

February 2023

## Exploring the Impacts of the COVID-19 Pandemic on the Number of Reported Missing Persons in Canada during 2020

Alexandria Connolly

*Royal Canadian Mounted Police, Sensitive and Specialized Investigative Services, Strategic and Operational Services, alexandria.connolly@rcmp-grc.gc.ca*

Mauranne Ste-Marie

*Royal Canadian Mounted Police, Sensitive and Specialized Investigative Services, Strategic and Operational Services, mauranne.ste-marie@rcmp-grc.gc.ca*

Kevin O'Shea

*Royal Canadian Mounted Police, Sensitive and Specialized Investigative Services, National Centre for Missing Persons and Unidentified Remains, kevin.oshea@rcmp-grc.gc.ca*

Follow this and additional works at: <https://scholarworks.sjsu.edu/ijmp>



Part of the [Criminology and Criminal Justice Commons](#), and the [Social Statistics Commons](#)

---

### Recommended Citation

Connolly, A., Ste-Marie, M., & O'Shea, K. (2023). Exploring the Impacts of the COVID-19 Pandemic on the Number of Reported Missing Persons in Canada during 2020. *International Journal of Missing Persons*, 1(1), 62. <https://doi.org/10.55917/2769-7045.1002>

This Article is brought to you for free and open access by the Justice Studies at SJSU ScholarWorks. It has been accepted for inclusion in International Journal of Missing Persons by an authorized editor of SJSU ScholarWorks. For more information, please contact [scholarworks@sjsu.edu](mailto:scholarworks@sjsu.edu).

---

## Exploring the Impacts of the COVID-19 Pandemic on the Number of Reported Missing Persons in Canada during 2020

### Acknowledgements

A special thank you to Professor Alexis Truong from the University of Ottawa for his expertise in quantitative analysis and guidance throughout this research project.

**Exploring the Impacts of the COVID-19 Pandemic on the Number of Reported Missing  
Persons in Canada during 2020**

Alexandria Connolly, Mauranne Ste-Marie and Kevin O'Shea

Sensitive and Specialized Investigative Services, Royal Canadian Mounted Police

[SSIS-SOS@rcmp-grc.gc.ca](mailto:SSIS-SOS@rcmp-grc.gc.ca)

### **Abstract**

The COVID-19 pandemic has resulted in notable social and economic impacts in many countries, including Canada. This study examines the impacts of the COVID-19 pandemic on the number of reported missing persons, adults and children, in Canada during 2020. Results indicate that there was a decrease in the number of reported missing persons cases during 2020 as compared to 2019 by 20.20%. All provinces and territories experienced a decrease, with the exception of New Brunswick. The pandemic had notable impacts specifically on the number of reported missing children, missing teenagers, and missing male individuals in general. This study provides a better understanding of how the restrictions of the pandemic affected missing persons numbers and the nature of who goes missing. These findings can also be used to inform strategies under similar future states to allow for effective response.

**Keywords:** COVID-19 pandemic, missing persons investigations, National Centre for Missing Persons and Unidentified Remains, Canada, runaways

## **Exploring the Impacts of the COVID-19 Pandemic on the Number of Reported Missing Persons in Canada during 2020**

### **Introduction**

This study examines the effects of the restrictions of the COVID-19 pandemic on missing persons cases in Canada during 2020. On March 11<sup>th</sup>, 2020, the World Health Organization (WHO) declared the *coronavirus* or *COVID-19*, a pandemic after the presence of more than 118,000 cases in 114 countries (WHO, 2020). In response, the provincial and territorial governments in Canada declared states of emergencies, which led to the closures of schools, establishments and non-essential workplaces (The Canadian Press, 2021). Since health is under provincial jurisdiction, these measures differed from province to province. The Government of Canada announced the closure of the border to non-Canadians on March 14<sup>th</sup> 2020 and by March 18<sup>th</sup>, the Canada-United States border was closed (The Canadian Press, 2021). By March 18<sup>th</sup> 2020, there had been 727 cases of COVID-19 in Canada (Esri Canada, 2021).

The modification and enforcement of the federal legislation began in the early weeks of March 2020 to protect the health of Canadians (Department of Justice, 2022). In an effort to track COVID-19 cases, both the provinces and the federal government engaged in contact tracing in an effort to control the spread of COVID-19 (Statistics Canada, 2022). This involved informing individuals of COVID-19 exposures and providing information on quarantine measures through a federally created cell phone application or through local public health units (Government of Canada, 2021b).

In the months to follow, additional restriction measures were implemented including the creation of mask mandates for all indoor spaces, and the requirement for social distancing

(Government of Canada, 2020b). Reintegration to pre-COVID society began at different rates in the various provinces and territories during the summer of 2020, but these efforts were often halted due to fluctuations in the active cases, hospitalizations and deaths. While there were individual differences by province in response to the pandemic, generally all of Canada took active steps to reduce the spread of COVID-19 through social distancing, the use of masks, and mobility restrictions, which were enforced by law enforcement officers. By the end of 2020, there had been 581,397 reported cases of COVID-19 in Canada (Esri Canada, 2021). In December of 2020, vaccinations against COVID-19 became available to high-risk populations including healthcare workers and the elderly. By the end of the year, 0.3% of the population had received one dose of a vaccine against COVID-19 (Government of Canada, 2022).

The COVID-19 pandemic resulted in large and widespread social and economic disruptions, due to the implementation of various measures aimed to reduce the risk of widespread infection. The societal changes from the pandemic impacted policing and the frequency of certain reported criminal offences. Changes in mobility restrictions and increased unemployment from the pandemic are believed to have increased the risk of child sexual exploitation all around the world (NetClean, 2021). Relying on survey data from 470 law enforcement officers in 39 countries, NetClean (2021) found that there was an increase in online activity in terms of attempting to contact children, the volume of self-produced child sexual exploitation material (CSEM) and peer-to-peer downloads (a mechanism to share CSEM). With children spending more time online as a means of socializing and continuing their education, they became more vulnerable to attempts at exploitation (UN Women, 2022b). Additionally, the economic hardships from the pandemic, especially in countries that relied on travel and tourism, rendered children especially

vulnerable to child sexual offenders who were willing to pay (Down to Zero Alliance and ECPAT International, 2020).

The implication on victimization extends beyond child-directed offences as COVID-19 also affected the victimization towards adults. The United Nations' *Women Report on Intensification of efforts to eliminate all forms of violence against women* (2022a) found that there was an increase in reported cases of domestic violence to helplines, women's shelters and the police. In some countries, this increase was five-fold (UN Women, 2022b). These increases were seen in many countries around the world including Australia, France, Cyprus, Singapore, Argentina and Canada. As well, in many Asian countries during lockdowns or stay-at-home orders, there was an increase in internet searches related to violence against women. These searches included key words such as *physical abuse signs, violent relationships, helplines, signs of domestic abuse*, etc. The increases ranged from 63 to 477 percent increases in search queries for countries including the Philippines, Malaysia and Nepal. The increases in violence against women are believed to be the result of multiple pandemic-related factors including the overburdened health care systems which provide care to abuse victims, compromised or altered support services, and mobility restrictions which trapped many women with their abusive partners. These findings demonstrate that in some circumstances the pandemic exacerbates victimization towards vulnerable populations.

In contrast, some crime types decreased in frequency in response to the pandemic. A study examining crime type frequencies during the early months of the pandemic found that in some major US cities there were fewer residential burglaries (Ashby, 2020). This occurred in cities during the first four weeks of the stay-at-home order, suggesting that the presence of people at home reduced the risk of burglary. Another crime type that was reduced in some cities

was vehicle theft, which in the city of San Francisco saw 63% fewer thefts than the forecasted model. The author suggests that this decrease could be the result of an altered distribution of unattended vehicles in public spaces. During the stay-at-home order, fewer people would have parked their vehicles in unattended lots downtown so the opportunity for theft would be reduced. These findings suggest that the social changes related to the pandemic have a complex association with the frequency of reported criminal offences.

