., did not receive ROEs because of injury or illness, WC benefits or CPP or QPP disability benefits).²⁴ The age restriction—being aged 18 to 44 in year t —is imposed to ensure that the women in the 2000 cohort will be at most in their early 60s in 2017. The primary definition of leaving the child care sector is used.

The survival analysis pools together the 16 cohorts defined above and assesses whether the receipt of ROEs, WC benefits, or CPP or QPP disability benefits in year t is associated with a greater likelihood of leaving the child care sector for at least two years in year t or in subsequent years ($t+1$ to $t+10$).²⁵ The following set of control variables is used: age group indicators, tenure, tenure squared, year indicators, union status in year t , pension coverage in year t , province of residence in year t , and indicators of average annual wages and salaries received in the first two years in the child care services industry. Model 1 includes a limited set of cohort indicators, while Model 2 does not. The results are shown in Table 8.

24. Condition 3 is imposed to minimize concerns about the possibility that departures from the child care sector may have been caused by illnesses or injuries that originated in a previous job and that persisted (or reappeared) at the beginning of the new job.

25. Year t refers to the year of the injury or illness, not the year that a person started a job in the child care services industry. The analysis uses a logistic regression applied to survival data. In this framework, a person contributes a number of observations equal to the number of years during which she is at risk of leaving the child care sector. Since a person may contribute several observations during a given employment spell and may be observed in several cohorts, standard errors for this logistic regression are clustered by person identifier.

Table 8

Average partial effects for the likelihood of leaving the child care sector during the current year or in subsequent years, women receiving records of employment because of injury or illness, workers' compensation benefits, or Canada Pension Plan or Quebec Pension Plan disability benefits versus other women

	Women aged 18 to 44		Women aged 18 to 24		Women aged 25 to 44	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	average partial effects					
Current year	0.033 ***	0.033 ***	0.025 ***	0.025 ***	0.039 ***	0.039 ***
1 year later	0.001	0.001	-0.012 ***	-0.012 ***	0.012 ***	0.012 ***
2 years later	0.026 ***	0.026 ***	0.026 ***	0.026 ***	0.028 ***	0.028 ***
3 years later	0.021 ***	0.021 ***	0.015 **	0.015 **	0.027 ***	0.027 ***
4 years later	0.016 ***	0.016 ***	0.022 ***	0.022 ***	0.012 **	0.012 **
5 years later	0.021 ***	0.021 ***	0.030 ***	0.030 ***	0.015 **	0.015 **
6 years later	0.026 ***	0.026 ***	0.039 ***	0.039 ***	0.016 **	0.017 **
7 years later	0.017 **	0.017 **	0.024 **	0.025 **	0.012 †	0.013 †
8 years later	0.010	0.010	0.025 **	0.025 **	0.000	0.000
9 years later	0.000	0.000	-0.004	-0.004	0.004	0.004
10 years later or more	-0.009 †	-0.009 †	0.001	0.001	-0.014 *	-0.014 *

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

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

*** significantly different from reference category ($p < 0.001$)

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

Notes: Includes women aged 18 to 44 starting a new job in child care services (North American Industry Classification System code 6244). The numbers refer to the likelihood of leaving the child care sector for at least two years. See main text for details.

Source: Statistics Canada, Longitudinal Worker File.

The first two columns of Table 8 display results for the sample defined above. They show that for both Model 1 and Model 2, receiving ROEs, WC benefits, or CPP or QPP disability benefits in year t is generally associated with a greater likelihood of leaving the child care sector not only in year t but also in subsequent years. For example, women who had work absences in year t were on average 3.3 percentage points more likely than other women to leave the child care sector in year t and 2.6 percentage points more likely to leave in year $t + 6$.

The last two columns of Table 8 also show a robust association between work absences due to injury or illness in year t and departures from the child care sector in subsequent years for women who were aged 25 to 44 when they started a new job in the child care services industry. Columns 3 and 4 show similar results for women who were aged 18 to 24 when they started a new job.²⁶ In sum, Table 8 confirms that work absences experienced in a given year are generally associated with a greater likelihood of leaving the child care sector during that year and subsequent years.

