Impacts of race on family reunification: A longitudinal study comparing exits from Quebec's child welfare system☆

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ABSTRACT

Background: In the United States, Black children spend more time in out-of-home placement than other children and are less likely to experience family reunification following involvement with child welfare services. Within Canada, very few studies have examined Black children's exits from the child welfare system and factors influencing their service trajectory.
Objective: This study, the first of its kind in Canada, uses longitudinal clinical administrative data to examine reunification outcomes for Black children following placement in out-of-home care.
Participants and setting: The study population includes 1395 children receiving ongoing child welfare services in Quebec between April 1, 2002 and March 31, 2011.
Methods: A longitudinal research design from anonymized clinical administrative data extracted from a single child welfare agency in Montreal. Survival analysis using a Kaplan Meier and Cox proportional hazard regression examined the trajectory and chances of family reunification from the point of each child's initial placement.
Results: Black children spend longer lengths of time in out-of-home placement and are less likely to experience family reunification when compared to other children. Poorer reunification outcomes for Black children were associated with placement instability, the age of the child and reasons for child welfare involvement.
Conclusions: While we tend to prioritize prevention services for vulnerable communities, this study indicates that attention must be given to services all throughout Black children's service trajectory to ensure that these children are able to exit the child welfare system in a timely manner.

1. Introduction

In Canada, Black children are overrepresented within child welfare systems (Boatswain-Kyte et al., 2020; Dufour et al., 2016; King et al., 2017; Lavergne et al., 2008, 2009). Of the few studies that exist, Black children were found to be overrepresented at screening, substantiation, and placement and to face disparate service outcomes when compared to White children (Boatswain-Kyte et al., 2020; King et al., 2017; Lavergne et al., 2009). As the factors that contribute to the overrepresentation of Black Canadian children reported to

the child welfare system become better understood, little is known about the factors that influence their exit. In the United States, many studies have been conducted on exits from the child welfare system. Their findings suggest that African-American children have longer stays within the child welfare system and are less likely to reunify with parents, compared to White and Hispanic children (Cheng, 2010; Connell et al., 2006; Courtney & Wong, 1996; Lloyd Sieger, 2020; Shaw, 2010; Wells & Guo, 1999). The causes of this disparity are complex and are attributed to child and parent case characteristics, organizational factors within the child welfare system, and external factors including socioeconomic disadvantage (Hines et al., 2007). Variability across studies is largely due to the complexity of race and racism and the ways by which they are experienced according to place.

In Canada, as in the United States, studies observe that Black children are exposed to an increasing number of risk conditions that influence their likelihood of entering the "front door" of child welfare services. Studies in the United States have explored whether these risk conditions continue to influence outcomes beyond the initial child welfare involvement and identify what protective factors may help to mitigate negative outcomes. The applicability of these findings to a Canadian context are made challenging by our universal healthcare system and social programming that may provide a more favourable landscape for Black families. This remains particularly true in Quebec, where access to social services and early childcare are the highest in the country. These differences have been found to play an important role in improving access to care, particularly for marginalized groups (Pylypchuk & Sarpong, 2013). Within Canada, to the best of the authors' knowledge, no known longitudinal study has previously examined race and its influence on reunification outcomes. Of the studies addressing Black Canadian children's overrepresentation in the child welfare system and related disparities, most of these studies are cross-sectional in nature and rely on annual service statistics that may not be collected consistently over time. Given that Black children have been found to experience longer stays in care and tend to receive services at a younger age, their representation may be overstated at any specific point in time. This study examines when and for whom reunification is most likely to occur for from the point of initial placement in out-of-home care.

1.1. Background

For children placed in out-of-home placement, reunification with their families is the primary goal of service providers. Most children in the child welfare system are reunified with their families often following a short time in out-of-home placement (Biehal, 2007). In Canada, Esposito et al. (2014) found that of children placed in the Quebec child welfare system between 2002 and 2011, 80.2% reunified with their family. Of this, the majority reunified within the first year of out-of-home placement with reunification outcomes differing significantly based on the age of the child, the type of maltreatment investigated, involvement with youth criminal justice services, and socioeconomic disadvantage. Placement was defined as any removal from the home for a period longer than 72 h. Each child was observed for a period of 36 months following removal. This study did not take into consideration child race.