Prior to the pandemic, cases of missing persons presented challenging issues for police forces due to their growing frequency (Sidebottom, Boulton, Cockbain, Halford & Phoenix, 2020; Ferguson & Soave, 2020). Every year in Canada, tens of thousands of individuals are reported as missing to the police (Royal Canadian Mounted Police, 2020). In Canada, a missing person is defined as “anyone reported to police or by police as someone whose whereabouts are unknown, whatever the circumstances of their disappearance, and they are considered missing until located” (Government of Canada, 2014, para. 5). Understanding the factors surrounding a person’s disappearance has been the focus of scholarly interest for many years. Literature has generally focused on identifying risk factors and understanding the increased vulnerabilities they may pose (Huey & Ferguson, 2020; Kiepal, Carrington and Dawson, 2012). Investigations involving missing children are considered high priority as it can indicate other underlying vulnerabilities and/or sign of abuse (Sidebottom et al., 2020). This is important as more than half of the reported missing persons in England were children (NCA, 2016 as cited in Sidebottom et al., 2020). This pattern has also been observed in other countries including Australia, Canada and Scotland (Bricknell and Renshaw, 2016; Government of Canada, 2017; and Police Scotland, 2018 as cited in Sidebottom et al., 2020). Given these findings, children have become the focus of missing persons research along with other populations who are perceived as high-risk. These



include those with mental health issues, dementia, those who are experiencing unemployment or homelessness, and others (Huey and Ferguson, 2020; Kiepal, Carrington and Dawson, 2012; Taylor, Woolnough and Dickens, 2019). Research focuses on why these individuals are considered high-risk, as well as the process of going missing to develop strategies to prevent disappearances and improve police practices (Huey & Ferguson, 2020; Neubauer, Laquian, Conway & Liu, 2019; Sidebottom et al., 2020).

Another area of study has examined best practice recommendations to improve police investigations in the field of missing persons (Shalev-Greene, 2020). Common suggestions include the need for specialized missing person units, improved information collection processes, and increased use of social media to engage the public (Ferguson and Soave, 2021; Gabbert, Tamonyte, Apps, Caso, Woolnough, Hope, Handscomb, and Waterworth, 2020; Shalev-Greene, 2020). These types of activities have the potential to affect the outcome of investigations. While the impacts of policy and procedural changes for investigations have been examined, there is a gap in terms of examining the impact of societal phenomena on missing person incidences such as a pandemic.

Given the unique demands placed on emergency services as a result of the pandemic, Shalev Greene, O'Brien, Collie & Giles (2020) and O'Brien, Collie, Shalev Greene and Giles (2021) aimed to examine the extent that reported missing persons cases changed during the COVID-19 lockdown in the United Kingdom (U.K.). They examined cases of missing persons for a two-month period of 2020 and 2019, with data from six police forces. Results suggest that the lockdown period in the U.K. led to a 35% decrease in missing children reports and a 36% decrease in missing adult reports. Further, it was identified that high-risk adults and low risk children were more likely to go missing during the timeframe of 2020 as compared to 2019.

Using their findings, Shalev-Greene et al. (2020) and O'Brien et al. (2021) presented recommendations for police forces as well as future areas of study. This first of its kind study has demonstrated that the pandemic and subsequent social changes have influenced reports of missing persons in different ways.

Using the Shalev Greene et al. (2020) and O'Brien et al. (2021) studies as inspiration, the present study aims to widen the scope of understanding by examining the impacts of the *COVID-19* pandemic on the number and nature of reported missing persons cases in Canada in 2020. These cases were compared to the reported missing persons in 2018 and 2019. Particularly, this present study examines the impact of COVID-19 in relation to six variables: the overall number of missing persons, as well as the effect by province/territory, type of occurrence, sex, age and period of time the individual was missing. In contrast to the studies by Shalev Greene et al. (2020) and O'Brien et al. (2021), this present study does not use inferential statistics during the analysis, as the aim of this study is simply to provide a preliminary examination of the dataset. Further, this present study examines a large dataset, but with fewer variables in contrast to Shalev Greene et al (2020) and O'Brien et al. (2021) as some information is not available through the database used to create the dataset. For the purposes of this report, a *missing person* refers to someone who was reported to law enforcement as being missing and entered into police information systems as such.

The findings are intended to inform law enforcement working in the area of missing persons as well as the public on how the pandemic, particularly the lockdowns and mobility restrictions, may have affected the prevalence of persons going missing in Canada in 2020. Findings from this research can be used to inform future responses to similar societal

phenomena, to bare some factors that influence missing persons under any conditions, as well as to guide future research.

## **Methodology**

This study began with a review of academic literature and relevant law enforcement reports to identify any similar research conducted on this topic since the onset of the pandemic. It was found that only one country, the U.K., completed a study on the impact of *COVID-19* lockdown restrictions on missing persons reports (Shalev-Greene et al., 2020; O'Brien et al., 2021). The results of that research were used as international comparatives for this study, to see if Canada and the U.K. observed similar or different impacts during the pandemic. With this understanding of other research on this topic, the data required for this study was extracted from the *Missing Children/Persons and Unidentified Remains (MC/PUR) database*. This database is the only Canadian national police database specifically for missing persons (MP) and unidentified remains (UR) cases. It provides the necessary data and tools to coordinate a national approach to these investigations. The MC/PUR database is used by trained specialists to provide Canadian law enforcement, medical examiners and chief coroners with comprehensive information on MP and UR cases across jurisdictions. It is also used to conduct in-depth analyses in an attempt to identify trends and to link MPs to URs. An extract of the data was completed on April 8<sup>th</sup> 2021 to gather information about all persons reported missing between January 1, 2018 and December 31, 2020. The extract for this timeframe resulted in a sample of 208,140 cases of missing persons across Canada from varying jurisdictions. See Table 1 below for the breakdown of reported cases by month. The collected data included details related to:

- Province/territory

- Sex, which refers to the biological categorization of individuals based on primary sexual characteristics at birth (Government of Canada, 2019). Sex was used as a variable in this report, as the individual's gender is not generally available in the *MC/PUR* database. Gender refers to the socially constructed roles, behaviours, expressions, and identities of the individual (Government of Canada, 2019; Government of Canada, 2021c). Although it is not always clear if the field available in the police systems is being used for sex or gender in a particular case, for the statistical majority they are treated as sex. The two options that were included in this study for this field were *female* and *male*. Individuals whose sex was identified as *unknown* and *other* were excluded from the analysis in this report. This was done as together they represent less than 100 of the reported missing persons cases for each year so, conclusions cannot be drawn from a sample group this size, in this type of research design. It also allowed for consistent comparison to other Missing Person reports that also detailed findings for only male and female individuals. Additional research should be conducted to examine the Unknown or Other categories as well.
- Age, which refers to the age the person reached on the date they went missing. There were three categories used as options for this variable: adult, teenager and child. For this report, a *missing adult* refers to anyone reported missing who is between the ages of 18 and 102 at the time they went missing. A *missing teenager* refers to anyone reported missing who is between the ages of 11 and 17 inclusive. A *missing child* refers to anyone reported missing who is between the ages of 0 and 10.
- Probable Cause, which includes *abduction by a relative* (which includes *abducted by a relative*, *parental abduction with custody order* and *parental abduction without custody*

*order*), *runaway*, *wandered off/lost*, *unknown* and *other*. It is important to note that there are other Probable Causes, namely *Abduction by a stranger*, *accident*, *human trafficking* and *presumed dead*. To remain consistent with the rest of this study, these were excluded from the analysis as they represent less than 100 of the reported missing persons cases for each year. Additional research should be conducted to examine these probable causes.

- Time to Resolve, which refers to the number of days between Date Last Seen and Date Occurrence Concluded (for cases that have been resolved).

The timeframe chosen for the data extract enabled a multi-year comparison to identify potential changes observed during the *COVID-19* pandemic in missing persons numbers in Canada as compared to the same periods in 2018 and 2019. It must be noted that these changes cannot all be attributed to the pandemic necessarily. The correlations included in this report are statistical ones and thus, do not necessarily represent a cause-and-effect relationship. Numbers for both 2018 and 2019 were included to illustrate the typical variability between years.