26. In all years following the receipt of ROEs or WC benefits except year $t + 1$, there is a positive association between such receipt and the likelihood of leaving the child care sector for women aged 18 to 24. Why year $t + 1$ is an exception for this group remains to be determined.

7 Discussion

The estimates presented in Tables 5, 7 and 8 are consistent with the hypothesis that work absences resulting from injuries or illnesses might increase the propensity of child care workers to leave the child care sector. However, these estimates cannot be given a causal interpretation. The reason is that child care workers who experience work absences because of injuries or illnesses may differ from other child care workers in important unmeasured aspects (such as personality traits, attitudes towards work, motivation and attention to details) that are correlated with the propensity to leave the child care sector. For example, if child care workers who are prone to injuries or illnesses have a higher-than-average (lower-than-average) propensity to leave the child care sector, then the numbers shown so far will overestimate (underestimate) the causal impact of work absences caused by injuries or illnesses on the likelihood of leaving the child care sector.

With this possibility in mind, it may be useful to answer the following question: assuming that Tables 5 and 7 show unbiased estimates of the causal impact of work absences on the propensity to leave the child care sector, by how much would the departures of ECEAs from the child care sector fall—on an annual basis—if work absences due to injury or illness were eliminated?

In 2016, 8.1% of ECEAs in the broad sample had work absences (Table 2, column 5). All else equal, those who were absent were between 5.7 and 6.6 percentage points more likely than others to leave the child care sector that year (Tables 5 and 7, column 5), depending on whether the primary definition or the alternative definition of leaving the child care sector is used. Multiplying these two sets of numbers implies that moving to a scenario with no work absences due to injury or illness might reduce the departures of ECEAs from the child care sector by:

- a) 0.46 percentage points ($0.081 \times 0.057 = 0.0046$) on an annual basis (primary definition of leaving the child care sector)
- b) 0.53 percentage points ($0.081 \times 0.066 = 0.0053$) on an annual basis (alternative definition of leaving the child care sector).

Since the overall departure rates observed in the broad sample among ECEAs in 2016 varied between 7.1% and 10.8% (Tables 4 and 6, column 5), the numbers outlined in a) and b) imply that these departure rates would fall marginally—for example, from 10.80% to 10.27% in b)—if work absences due to injury or illness were eliminated.

Because these estimates may not reflect the causal impact of work absences on departure rates from the child care sector, it is worth considering a second question: if work absences due to injury or illness were eliminated, what is the maximum reduction in the departure rates that could be achieved on an annual basis? To answer this question, one must assume that if they had not experienced work absences due to injury or illness, none of the ECEAs would have left the child care sector.

Under this scenario, departure rates of ECEAs from the child care sector would have fallen by between 0.83 percentage points and 1.13 percentage points, from baseline rates of 7.1% and 10.8%.²⁷ In sum, the maximum reduction in departure rates that could be achieved nationwide through the elimination of work absences due to injury or illness appears to be relatively limited. This finding suggests that the objective of increasing the retention of ECEAs within the child care sector is unlikely to be achieved nationwide solely by reducing (or even eliminating) the sources of these work absences.

27. Under the alternative definition of leaving the child care sector, 14.0% of ECEAs left the child care sector in 2016. Since 8.1% of ECEAs had work absences due to injury or illness in 2016, eliminating these absences could reduce departure rates by at most 1.13 percentage points (i.e., 0.081 times 0.14).

The logit models of leaving the child care sector estimated so far control for the province of residence but do not allow the effect of work absences on departures to differ across provinces. This is a limitation because work absences are likely measured differently in Quebec (where rates of WC benefits are relatively high), compared with other provinces. As a robustness check, logit models of the likelihood of leaving the child care sector (alternative definition) were estimated separately for each of the four largest provinces (Quebec, Ontario, Alberta and British Columbia) for the broad sample of ECEAs.