In the United States, research on rates of reunification between Black and White children have yielded mixed findings. While a number of studies have found race to be a significant predictor of reunification, even after controlling for various risk factors (Connell et al., 2006; Courtney & Wong, 1996; Texas Department of Family and Protective Services, 2010; Wells & Guo, 1999; Wittenstrom et al., 2015), multiple studies have shown that race holds no predictive value to the model (LaBrenz et al., 2020; Lu et al., 2004; Putnam-Hornstein & Shaw, 2011; Wulczyn et al., 2011). Proportional hazard models are often used to identify factors associated with reunification. In such studies, race is often introduced as a main effect to better understand its association with reunification while controlling for other factors.

1.2. Race and reunification outcomes

The key explanatory variables for reunification outcomes can be grouped under three categories, pertaining to (1) child and family characteristics, (2) organizational level characteristics within the child welfare system, and (3) external factors within the socio-structural context surrounding both the child and the agency. Research conducted thus far, while it may include race/ethnicity as a predictor variable, has not consistently examined how race interacts with various child, family, organizational and external factors that predict reunification.

1.2.1. Child and family characteristics

Studies have found that younger children are less likely to experience family reunification (Barth, 1997; Carnochan et al., 2013; Courtney & Wong, 1996; Wells & Guo, 1999). Generally, infants have been shown to have a lower probability of reunification compared to other age groups (Courtney & Wong, 1996). This is largely explained by worker concerns over safety of infants and also the greater interest in adopting younger children. Child welfare legislation is another reason offered to explain these findings, given maximum placement durations and permanency plans required for younger children.

Child emotional and behavioural concerns were associated with a 50% decrease in the likelihood of reunification (Landsverk et al., 1996). Children with physical and mental disabilities were also significantly less likely to be reunified (Courtney & Wong, 1996). For the most part, gender alone does not appear to hold significant effects associated with exit rates, although some studies have found mixed results for older adolescent boys and girls (Courtney & Wong, 1996). Family structure is associated with reunification, with children from two-parent families reunifying more quickly than single parents (Courtney & Wong, 1996; Harris & Courtney, 2003; McDonald et al., 2007; Wells & Guo, 1999). Certain studies also used the type of maltreatment investigated as a proxy for family problems. Younger children reported for neglect have poorer reunification outcomes compared to younger children reported for physical and sexual abuse (Barber et al., 2004). Removal because of child behavioural concerns or delinquency was also associated with faster exits to reunification when compared to neglect or abuse (Wells & Guo, 1999). In addition, numerous studies have found

that parental lifestyle concerns, such as substance abuse, significantly decrease the likelihood of reunification (McDonald et al., 2007; Shaw, 2010).

In each of the above studies, race was included as a predictor variable and yielded a significant main effect. In measuring the interaction effect of race on the relationship between reunification (dependent variable) and specific child and family characteristics (independent variable), Black children were found least likely to reunify when compared to any other age or racial groups (Courtney, 1994). Studies have also shown that family structure interacts with race, with Black children from single-parent families being least likely to experience reunification (Harris & Courtney, 2003). In exploring the interactions between race and removals from care as a result of substance use, a number of studies have found that Black children's likelihood of reunification is much lower than other groups (Hines et al., 2007; Lloyd Sieger, 2020; Wittenstrom et al., 2015). Lloyd Sieger (2020) in a longitudinal study comparing reunification outcomes by substance removal status, found that racial disparities in reunification for younger children aged 0–4 were primarily driven by Black children. Liming et al. (2021) in investigating associations between adverse childhood experiences (ACEs) and reunification, found that children with higher ACE exposure were less likely to reunify and that non-White children were 21% less likely to exit to reunification than their White counterparts. The authors evoke the need for attention to be given to subgroups of children among already vulnerable populations.