The sample (n= 208,140) was imported into a quantitative analysis software, the Statistical Package for the Social Sciences (SPSS). The data was then reorganized to allow for the creation of figures, descriptive tables and basic statistical manipulations. These figures and tables allowed for differences to be observed between the variables, which then were used to guide the statistical analysis portion of the study. The data was statistically analyzed using Kendall's Tau Correlation (denoted by  $r$ ) which suggests how strongly two variables are related to each other or the degree of association between the two, for non-normal distributions. These were calculated using a confidence interval of 95%. The results of this analysis are presented in the Results section below. Additional statistical manipulations such as inferential statistics were

not used in this study as the aim of the study is to provide a preliminary overview of the data. It is important to note that this study relies on basic statistical manipulations and frequency tables so additional comparisons are necessary for more informative results.

### **Data Limitations**

MC/PUR includes occurrences that are currently open, only if they were open on or after May 16, 2014, and those that have been concluded. Open occurrences are ones that have not yet been resolved. An occurrence is concluded when the missing persons case is resolved (e.g., person has been located). For most occurrences in the database, the date used as the date of conclusion is the date at which the last mention of the case was removed from the Canadian Police Information Centre (CPIC). The data in MC/PUR is derived from missing person transactions in CPIC. Therefore, it is limited by the quality and types of data that agencies enter into CPIC and the techniques used by MC/PUR to compile that data. CPIC transactions include repeat runaway individuals, and situations where a single instance of a missing person may be entered and deleted multiple times and even by different agencies over a period of time (e.g., an agency removes an entry to replace it with slightly different information, or a child goes missing with the initial report being filed with one police service but later the file is transferred to another police service's jurisdiction and they put in their own entry). The MC/PUR uses algorithms in an attempt to identify and eliminate duplicate data and produce statistics that are more accurate. An occurrence is considered as belonging to a respective year based on the reported Date Last Seen regardless of when they are reported to police as missing. The number of missing person subjects reported herein reflects a *point in time* and can change if records for 2018, 2019 and 2020 cases are later added, modified, or flagged as duplicate. It is also important to note that Probable Cause may not be comprehensive nor entirely dependable because it is often subjective (identified by

individual investigators or agencies), not well defined, and not consistently completed nor maintained on CPIC. Although the authors recognize the limitations of this study based on the data available, the limitations are consistent across the time periods examined, and the study provides unique insight into how missing persons numbers changed over the period of the pandemic.

## Results

### Total Number of Missing Persons

Table 1 below shows the total number of missing persons by month for 2018, 2019 and 2020.

Month	2018	2019	2020
January	5,542	5,427	5,601
February	5,364	4,794	5,526
March	6,132	5,612	5,423
April	5,994	5,994	4,168
May	7,078	6,799	4,810
June	6,881	6,983	5,186
July	6,448	6,686	5,764
August	6,485	6,654	5,685
September	6,060	6,402	5,408
October	6,349	6,537	5,165
November	5,826	5,874	4,519
December	5,527	5,365	4,072
<b>Total</b>	<b>73,686</b>	<b>73,127</b>	<b>61,327</b>

As can be seen in Table 1 or in Figure 1 (below), during the time of the restrictions related to the pandemic (beginning after March 2020), there was a substantial reduction in the overall number of missing persons in Canada compared to the two previous years, especially in *April* and *December*. From *March* to *December* in both 2018 and 2019, there were approximately 63,000 missing persons. For the same period in 2020, there were approximately

50,000 people missing, representing a 20.20% decrease. For the entire year, a decrease of 16.14% was observed between 2019 and 2020, as compared to the decrease of 0.76% between 2018 and 2019. Normal fluctuations in the previous 5 years were about +/-6.00% (Royal Canadian Mounted Police, 2015-2020).

Month	Number of Report MPs	Number of Monthly COVID cases (Esri Canada, 2021)
January	5,601	4
February	5,526	16
March	5,423	8,571
April	4,168	44,637
May	4,810	37,711
June	5,186	13,257
July	5,764	11,928
August	5,685	12,816
September	5,408	29,810
October	5,165	75,753
November	4,519	143,628
December	4,072	203,266
<b>Total</b>	<b>61,327</b>	<b>581,397</b>

Table 2 demonstrates the number of reported *COVID-19* cases between *January* and *December* 2020, as well as the reported missing persons. Overall, there is a correlation of -0.70 between the number of COVID-19 cases and the number of reported missing persons, indicating a strong negative relationship between these phenomena: as the number of monthly *COVID-19* cases increased, the number of missing persons decreased. The 95% confidence interval ranges from -0.87 to -0.38, which render it difficult to draw definitive conclusions. To understand further this relationship, tables were then generated to examine the number of missing persons in comparison



with the other relevant variables (e.g., province/territory, age, sex, probable cause) in this study. These are explored in the following sections.

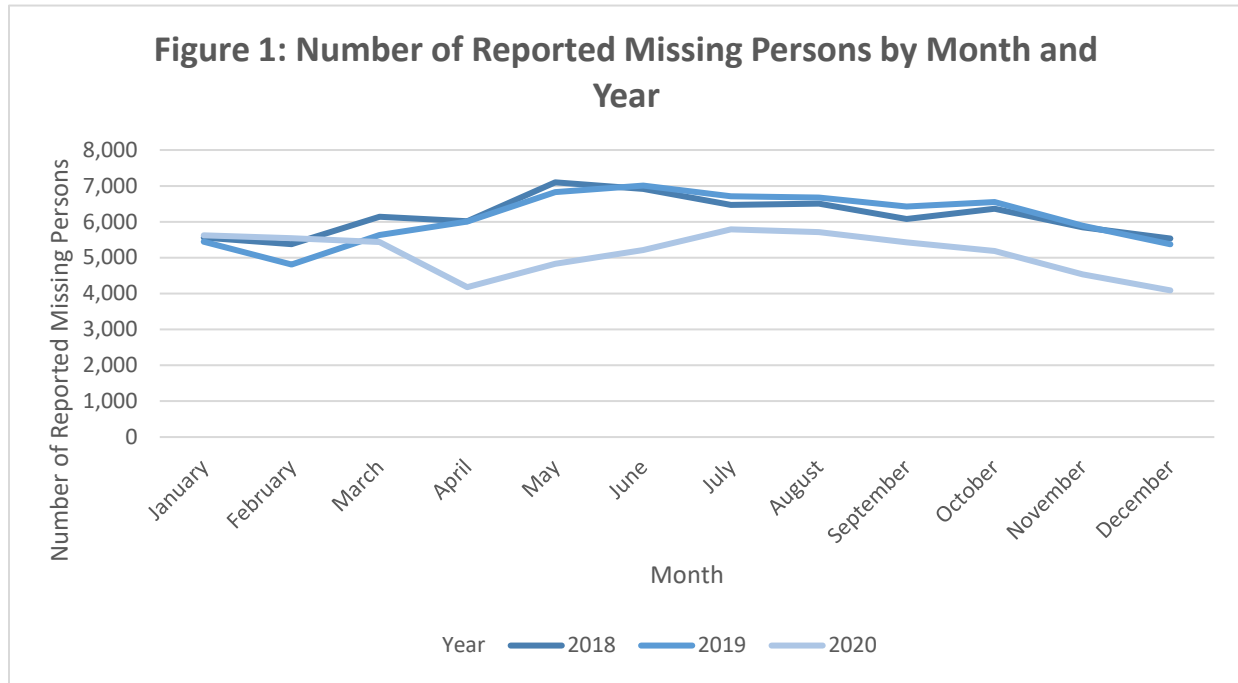


Table 3 highlights the information from Figure 1 in a frequency table and lists the percentage change between *2018 and 2019*, *2018 and 2020*, as well as *2019 and 2020* for each month.