In each of these provinces, ECEAs who had work absences were, all else equal, more likely to leave the child care sector than other ECEAs. Under the assumption that logit parameters provide unbiased estimates of the causal impact of work absences on the propensity to leave the child care sector, departure rates of ECEAs would, in each province, drop marginally if work absences due to injury or illness were eliminated. For example, departure rates of ECEAs in Ontario would drop by 0.3 percentage points from a baseline departure rate of 12.5% (Table 9). Under the alternative assumption that none of the ECEAs who had work absences would have left the child care sector if they had not been injured or ill, the maximum reduction in departures that could be achieved by eliminating these work absences would, in most provinces, be marginal. In this scenario, departure rates of ECEAs in Ontario would drop by 0.8 percentage points, from a baseline departure rate of 12.5%. The only exception is Quebec, where departure rates of ECEAs would drop by 1.2 percentage points, from a baseline departure rate of 5.9%, which represents a 20% decline in departures (Table 9). Taken together, these numbers confirm that reducing work absences due to injury or illness will, in general, likely have a limited impact on overall employee retention.

Table 9
Reduction in departures of early childhood educators and assistants under two different scenarios, selected provinces

	Quebec	Ontario	Alberta	British Columbia
Scenario 1: Logit parameters provide unbiased estimates of the causal impact of work absences due to injury or illness on departure rates				
Reduction in departures (percentage points)	0.3	0.3	0.7	0.7
Rates of departures of ECEAs (percent)	5.9	12.5	18.7	15.3
Scenario 2: Maximum reduction in departures associated with the elimination of work absences due to injury or illness				
Maximum reduction in departures (percentage points)	1.2	0.8	1.5	1.4
Rates of departures of ECEAs (percent)	5.9	12.5	18.7	15.3

Notes: ECEAs = early childhood educators and assistants. Includes women aged 18 to 60 employed as ECEAs in child care services (North American Industry Classification System code 6244) in 2016. Numbers are based on the broad sample of ECEAs and on the alternative definition of leaving the child care sector.

Sources: Statistics Canada, Longitudinal Worker File and 2016 Census of Population.

8 Conclusion

Work absences caused by injuries or illnesses may lead some child care workers to leave the child care sector and therefore may lower the degree of personnel retention within this sector. Using a large representative sample of women employed in the child care services industry, this study documents—for the first time in Canada—the association between work absences caused by injuries or illnesses and the likelihood of child care workers leaving the child care sector. The main findings are the following:

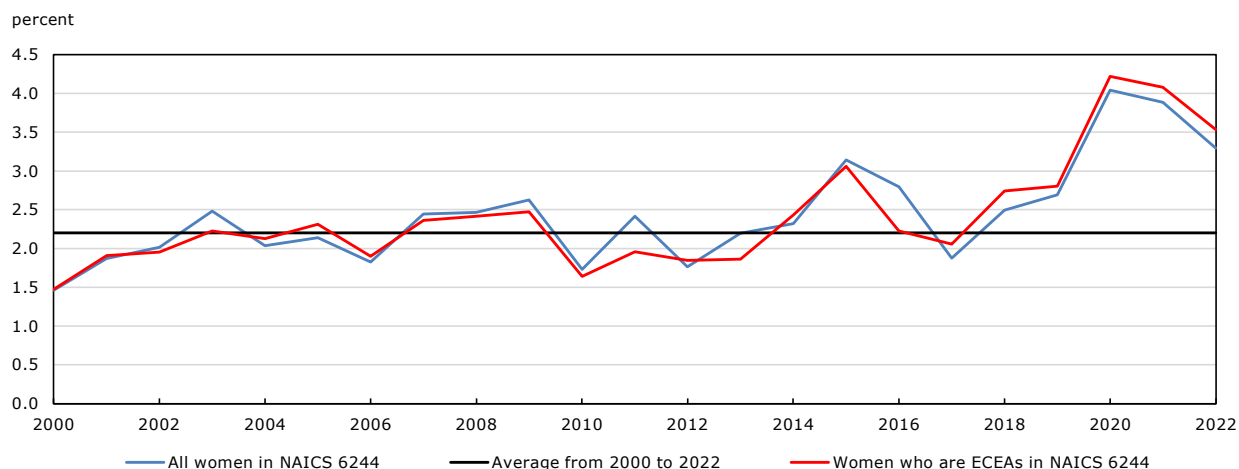
- 1) Before the COVID-19 pandemic, work absences due to injury or illness were not very frequent among child care workers. In 2018, 7.8% of women employed in the child care services industry in their main job had such work absences. The corresponding percentages were lower for women employed in elementary and secondary schools (4.2%) and higher for women employed in nursing and residential care facilities (10.6%).
- 2) Depending on the samples analyzed and the definitions used for leaving the child care sector, between 9% and 14% of ECEAs who had work absences due to injury or illness in 2016 left the child care sector that year. In contrast, departure rates of other ECEAs were lower, between 4% and 11%.
- 3) All else equal, ECEAs who lived outside Quebec, were younger than 35 years, had at most a high school diploma, earned relatively low wages, were not unionized, had no pension plan or were recently hired were more likely than others to leave the child care sector in 2016.
- 4) All else equal, ECEAs who had work absences due to injury or illness were more likely than others to leave the child care sector in 2016.
- 5) Data from the LFS suggest that the COVID-19 pandemic increased the full-week work absences of ECEAs in 2020-2021, relative to the average observed from 2000 to 2019.
- 6) Because relatively few ECEAs experience work absences due to injury or illness in a given year, efforts to reduce injury- or illness-related work absences or to eliminate them entirely will likely have a limited impact on overall employee retention within the child care sector. This finding suggests that strategies to increase overall employee retention in this sector will likely have to rely on a broader set of tools than those aimed solely at reducing work absences caused by injuries or illnesses.

Several limitations must be noted. The fact that reductions in work absences caused by injuries or illnesses will likely have a limited impact on overall employee retention within the child care sector does not rule out the possibility that such reductions might have a significant impact in some day care centres, namely those that rely on a few employees for their operations. Second, departure rates from the child care sector may differ across day care centres depending on several characteristics, such as establishment size, and whether centres operate in regulated or unregulated settings. Third, departure rates may also differ for licensed and unlicensed ECEAs. Fourth, one should expect employee turnover within day care centres to be substantially higher than the departure rates from the child care sector documented in this study. Lastly, the magnitude of the association between work absences caused by injuries and illnesses and employees' departures from the child care sector may have changed with the onset of the COVID-19 pandemic. Because of data limitations, these issues could not be investigated.

Appendix: Full-week absences due to illness or disability during the COVID-19 pandemic

The degree to which the COVID-19 pandemic affected the work absences of child care workers can be assessed using the Labour Force Survey. To examine this issue, women aged 18 to 60 employed as paid workers in the child care services industry (North American Industry Classification System code 6244) are considered. The percentage who had full-week absences due to illness or disability is computed from January 2000 to September 2022. The results are shown in Appendix Chart A.1.

Appendix Chart A.1
Percentage of child care workers with full-week absences due to illness or disability, 2000 to 2022



Notes: Women aged 18 to 60 employed in child day-care services (NAICS 6244). The 2022 data ends in September 2022. ECEAs = early childhood educators and assistants. NAICS = North American Industry Classification System.

Source: Statistics Canada, Labour Force Survey.

From 2000 to 2019, 2.2% of female early childhood educators and assistants (ECEAs) had full-week absences due to illness or disability in a given year, on average. In 2020, this proportion increased to 4.2%. It was, at 4.1%, similar in 2021. Measured over the first nine months of 2022, the percentage of female ECEAs with such absences amounted to 3.5%. Taken together, these numbers suggest that the COVID-19 pandemic increased the full-week work absences of ECEAs by about 2 percentage points in 2020-2021, from a long-term average of 2.2%. This conclusion holds when one considers all women employed in the child care services industry.

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