1.2.2. Organizational level characteristics

Institutional racism, in the form of systemic discrimination, has also been linked to poorer outcomes for Black children within the child welfare system. Systemic discrimination is present from the point of entry into the system and extends to placement and reunification. While difficult to measure and analyze, a number of studies have demonstrated that decision-making, agency infra-structure, organizational culture, and quality of services produce disparate outcomes across decision-points for Black children compared to others (Harris & Hackett, 2008; Hill, 2005; Huggins-Hoyt et al., 2019). With regards to measurable effects on reunifi-cation, Black children were found to be less likely to receive support services compared to White families (Courtney & Wong, 1996). Given that lower reunification rates have been found among families that receive fewer services, failure to ensure adequate service to Black children has implications in their ability to reunify with their families (Hill, 2005).

Placement type has been associated with the timing of reunification, with children in kinship care (cared for by a relative or someone with whom they have a close relationship) experiencing longer delays to reunification compared to placements in other settings (Goerge, 1990). This may be due to differences in the unobserved characteristics of children placed in kinship care, rather than kinship care itself (Wittenstrom et al., 2015). Black children represent one group that is more likely than other categories to be placed with kin (Bartholet, 2009). In addition to placement type, placement instability has also been negatively associated with reunification outcomes. Placement instability has generally been defined by any child who has experienced three or more placements during their contact with the child welfare system. Studies have found that Black children experience more placement disruptions compared to other groups (Leathers et al., 2019; Webster et al., 2000), and that when placed, these placements are more likely to end due to incompatibility between the child and foster caregiver or because of concerns of substandard care provided by the placement resource (Sattler et al., 2018). Black children are more likely than White children to have medical conditions and disabilities, in addition to behavioural and emotional disorders, partly because of their increased exposure to poverty (Kohen et al., 2008; Newacheck et al., 2003). Their exposure to risk conditions may result in placement breakdown, which in turn yields detrimental effects for the child; child functioning concerns have been shown to be both the cause and consequence of placement instability (Newton et al., 2000).

1.2.3. External factors within the socio-structural context

Socioeconomic hardship is negatively associated with the likelihood of reunification. While this hardship may not be the direct cause in preventing reunification, its association with other challenges such as housing, education, employment, and family structure may act as barriers in achieving reunification. Furthermore, different thresholds have been shown to exist across demographic groups, with thresholds being lower for Black children compared to White children given differential exposure to poverty and social disad-vantage (Wulczyn et al., 2013). It is thus imperative that consideration be given to the interaction between socioeconomic hardship, race, and the socio-structural context within which Black families reside and how this influences reunification. LaBrenz et al. (2021) examined racial disparities in reunification within child welfare systems across the United States and found that Black children's likelihood of reunification varied across state jurisdictions. Other interesting findings within their study included the lack of associ-ation between statewide variables such as: rates of poverty, crime, teen births, privatization, Medicaid expansion and reunification; in addition to the lack of association between state funding on targeted reunification services and likelihood of reunification.

Accessibility of social and community-based services in the form of services to help families address maltreatment behaviours have been shown to positively effect exits from placement (Cheng, 2010; Choi & Ryan, 2007; D'Andrade & Nguyen, 2014; Murphy et al., 2017). However, much of the research to date has not given much consideration to the role of race and its interaction with treatment service on reunification outcomes. Marsh and Smith (2011) in their study that did not include a race variable, retention and completion of treatment were shown to be strong predictors of reunification for parents who have issues with substance abuse. Cheng (2010) in a study that included Black parents, found that likelihood of reunification increased when parenting problems were addressed through well-matched and appropriately delivered services. However, the role of race and its interaction with matched services was not explored. There have been some studies that have examined substance abuse treatment, reunification outcomes and the role of race. These studies have found that race can impact substance use treatment experiences and outcomes through unequal access to health care, poorer completion rates of treatment and lack of culturally appropriate substance use treatment (Ann Priester et al., 2016; Lloyd Sieger, 2020).

1.3. Current study

This study will use proportional hazard models with race introduced as a main effect to better understand its association with reunification outcomes while controlling for other factors. A major critique of this method is our inability to account for the interaction of race effects through combinations of specific characteristics (Wittenstrom et al., 2015). Despite this limitation, our study nevertheless addresses a gap in our understanding of overrepresentation and disparity of Black children receiving child welfare services in Canada. It seeks to examine the following research questions: 1a) What is the duration of time that Black children spend in out-of-home placement? 1b) Does time spent in placement vary according to race? 2a) Is race associated with family reunification after controlling for family, child welfare service, and socioeconomic characteristics?