Table 3: Number of Reported Missing Persons by Year and Month, and percentage change between years						
Month	2018	2018 to 2019	2019	2019 to 2020	2020	2018 to 2020
Jan.	5,542	-2.08%	5,427	3.21%	5,601	1.06%
Feb.	5,364	-10.63%	4,794	15.27%	5,526	3.02%
March	6,132	-8.48%	5,612	-3.37%	5,423	-11.56%
Apr.	5,994	0.00%	5,994	-30.46%	4,168	-30.46%
May	7,078	-3.94%	6,799	-29.25%	4,810	-32.04%
June	6,881	1.48%	6,983	-25.73%	5,186	-24.63%
July	6,448	3.69%	6,686	-13.79%	5,764	-10.61%
Aug.	6,485	2.61%	6,654	-14.56%	5,685	-12.34%
Sept.	6,060	5.64%	6,402	-15.53%	5,408	-10.76%
Oct.	6,349	2.96%	6,537	-20.99%	5,165	-18.65%
Nov.	5,826	0.82%	5,874	-23.07%	4,519	-22.43%
Dec.	5,527	-2.93%	5,365	-24.10%	4,072	-26.33%
<b>Total</b>	<b>73,686</b>	<b>-0.76%</b>	<b>73,127</b>	<b>-16.14%</b>	<b>61,327</b>	<b>-16.77%</b>

At the beginning of 2020, before the onset of the *COVID-19* pandemic, the number of missing persons compared to 2019 was similar, if not slightly higher (3.21-15.27% increases for the months of *January* and *February*). Then, a slight decrease occurred in the month of *March* (3.37%), followed by large decreases in the number of missing persons for the months of *April* and *May* (30.46% and 29.25% decreases as compared to 2019). This decrease in percentage remained stable until *July 2020*, during which a higher number of missing persons was observed, as compared to the previous months of that year. Despite this increase in *July 2020*, the number of missing persons was nonetheless lower compared to *July 2019* (13.79% decrease). In September, there was an increase in *COVID-19* cases and a parallel decrease (15.53%) in

missing persons was found. Across the following months, the decrease in missing persons continued to grow, beginning with 20.99% in *October* and ending with a 24.10% decrease by *December 2020*. These findings reinforce the relationship between the increase in *COVID-19* cases (with restrictions imposed in response) and a decrease in missing persons in Canada.

### Provinces and Territories

When examining the impacts of COVID-19 on the reported missing persons by region, certain provinces and territories were grouped. First, *Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador* had a low number of reported missing persons so statistics were calculated for *the Maritimes* in general. The same was done for *Nunavut, Northwest Territories and Yukon*, which were grouped under *the Territories*. Table 4 outlines the rate of reported missing persons by region per 100,000 people. This table demonstrates that *Manitoba* had a 10.96% decrease in missing persons per 100,000 people between 2019 and 2020, although a similar decrease was observed between 2018 and 2019 (10.52%), showing a general decreasing trend. A consistent observation was made for the *Maritimes* where a 1.77% increase was noted, similar to the 4.32% increase the previous year. *Québec* remains the province with the largest decrease between 2019 and 2020 with 28.19% per 100,000 people, followed by *Ontario* (22.10%) and *The Territories* (21.95%). The latter experienced an increase in population in 2020, which accentuates the decrease in the numbers of missing persons when viewed per 100,000 population, unlike other provinces where the populations were relatively stable.

Province	2018	% difference per 100,000 for 2018 and 2019	2019	% difference per 100,000 for 2019 and 2020	2020
British-Columbia	389.05	0.15%	389.65	-9.20%	353.80
Alberta	166.85	-1.43%	164.46	-17.83%	135.14
Saskatchewan	583.75	-0.60%	580.24	-21.24%	457.01
Manitoba	812.18	-10.52%	726.71	-10.96%	647.08
Ontario	122.83	-0.95%	121.66	-22.10%	94.78
Québec	108.61	-3.15%	105.19	-28.19%	75.54
The Maritimes	86.31	4.32%	90.04	1.77%	91.64
The Territories	147.45	1.63%	149.85	-21.95%	116.96

This notable decrease in *Québec* is largely attributed to the *teenage* age category (33.88% decrease in reported missing persons from 2019 to 2020) of both sexes, and runaway individuals in particular (33.01% decrease). Although the numbers are small each year, *Québec* also saw a notable decrease in the number of *children abducted by a relative* (40.82%). In 2018, there were 48 abductions by a relative, and in 2019, there were 49, whereas in 2020, there were 29.

While the general trend in Canada indicates a decrease in missing persons in 2020, there is a notable 22.44% increase since 2019 for *New Brunswick*. One of the main contributors to this is a 43.00% increase in *runaway individuals* in that province in 2020, as compared to a 16.29% increase between 2018 and 2019, while the number of cases from other probable causes remained relatively stable in the province in 2020. When looking at the number of missing persons for *New Brunswick* by month for 2020 compared to 2019, the largest spikes in *runaway*

<sup>1</sup> The population represents quarter 4 of the 2018, 2019 and 2020 Statistics Canada quarterly estimates. Statistics Canada. Table 17-10-0009-01 Population estimates, quarterly. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710000901>

*individuals* are observed during the months of *March* (109% increase), *July* (77% increase), *August* (74% increase) and *October* (70% increase). Despite representing the smaller sample, the increases by percentages were notably larger. It is important to note that the tables containing the findings for New Brunswick were excluded from this study to avoid the presence of an overwhelming amount of detailed data. More detailed information related to Probable Cause is found in the following section.

### Probable Cause

Table 5 demonstrates the number of missing persons per Probable Cause for the years 2018, 2019 and 2020. As seen in the table, all probable causes saw a decrease in reported number of cases between 2019 and 2020. The category of *other* and *unknown* both decrease by roughly 10.00%, and *wandered off/lost* decrease by 19.03%. When *wandered off/lost* reported cases were broken down by age category variables, it was found that there was a 17.07% decrease in the number of reported teenagers who wandered off or got lost, and a 19.53% decrease in the number of reported adults who wandered off or got lost.

The number of *runaway individuals* showed a 21.35% decrease in 2020. In fact, there was a strong negative correlation ( $r=-0.73$ ) between *COVID-19* cases and *runaway individuals*: as the *COVID-19* cases increased, the number of *runaway individuals* decreased. The 95% confidence interval ranges from -0.90 to -0.39, which renders a definitive conclusion difficult. The frequency table also demonstrates that *abductions by a relative* decreased by 31.10% between 2019 and 2020. Given the sample size associated with *abductions by a relative*, it is difficult to understand the causes of the decrease using this study design.

Probable Cause	2018	2018 to 2019	2019	2019 to 2020	2020
Abduction by a relative	183	-10.38%	164	-31.10%	113
Runaway	36,858	-3.33%	35,630	-21.35%	28,023
Wandered Off, Lost	3,388	14.14%	3,867	-19.03%	3,131
Unknown	28,354	-0.56%	28,194	-10.18%	25,325
Other	4,903	7.53%	5,272	-10.19%	4,735
<b>Total</b>	<b>73,686</b>		<b>73,127</b>		<b>61,327</b>

### Sex

Table 6 examines the number of reported missing persons according to *sex*. It can be seen that both the *male* and *female* groups saw a decrease in 2020 as compared to 2018 and 2019. Particularly, between 2019 and 2020, there was a 13.51% decrease in *missing female individuals*, while there was a 18.80% decrease in *missing male individuals*.

Sex	2018	2018 to 2019	2019	2019 to 2020	2020
Female	38,094	-3.30%	36,837	-13.51%	31,861
Male	35,592	1.96%	36,290	-18.80%	29,466
<b>Total</b>	<b>73,686</b>		<b>73,127</b>		<b>61,327</b>

When the study compared sex with other variables, some notable observations were made from the data. With regard to age, the largest decrease was observed for male children between 2019 and 2020. Between these time periods, the reported number of missing *male children* decreased by 34.02% (from 430 to 287). The next largest decrease is the *teenage male group* between 2019 and 2020, who saw a 27.10% decrease in reported missing persons cases. This varies from the changes observed between 2018 and 2019 as the *child male group* saw a very minor increase during that time period (1.16%) and the *teenage male group* saw a very minor

decrease (-0.76%). Their female counterparts also observed decreases in reported cases (-20.42% for *female children* and -16.25% for *female teenagers*), but those for the male individuals were greater. It is important to note that the tables containing the findings for the number of missing persons by age and sex were excluded from this study to avoid the presence of an overwhelming amount of detailed data.

With regard to probable cause, there was a large decrease in *male runaway individuals* (27.43%) as compared to the normal year-to-year variation. *Female runaway individuals* dropped by 16.43% between 2019 and 2020. In fact, the decrease in male numbers was larger than the decrease in female numbers for all probable causes with the exception of *abductions by relative*. Similarly to the analysis with age, the tables containing the analysis between sex and probable cause were excluded from this study to avoid the presence of an overwhelming amount of detailed data.

### Age

Table 7 demonstrates the number of missing persons by age group for 2018, 2019 and 2020. The *adult age group* saw the smallest decrease (10.11%) between 2019 and 2020, whereas the *child* and *teenager age groups* both saw larger decreases (28.13% for *child* and 20.91% for *teenager*). There was a strong negative correlation (-0.78) between *COVID-19* cases and missing teenagers: as *COVID-19* cases (and restrictions) increased, the number of missing teenagers decreased. The 95% confidence interval ranges from -0.92 to -0.47, which is a smaller gap than the other correlations performed in this study, but still wide. This range thus renders it difficult to determine a definitive conclusion. The province (with more than 100 reported cases each year) that saw the largest decrease in missing teenagers is *Nova Scotia* (36.14%), followed by *Québec* (33.88%). More specifically, with respect to *teenagers* in 2020 in Nova Scotia, there was a

decrease in *male missing teenagers* by 36.15% and a decrease in *male runaway individuals* by 37.96% as compared to previous years. It is important to note that the tables containing the analysis between age and provinces were excluded from this study to avoid the presence of an overwhelming amount of detailed data.

Age Group	2018	2018 to 2019	2019	2019 to 2020	2020
Child	770	-0.26%	768	-28.13%	552
Teenager	41,362	-4.45%	39,523	-20.91%	31,259
Adult	31,554	4.06%	32,836	-10.11%	29,516
<b>Total</b>	<b>73,686</b>		<b>73,127</b>		<b>61,327</b>

### Time to Resolve

The time to resolve in this study is defined by the number of days between the date a person was last seen and the date the file was concluded and removed from CPIC. This is the data available related to the number of days for which a person was missing, although it is known there can sometimes be a lag between the actual discovery of the person and when the CPIC entry is removed and the occurrence is concluded in MC/PUR. The results suggest that there were no large differences in the time to resolve missing persons cases in 2020, as compared to the two previous years. Table 8 highlights how 59.66% of reported missing persons occurrences in 2020 were resolved within 2 days, 83.04% within one week, while 94.47% were located within one month. It is important to note that the 2020 numbers were generated on April 8, 2021. Therefore, fewer cases would have been resolved by that time as compared to previous years for which we have a longer history to measure. A yearly month-to-month comparison versus time to resolve was conducted and showed no variations that was notable over the years.



Days	2018	2019	2020
0 Days	10.96%	11.27%	11.07%
1 Days	46.24%	46.52%	44.84%
2 Days	61.73%	61.79%	59.66%
3 Days	70.47%	70.46%	68.32%
4 to 7 Days	84.17%	84.22%	83.04%
8 to 14 Days	90.39%	90.39%	89.98%
15 to 30 Days	94.47%	94.64%	94.46%
31 to 60 Days	96.79%	97.03%	97.07%
61 to 90 Days	97.65%	97.93%	97.95%
91 to 180 Days	98.62%	98.90%	99.01%
181 to 365 Days	99.19%	99.45%	99.68%
366 to 730 Days	99.69%	99.91%	100.00%
<b>731 to 1096 Days</b>	<b>99.93%<sup>2</sup></b>	<b>100.00%</b>	<b>100.00%</b>

## Discussion

This study examined the impact of the *COVID-19* pandemic on the number of reported missing persons, adults and children, in Canada during 2020. This was done by comparing relevant statistical data of missing persons from the MC/PUR database between January 1, 2018 and December 31, 2020. This study examined the impact of COVID-19 in relation to six variables: the overall number of missing persons, as well as the effect by province/territory, type of occurrence, sex, age and period of time the individual was missing.

In regard to the overall number of missing persons, results of this study indicate that the total number of reported missing persons in Canada decreased by 16% in 2020, compared to 2019 and 2018. This decrease differs from the numbers observed in the U.K. study (decrease of 35% in missing children and 36% reduction in missing adult reports), as compared to 2019. These differences may be due to the time period difference as this study examined the entire year

---

<sup>2</sup> There were 0.07% of cases that remain unresolved.

whereas the U.K. study examined *March to May 2020* only, the height of the initial restrictions and panic. When the same timeframe is used, this study has found that the reported missing persons cases between *March* and *May 2020* as compared to 2019, decreased by 21.75%. The UK study also focussed on a few police forces whereas this study looked at all police information in Canada. Further analysis could be done to mirror the methodology of the U.K. study to allow for a more accurate comparison.

Further, when comparing reported missing persons cases to reported *COVID-19* cases, this study has demonstrated a strong negative correlation between these variables. This means that as reported *COVID-19* cases increased, the number of reported missing persons cases decreased. The slight decrease in the month of *March*, followed by large decreases in the number of missing persons for the months of *April* and *May*, corresponds to the time immediately following the implementation of strict restrictions across Canada (McCarthy Tetrault LLP, 2022). Measures put in place by the Government of Canada include restricting entry into the country to Canadian citizens and permanent residents and their immediate families; social distancing; face masks; limited socialization outside of the household, particularly indoors; and mandatory quarantine for those who tested positive, were in contact with someone who tested positive or those arriving in Canada. Severe fines were imposed to those violating the emergency measures (McCarthy Tetrault LLP, 2022). These notable decreases were also seen in the U.K. study as the sample examined cases between *March* and *May 2020* (Shalev-Greene et al., 2020; O'Brien et al., 2021).

The decreases in percentage continued until *July 2020*, when a higher number of missing persons was observed, as compared to the previous months of that year. This increase in numbers aligns with more relaxed restrictions nation-wide, weather providing an ability to socialize

outdoors where there was lower risk of transmission, and the end of school year and summer holidays, removing people from situations that were sources of transmission (i.e. the workplace). Later, as outdoor socialization became more challenging due to colder weather, and as students returned to school and parents to work, a notable increase in *COVID-19* cases resulted (beginning in *September*) and a parallel decrease (15.53%) in missing persons was observed as the government responded with more restrictions. Over the following months, the decrease in missing persons continued to grow, right until the end of *December 2020*, compared to what was observed in 2019. The number of COVID-19 cases increased dramatically during this time, which led to more restrictions. This timeline suggests that the number of COVID-19 cases and the number of reported missing persons cases are associated with the severity of restrictions that occurred. This finding can be used to understand changes in missing persons cases that could occur with social restrictions such as those under the pandemic. The relationship can also be used to better understand the reasons people go missing at any time, by looking at how restrictions affected the number of missing person cases reported, which is helpful for both law enforcement and public awareness. Additional research is necessary to fully understand this phenomenon and additional statistical manipulations are necessary to understand the relationship between these factors.

While these decreases were observed generally in cases of missing persons, there were also regional differences. Notably, the province of *Québec* imposed very strict restrictions at the onset of the pandemic (i.e. curfews, stay-at-home orders, closed provincial borders, etc.). The province of Québec declared a state of emergency on March 13<sup>th</sup> 2020, which was 4 to 7 days

ahead<sup>3</sup> of *Ontario, British Columbia, Manitoba, and New Brunswick* (McCarthy Tetrault LLP, 2022). This allowed Québec to limit mobility between regions and close all non-essential businesses early on, as well as impose curfews, to an extent which no other province/territory reached during the pandemic (Rowe, 2020). These restrictions were enforced with checkpoints and a heavy municipal and provincial enforcement presence throughout the province (Rowe, 2020). Interestingly, *Québec* observed the most notable decrease in missing persons in Canada. These severe restrictions in mobility would reduce the opportunity for teenagers to go missing and for individuals to run away, thus potentially explaining these decreases. Further research is necessary to examine these particular cases as this study did not examine the conditions around these groups disappearing.