More recently, a number of studies have begun to examine the impacts of privatization and state system factors on racial outcomes to reunification. Findings from these studies point to the variability of racial disparities to reunification emotion across child welfare systems, finding that in some instances reunification outcomes for Black children are more successful than their White counterparts (Huggins-Hoyt et al., 2019; LaBrenz et al., 2020, 2021). Examination of reunification outcomes for Black children in Quebec, will allow us to determine whether racial disparities to reunification exist despite Quebec's more favourable sociopolitical context.

2. Methods

2.1. Data sources

The present study uses secondary clinical-administrative data from a child welfare agency in Montreal, Quebec. The dataset provided anonymized longitudinal information on each child's experience with protection services, in addition to a number of covariates associated with their service involvement. The second data source was extracted from the 2006 Canadian Census and was used to develop a composite index of socioeconomic disadvantage (see Esposito et al., 2017). The index was linked to the child welfare clinical administrative data based on the child's postal code. The index registered a minimum score of -3.37 representing the lowest socioeconomic risk, and a maximum score of 3.51 representing the highest socioeconomic risk.

The longitudinal cohort consisted of 1395 children placed for the first time between April 1, 2002 and March 31, 2011. Categories based on visible minority definitions from Statistics Canada were used to create similar categories within the agency dataset. Of this sample, the race variable was available for 86% of cases: White ($N = 566$), Black ($N = 342$), other visible minority ($N = 218$) and First Nations ($N = 77$). Data on First Nations children was removed from the sample given the First Nations Principles of OCAP that require research to be done in conjunction with First Nations communities. Thus, with First Nations children removed, the total sample of children placed in initial out-of-placement was $N = 1318$. Children for whom no racial information was provided ($N = 192$) were kept in the study as an "unidentified" category.

Family reunification was defined as: 1) a return to one or both biological parents and 2) an entrustment to extended family. Whereas studies in the United States have tended to view reunification more narrowly, this study included entrustment to extended family in our definition of reunification. The dataset documented five types of ends to placement: reunification with family (including extended family members), running away, adoption, death, or unknown. For the purposes of this study, children who were adopted, who died, who ran away and for whom no placement status was identified were excluded from this study. Of the remaining children in the sample, $N = 1318$, 85.7% ($N = 1130$) were reunified with their families and 14.3% ($N = 188$) were still in out-of-home placement within the follow-up period. The follow-up period continued from the date of initial out-of-home placement to the date of reunification. For children who did not reunify, the follow-up period extended to September 31, 2011 or the age of majority (i.e. 18 years old), whichever came first. These findings capture the first occurrence of reunification, and do not consider subsequent reunification failure.

2.2. Covariates

The covariates included age, gender, race, type of maltreatment, source of referral, placement type (i.e. residential centre, community group home or foster home), number of out-of-home placement disruptions (i.e. placement moves), and a socioeconomic disadvantage index. These variables were all taken at initial placement and were used to present difference in case characteristics for White, Black, other visible minority, and unidentified children. Age at initial placement was described using three age categories: 0–5 years old, 6–9 years old and 10–17 years old. Within the regression model, age was entered as a continuous variable. Gender was described, but not included in the statistical model. The racial variable consisted of the following categories: (a) White, (b) Black, (c) other visible minority, and d) unidentified. Descriptive information is available for all four categories.

The reason for investigation variable included the following values: (a) psychological & emotional abuse including rejection, denigration, exposure to intimate partner violence, and exploitation; (b) physical, material, and health neglect including physical neglect, medical neglect, and material deprivation; (c) parents' high-risk lifestyle resulting in a failure to supervise or protect the child, including abandonment due to parental absence and refusal to assure child care and risk of neglect; (d) school truancy & school neglect including failure to attend school or failure to ensure that the child attends school; (e) risk of physical abuse, (f) physical abuse, (g) risk of sexual abuse, (i) sexual abuse, (h) behavioural problems that were either internalizing or externalizing in nature that posed significant risks to the child's physical or psychological integrity.

Within the regression model, the abuse categories (physical and sexual abuse) and behavioural problems were grouped together and used as a reference category. Declarants included professionals and other citizens (the latter being the reference category). Citizen sources of reports consisted of individuals who had personal knowledge of the allegations, such as family members and neighbours.