In contrast, New Brunswick saw an increase in the number of reported missing persons cases in 2020. This study noted that the province saw a large increase in *runaway individuals* in 2020, as compared to previous years, with the largest spikes in numbers in March and July. Possible explanations for the spike in March relates to an increase in a number of aggravating factors, which might encourage someone to run away. Shalev-Greene et al. (2020) and O'Brien et al. (2021) found that certain on-going issues such as alcohol dependency, mental health issues, suffering abuse, risk of suicide and self-harm, and relationship problems, were related to going missing. Further, New Brunswick has the highest rate of murder-suicide linked to intimate partner and domestic violence in the country and during the pandemic, the family crisis centres and shelters of New Brunswick saw a rise in interventions for intimate partner violence (Fraser, 2020). These issues would have been exacerbated by the mobility restrictions and stay-at-home

---

<sup>3</sup> Ontario declared a state of emergency on March 17<sup>th</sup> 2020, British Columbia on March 18<sup>th</sup> 2020, Manitoba on March 20<sup>th</sup> 2020, and New Brunswick on March 19<sup>th</sup> 2020.

orders, thus potentially encouraging someone to run away. The spike in July could be explained by the presence of intimate partner violence, but also by the creation of the *Atlantic Bubble* between the four Maritime provinces (*Nova Scotia, Newfoundland and Labrador, New Brunswick, and Prince Edward Island*) in July 2020 (Grant, 2020). This agreement allowed for unrestricted travel between these provinces that are geographically close. It is possible that this type of mobility freedom between four provinces encouraged more individuals to run away as there were less restrictions in the bubble than in other provinces. These findings should be further examined to understand the complications related to the results as the association with COVID-19 is unclear. These regional differences further demonstrate a relationship between severity of restrictions and the number of reported missing person cases. The typical differences in the nature of missing person cases between provinces and the different measures put in place during 2020 could be examined to understand further the effect of restrictions on persons going missing.

With regard to probable cause, this study found that the probable cause of *abduction by a relative* saw the largest decrease in reported cases between 2019 and 2020. It is important to highlight that the number of reported cases decreased from 164 in 2019 to 113 in 2020. Due to the restrictions in mobility between regions, it could be hypothesized that this limited the opportunity for *abductions by a relative* as there would be less places to go without raising suspicion. While this is the largest decrease, the small sample size suggests that this potential association to the pandemic cannot be fully understood. Additional research examining these cases more specifically should be conducted on a case-by-case basis. In comparison, in the Shalev-Greene et al. (2020) and O'Brien et al. (2021) study, only one police force identified the percentage of cases that were suspected abduction/murders. Those results indicate that Police

Force C noted that suspected abductions/murders represented a slightly larger percentage of the reported missing persons cases in 2020 for both missing adults and children (6.5% for children and 7.9% for adults in 2020). While these results differ from those in the present study, it is important to note that the present study observed *abductions by relative and stranger*, whereas Shalev-Greene et al. (2020) and O'Brien et al. (2021) examined suspected abductions/murders. This difference in definition of a category render it is difficult to compare the observed results. For a better comparison, the same variables should be examined in both countries.

The next largest decrease by probable cause occurred in the category of *runaway* cases. These reported cases were found to have a strong negative correlation to the COVID-19 cases. This relationship could be better explained by the presence of COVID-19 related restrictions. Specifically, the restrictions may have reduced the opportunities or situations for someone to go missing, as suggested by these findings and the findings of Shalev-Greene et al. (2020) and O'Brien et al. (2021). In Canada throughout 2020, there were periods in which all non-essential businesses and schools were closed (McCarthy Tetrault LLP, 2022). It was also encouraged that individuals avoid contact with those outside of their home. As such, it is hypothesized that this limited both the options for running away and peer interactions that may have encouraged running away, enough to counter the opposite pressure to get out of unpleasant situations exacerbated by the isolation at home. To determine if this is the case, additional research would need to examine in more detail the patterns in runaway persons to determine how and why they had been impacted by restrictions. This finding demonstrates that the reasons for runaway cases are more affected by social restrictions and mobility than other probable causes, emphasizing the social aspect of many runaway cases.

As mentioned, Shalev-Greene et al. (2020) and O'Brien et al. (2021) found that certain on-going issues such as alcohol dependency, mental health issues, suffering abuse, risk of suicide and self-harm, and relationship problems, were related to going missing. Mobility restrictions and stay-at-home orders would increase the risk of being exposed to these factors and wanting to escape this. However, the results in this study do not show an increase in runaway numbers that could be related to such exasperating restrictions, except possibly in *New Brunswick*. This suggests that other factors in runaway cases may be more significant contributors to why a person goes missing than confinement to situations from which to flee.

Additional research should examine how the factors related to going missing were affected by the COVID-19 pandemic to determine if they were affected during this period, but simply not highlighted in this study. Shalev-Greene et al. (2020) and O'Brien et al. (2021) examined the location that children went missing from, whereas this study did not. Shalev-Greene et al. (2020) found that children were 1.41 times more likely to have gone missing from a care home in 2020 as compared to 2019. This is consistent with their previous findings about risk factors as care homes are often believed to have these factors present. Canadian data should be examined similarly in order to determine if there is a connection with runaway individuals and the location that they are last seen. While additional studies are necessary to fully understand the impact of the pandemic on probable cause, these early findings indicate that the COVID-19 pandemic affected all probable causes to some degree but influenced some more heavily than others.

There were also notable changes to the numbers related to the probable cause of *wandered off or lost* between 2019 and 2020, representing about a 19% decrease. When the number of people identified as *wandered off or lost* individuals was broken down by age

category, this study found that *adults* and then *teenagers* saw the largest decreases. This could be that those age categories had fewer opportunities to wander off due to the mobility restrictions. For example, many retirement centres and long-term care facilities prohibited the residents from leaving to prevent the spread of COVID-19. This meant that those living in these facilities would have fewer opportunities to wander off as they were watched more heavily.

To understand this hypothesis, the cases involving individuals who wandered off or were lost should be examined further. The last known location as well as more specific age categories (i.e. 50-60, 60-70, 70-80, etc.) are variables that could be used to understand the impact of mobility restrictions in long-term care facilities. As for the teenagers who wandered off or were lost, additional research is necessary to understand the impact of the mobility restrictions on this group. It is possible that the mobility restrictions reduced the opportunities; however, it is unclear as this study did not examine the specific conditions around teenagers who wander off or are lost. Since the numbers in these categories are generally small, it is difficult to draw meaningful statistical conclusions.

The next variable examined the impact of COVID-19 on missing *male individuals* versus *female individuals*. This study found that there was a decrease in both male and female reported missing persons cases, with a larger decrease being experienced by *male individuals*. Interestingly, Shalev-Greene et al. (2020) and O'Brien et al. (2021) found that men and girls reported missing cases saw a decrease, whereas women and boys saw an increase between 2019 and 2020. Given that these two studies took place in different countries, it is possible there are a number of unknown factors that could explain these disparities. The difference in effects of the restrictions suggest different risk factors apply for males versus females. Additional research



should focus on the specific risk factors for *male individuals* going missing and examine whether the restrictions, in some capacity, affected those.

While the decrease in reported missing persons cases for male and female individuals was within 5% of each other, the decrease per age group is larger. This study found that between 2019 and 2020, the number of reported *missing children* decreased by 28.13% and for *missing teenagers* decreased by 20.91%. In comparison, reported *missing adult* cases decreased by 10.11%. Shalev-Greene et al. (2020) and O'Brien et al. (2021) found that there was a 35% decrease in *missing children* reports and a 36% reduction in *missing adult* reports. It is important to note that the children variable in the Shalev-Greene et al. (2020) and O'Brien et al. (2021) study included all those under the age of 18 years old, whereas the present study had a separate variable for teenagers. The difference in results suggest that the restrictions experienced in each of the countries affected the groups differently. Additional research comparing the types of restrictions could provide a possible explanation for these differences.