Professional sources were individuals who reported allegations in the context of their employment, including employees of community health and social services clinics, child welfare agency staff, school staff, police, hospital employees, and professionals in the private sector. Lastly, a socioeconomic disadvantage composite index was also used, computed from the 2006 Canadian census with lower scores representing high risk socioeconomic disadvantage. The index included six socioeconomic indicators, including unemployment, total persons in the household, marital status, individual median income, family median income, and household median income (see Esposito et al., 2014, for further details on how the index was computed).

2.3. Analytic method

Descriptive analyses comparing White ($N = 566$), Black ($N = 342$), other visible minority ($N = 218$), and unidentified children ($N = 192$) were performed including all independent covariates. A one-way between-subject analysis of variance (ANOVA) was conducted to compare the effect of the racial category on the length of time in out-of-home placement at initial entry. Survival analysis using a Kaplan Meier and Cox proportional hazard regression examined the trajectory and chances of family reunification from the point of a child's initial placement. The Cox proportional regression model was conducted using a subset of the covariates to obtain their independent effect with race on the probability of family reunification. Given the correlation between age and placement type, the latter was not included in the model. Values for the "unidentified" category were imputed in our Cox regression model that then compared Black children to all other racial categories (White and other visible minority). In order to assess for multicollinearity, variance inflation factor (VIF) estimates were measured from an ordinary least square linear regression model containing all of the covariates used in the Cox proportional hazard regression model. VIF estimates for the model ranged from 1.012 to 2.744 indicative that multicollinearity was not an issue (Frees, 2004). A baseline -2 Log likelihood statistic compared the goodness of fit after entering covariates into the model. Three blocks of covariates were added to the model in a sequential and cumulative manner starting with: (1) race; (2) age, reason for investigation at initial placement, declarant, and socioeconomic disadvantages (SED); and (3) the number of out-of-home placements. The decreasing Log probability estimates between blocks reported in Table 1 suggest the final model was a better fit. Multivariate Cox proportional hazard regression analyses were used to examine the chances of family reunification within an unspecified period. Table 4 reports the results of the Cox proportional hazard regression analysis. Hazard estimates along with the Wald statistic determine whether the null hypothesis equals zero.

Survival analysis methods account for censoring (the time at which no more information is available on a subject). Our model included children who remained in out-of-home care as the reference category and estimated the likelihood of family reunification. The Cox proportional hazard regression equation is specified as:

$$H(t) = H_0(t)_X \, exp(b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_kX_k)$$

where, $X_1 \ldots X_k$ represents the individual covariates, and $H_0(t)$ is the baseline likelihood of reunifying at time t. By dividing both sides of the equations above by $H_0(t)$, is obtained:

$$[H(t)/H_0(t)] = b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_kX_k$$

$H(t) / H_0(t)$ represents the likelihood of reunifying. The coefficient $b_1 \ldots b_k$ is estimated by a Cox proportional hazard regression function, and the exp^{b1} represents the likelihood of reunifying for the independent variable X_1, at any time, holding all other covariates constant. It provides an estimate by which the chances of family reunification increases or decreased based on a unit change of the independent variable. Statistical tests were conducted at 95% level of confidence; SPSS version 24 was used to analyze the data.

2.4. Treatment of missing racial information in the hazard model

The reason for missing data pertaining to a child's racial identity was initially hypothesized as resulting from out-of-home placement conditions more suggestive of emergency measures or a family crisis. Caseworkers would thus be less concerned with documenting racial status if involvement with the child welfare agency was expected to be of short duration. Including these children in our hazard model would potentially confound two very distinct profiles of children brought to the attention of child welfare services: those requiring services of urgent protection versus those requiring services for more pervasive developmental well-being concerns. To make a more informed decision, the pattern of the missing data was evaluated to determine whether the missing data was random or not random. Fig. 1 illustrates the pattern of missing data for all of the variables included in our hazard model and suggests that the missing information was not random. Monotonicity can be observed, with the missing information clustering on the right side of the graph between racial category, number of placement moves, and declarant. For these reasons, it was decided to impute values for the unidentified children so as not to bias our model.

Table 1
Model goodness-of-fit test.