There are a few possible explanations for the changes observed in the present study for the age group. First, the largest decrease in reported missing persons by probable cause (excluding abductions by a relative due to the small sample size) is runaway individuals. This probable cause saw 7,607 less reported cases in 2020 as compared to 2019, a 21.35% decrease. This could possibly explain the large decrease in missing children and teenage cases. While there are many runaway individuals who are adults, this sample found that in 2018 and 2019, children and teenagers represented 84% of the runaway sample. Similarly in 2020, children and teenagers represented 82% of the runaway sample. As such, their large presentation of the runaway probable cause could have reduced their overall representation in the age category. Another possible explanation can be found in the many restrictions for schools, daycares, after school

programs, and other places children and teenagers frequent (McCarthy Tetrault LLP, 2022). Given that these places were closed for the majority of 2020, the opportunity to go missing would have been decreased as compared to adults who would be restricted in some capacities but have other opportunities to go places. For example, restrictions for restaurants and bars fluctuated frequently during 2020, a place where adults socialize. Further examination of the socialization patterns of adults as compared to youth and children would be helpful to understand these findings. Another possible explanation relates to underreporting of *adult missing persons*. Given the lack of connection due to stay-at-home orders and restrictions, it is possible that less adults were noticed going missing and thus led to less reports. To examine this possibility, self-report questionnaires could be used to examine a sample to see if more people went missing during the pandemic without reports being made. The preliminary nature of this study did not allow such hypotheses to be tested. Therefore, additional research is necessary to understand further the impact of the COVID-19 pandemic on different age demographics.

When age and sex were compared together, this study found that *male children* and *male teenagers* saw the largest decreases between 2020 and the previous years. In contrast to the changes observed between 2018 and 2019, these are quite notable. This suggests changes in 2020 affected reported missing *male children* and *male teenagers* more than *female children* and *teenagers*. It is possible that the COVID-19 restrictions limited the opportunities to go missing for children and teenagers, with a heavier restriction on male individuals. To understand this hypothesis further, the behavioural habits of male and female children and teenagers should be studied to see if the restrictions affected the activities of one group more than the other.

This study also observed that the category of *male teenagers* and *male teenage runaway* individuals saw the largest decreases in 2020 compared to previous years. This suggests that in

some manner, the conditions related to the COVID-19 pandemic limited *male teenage runaway individuals* and *male teenagers* from going missing. Understanding this finding is beyond the realm of this study, which stresses the importance of additional research. In addition to further research for each of these variables, understanding the intersection between these variables should be studied. It is possible that some factors exacerbate or diminish the risk of going missing during a phenomenon like the COVID-19 pandemic; these relationships should be studied to inform future response and to further investigate the factors that have been exposed because of the pandemic.

Finally, the pandemic did not appear to affect the time it took to resolve cases of missing persons in general. Specifically, the time it took to resolve cases of missing persons remained stable across the three years. This factor is, however, complicated as it is influenced by allocation of police resources, which were not evaluated in this study. It is not clear if the pandemic affected the allocation of police resources proportionally, or if the pandemic affected the rate at which missing persons returned on their own, or other possible influences. Additional research is necessary to understand the influencing conditions associated with this finding, as well as how it was affected in different countries. This factor was not included in the Shalev-Greene et al. (2020) and O'Brien et al. (2021) study.

It is important to note that the highlighted changes may not all be attributable to the pandemic - the correlations included in this report are statistical associations and thus do not prove a cause-effect relationship. As such, more research is required to further understand these relationships with more advanced statistical manipulations. However, there appears to be some relationship between the severity of the pandemic restrictions and the decrease in missing persons reports from previous years. One possible explanation is that these restrictions may have

reduced the opportunities or situations for someone to go missing, as suggested by these findings and the findings of Shalev-Greene et al. (2020) and O'Brien et al. (2021). In contrast, certain crime types saw a notable increase in 2020 (i.e. online child sexual exploitation, domestic and intimate partner violence) (Thompson 2020, Thompson, 2021). This demonstrates that the pandemic influenced crime types and social phenomena differently, thus highlighting an area of potential future research.

While this study did not explore the multiple influences behind the findings, it did provide new insight into the relationship between *COVID-19* restrictions and reported missing persons. Since the pandemic continued through 2021 and is still ongoing, and restrictions and measures continued to fluctuate in the various provinces and territories into spring of 2022, the current study should be repeated when the pandemic restrictions are permanently lifted. A subsequent analysis should be conducted to see if the number of missing persons returns to quantities and/or proportions consistent with pre-pandemic numbers. Considering the high number of *runaway individuals*, even during the pandemic, and the notable effect on the number of runaway individuals, a potential future area of research could examine the location from which these individuals ran away (i.e. home, institutions, schools, etc.) as a variable. This examination could demonstrate potential issues at such premises or the type of runaway cases dampened by pandemic conditions, a notion highlighted by Shalev-Greene et al. (2020) and O'Brien et al. (2021). Additional research should also examine the missing persons cases involving individuals who were not identified as male or female. While those represent less than 100 cases each year, they could be examined more closely to determine how societal phenomena affect those with unknown or other sexes. Similarly, those with probable causes that were

excluded from the study due to small sample size should also be examined in a more detailed study.

## **Conclusion**

The *COVID-19* pandemic has resulted in notable social and economic impacts in many countries, including Canada. The results of this study indicate a 20.20% reduction in the number of reported missing persons, adults and children in Canada between *March* and *December* 2020, compared to 2019. These decreases were observed particularly in *Québec*, *Ontario*, and the *Territories*. The largest decrease was in the number of *runaway individuals* during 2020, suggesting that the social restrictions affect the factors that cause persons to run away. Reductions appear to be related to the severity of restrictions as provinces took different measures to reduce transmission. The decrease was also slightly greater for *male individuals* and for those in the *teenage age* range, 11-17 years old. There was no notable change in the rate at which cases became resolved, suggesting that both the police work and the nature of cases that resolve themselves were not affected by the pandemic.

While some questions remain, the results of this study provide a better understanding on how the *COVID-19* pandemic affected missing persons cases and the nature of who goes missing in Canada. As such, law enforcement can explore potential strategies to enhance their response in light of social changes similar to those experienced during the pandemic. Furthermore, understanding how regions, probable causes, sexes and ages were affected differently under the restrictions of the pandemic exposes some of the underlying dynamics of missing person cases at any time. Observations of how the pandemic affected the reported cases can inform strategies for dealing with these situations under typical conditions as well as in future times of similar social phenomena.

## References

- Ashby, Matthew P.J. (2020). Initial evidence on the relationship between the coronavirus pandemic and crime in the United States. *Crime Science*, 9(1), 6–6.  
<https://pubmed.ncbi.nlm.nih.gov/32455094/>
- Bricknell, Samantha & Renshaw, Lauren. (2016). Missing persons in Australia, 2008-2015. Statistical Bulletin no. 1. Canberra: Australian Institute of Criminology.  
<https://www.aic.gov.au/publications/sb/sb1>
- Canadian Police Information Centre. (2018). CPIC User Manual. *Royal Canadian Mounted Police*.
- Department of Justice. (2022). Government of Canada's response to COVID-19. *Government of Canada*. <https://www.justice.gc.ca/eng/csj-sjc/covid.html>
- Down to Zero Alliance and ECPAT International. (2020). *A Call for Restarting Travel and Tourism with Child Protection in Focus*. [https://ecpat.org/wp-content/uploads/2021/08/Call-for-Action\\_2020\\_EN.pdf](https://ecpat.org/wp-content/uploads/2021/08/Call-for-Action_2020_EN.pdf)
- Esri Canada. (2021). *COVID-19 Resources*. <https://resources-covid19canada.hub.arcgis.com/>
- Ferguson, Lorna, & Soave, Vincenzo. (2021). #Missing to #Found: Exploring police Twitter use for missing persons investigations. *Police Practice & Research*, 22(1), 869–885.  
<https://doi.org/10.1080/15614263.2020.1753516>
- Fraser, Elizabeth. (December 23, 2020). Domestic Violence on the rise during *COVID-19* — here's what you can do about it. *CBC News*. <https://www.cbc.ca/news/canada/new-brunswick/domestic-violence-mindy-godin-1.5852689>

- Grant, Taryn. (2020). As COVID-19 cases rise, N.L. and P.E.I exit Atlantic bubble for at least 2 weeks. *CBC news*. <https://www.cbc.ca/news/canada/nova-scotia/atlantic-bubble-burst-1.5812454>
- Gabbert, Fiona, Tamonyte, Donata, Apps, Joe, Caso, Alessandra., Woolnough, Penny, Hope, Lorraine, Handscomb, Megan, & Waterworth, Georgina. (2020). Examining the efficacy of a self-administered report form in missing person investigations. *Legal and Criminological Psychology*, 25(1), 1–16. <https://doi.org/10.1111/lcrp.12163>
- Government of Canada. (2014). Report a Missing Person/Unidentified Remains. *Canada's Missing*. <https://canadasmising.ca/report-signale/index-eng.htm>
- Government of Canada. (2019). Gender and Sexual Diversity Glossary. Translation Bureau. <https://www.btb.termiumplus.gc.ca/publications/diversite-diversity-eng.html#m>
- Government of Canada. (2021a). Fact sheets. *Canada's Missing*. <https://www.canadasmising.ca/pubs/index-eng.htm>
- Government of Canada. (2021b). *Download COVID Alert Today*. <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/covid-alert.html>
- Government of Canada. (2021c). GBA+: Beyond Sex and Gender. Women and Gender Equality Canada. <https://femmes-egalite-genres.canada.ca/en/gender-based-analysis-plus/microlearning-videos/gbaplus-beyond-sex-gender.html>
- Government of Canada. (2022a). *COVID-19 Vaccination in Canada*. <https://health-infobase.canada.ca/covid-19/vaccination-coverage/>

Government of Canada. (2022b). Coronavirus disease (COVID-19): Prevention and risks.

<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html#social>

Government of Ontario. (March 23 2020). Ontario Orders the Mandatory Closure of All non-Essential Workplaces to Fight Spread of COVID-19.

<https://news.ontario.ca/en/release/56435/ontario-orders-the-mandatory-closure-of-all-non-essential-workplaces-to-fight-spread-of-covid-19>

Hosmer, David W. & Lemeshow, Stanley. (2000). *Applied logistic regression (Second Edition)*.

New York, US: John Wiley & Sons

Huey, Laura, & Ferguson, Lorna. (2020). “Going Missing” as a Maladaptive Coping Behavior for Adults Experiencing Strain. *Deviant Behavior*, 1–13.

<https://doi.org/10.1080/01639625.2020.1773175>

Kiepal, Laura Christine, Carrington, Peter J., & Dawson, Myrna. (2012). Missing Persons and Social Exclusion. *Canadian Journal of Sociology*, 37(2), 137–168.

<https://doi.org/10.29173/cjs10114>

McCarthy Tetrault LLP. (2022). *COVID-19: Emergency Measures Tracker*.

<https://www.mccarthy.ca/en/insights/articles/covid-19-emergency-measures-tracker>

NetClean. (2021). COVID-19 Impact 2020: A report about child sexual abuse

crime. [https://www.netclean.com/wp-content/uploads/2021/01/NetCleanReport\\_COVID19Impact2020\\_spreads1200-1.pdf](https://www.netclean.com/wp-content/uploads/2021/01/NetCleanReport_COVID19Impact2020_spreads1200-1.pdf)



- Neubauer, Laquian, K., Conway, C., & Liu, L. (2019). What do we know about best police practices for lost persons with dementia? A scoping review. *Neurodegenerative Disease Management*, 9(6), 319–330. <https://doi.org/10.2217/nmt-2019-0023>
- Rowe, Daniel. (April 12, 2020). *COVID-19 in Québec: a timeline of key dates*. *Montreal CTV News*. <https://montreal.ctvnews.ca/COVID-19-in-Québec-a-timeline-of-key-dates-and-events-1.4892912>
- Royal Canadian Mounted Police. (2020). *Missing Persons*. <https://www.rcmp-grc.gc.ca/en/missing-persons>
- Royal Canadian Mounted Police. (2015-2020). *NCMPUR Fast Facts 2015-2020*. <https://www.canadasmising.ca/pubs/index-eng.htm>
- Shalev-Greene, Karen. (2020). Missing Persons: Identifying Best Practice, Training and Research Needs. *The Independent Civilian Review into Missing Persons Investigation*. [https://8e5a70b5-92aa-40ae-a0bd-e885453ee64c.filesusr.com/ugd/681ae0\\_3ba4a6ab51b243f588131c8f9ec4de11.pdf](https://8e5a70b5-92aa-40ae-a0bd-e885453ee64c.filesusr.com/ugd/681ae0_3ba4a6ab51b243f588131c8f9ec4de11.pdf)
- Shalev-Greene, Karen, O'Brien, Freye, Collie, Craig John Robert, & Giles, Susan. (2020). *The impact of COVID-19 lockdown restrictions on missing person reports*. University of Portsmouth: Centre for the Study of Missing Persons.
- Sidebottom, Boulton, L., Cockbain, E., Halford, E., & Phoenix, J. (2020). Missing children: risks, repeats and responses. *Policing & Society*, 30(10), 1157–1170. <https://doi.org/10.1080/10439463.2019.1666129>

Statistics Canada. (2022). Statistics Canada and contact tracing. *Government of Canada*.

<https://www.statcan.gc.ca/en/transparency-accountability/contact-tracing>

Taylor, Claire, Woolnough, Penny S., & Dickens, Geoffrey. L. (2019). Adult missing persons: a concept analysis. *Psychology, Crime & Law*, 25(4), 396–419.

<https://doi.org/10.1080/1068316X.2018.1529230>

The Canadian Press. (January 25, 2021). Grim anniversary: A timeline of one year of COVID-

19. *CTV News*. <https://www.ctvnews.ca/health/coronavirus/grim-anniversary-a-timeline-of-one-year-of-covid-19-1.5280617>

Thompson, Nicole. (February 15, 2021). Reports of domestic, intimate partner violence continue

to rise during pandemic. *CTV News*. <https://www.ctvnews.ca/health/coronavirus/reports-of-domestic-intimate-partner-violence-continue-to-rise-during-pandemic-1.5309118>

Thompson, Elizabeth. (July 13, 2020). *Child sex exploitation is on the rise in Canada during the*

*pandemic*. *CBC News*. <https://www.cbc.ca/news/politics/pandemic-child-sexual-abuse-1.5645315>

UN Women. (2022a). Facts and Figures: Ending Violence against Women. United Nations.

<https://www.unwomen.org/en/what-we-do/ending-violence-against-women/facts-and-figures>

UN Women. (2022b). COVID-19 and ending violence against women and girls. United Nations.

<https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2020/Issue-brief-COVID-19-and-ending-violence-against-women-and-girls-en.pdf>

UN Women. (2021). COVID-19 and violence against women: The evidence behind the talk.

United Nations.

[https://data.unwomen.org/sites/default/files/documents/Publications/COVID-19%20and%20VAW\\_Insights%20from%20big%20data%20analysis\\_final.pdf](https://data.unwomen.org/sites/default/files/documents/Publications/COVID-19%20and%20VAW_Insights%20from%20big%20data%20analysis_final.pdf)

Walker, Kate. & April, Allan. (2020). Moncton women's shelter sees increase in domestic violence calls. Atlantic CTV News <https://atlantic.ctvnews.ca/moncton-women-s-shelter-sees-increase-in-domestic-violence-calls-1.5119836>

WHO. (2020). WHO Director-General's opening remarks at the media briefing on COVID-19- 11 March 2020. World Health Organization. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>