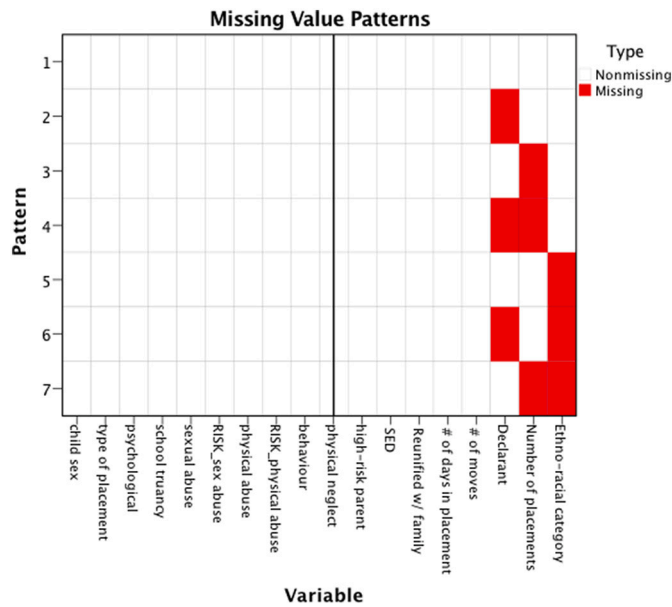|	-2 Log probability statistic	df	P
Identified children only			
Race only model	14,578	1	0.001
All except number of moves	14,495	7	<0.0001
Full model	14,492	8	<0.0001

Fig. 1. Analysis of the pattern of missing racial dat.

3. Results

The majority of children studied (85.7%), irrespective of racial category, were reunified with their families. Table 2 provides family, case, and socioeconomic characteristics of children in out-of-home placement by racial category. It compares the total number of children placed with those that reunified respective of the race variable. Information for unidentified children is also provided. Table 2 indicates that both the Black and the unidentified categories have higher proportions of younger children in out-of-home placement compared to White and other visible minority children. Only 44.4% of Black children placed are between the ages of 11 and 17 years old, whereas this proportion is higher for White (59.0%), other visible minority (61.0%), and unidentified children (61.5%).

The unidentified category has a majority of females in out-of-home placement (53.6%), in contrast to the other racial categories where the majority are males. The proportion of Black children placed for physical abuse investigations was (19.1%) compared to White (9.2%), other visible minority (19.9%) and unidentified (13.5%) children. Black children have the lowest proportion of children investigated for behavioural concerns (28.9%) versus White (42.8%), other visible minority (33.0%), and unidentified children (39.1%). Children being investigated for physical, material, and health neglect are less prevalent in the unidentified category (2.6%) compared to the other groups, whereas it is most prevalent for Black children (7.3%). Parents' high-risk lifestyle represented the second highest proportion of children being placed in out-of-home placement following behavioural problems, with the exception of Black children where it was the highest. An examination of placed and reunified children by racial categories reveals that contrary to those placed for behavioural problems, children placed for parental-high risk lifestyle are less likely to reunify, given that their proportions are lower than the full sample of children placed. A similar result was observed for children between the ages of 0 and 5 years old.

For all children in out-of-home placement, a maltreatment report was more likely to issue from a professional than a citizen. Higher proportions of professional reports were observed for Black (84.9%) and other visible minority children (86.3%) compared to White (74.3%) and unidentified children (73.7%). The majority of White children (56.7%) were placed in residential or group home settings, compared to Black (37.7%), other visible minority (46.3%) and unidentified children (45.3%) where the majority of their children were in foster homes. Black children (62.3%) had the highest proportion of children placed in foster homes, among the groups studied. An examination of placed and reunified racial categories reveals that children placed in foster homes are less likely to reunify given their proportions are lower than the full sample of children placed. Black children experienced on average, more placement moves ($M = 2.15, SD = 1.59$), compared to White ($M = 1.99, SD = 1.37$), other visible minority ($M = 1.89, SD = 2.05$) and unidentified children ($M = 1.71, SD = 1.33$). For all children, we observe that children who reunify experience on average less placement moves than their total group average.

The composite estimate of socioeconomic disadvantages was highest for Black children ($M = 0.68, SD = 0.81$) compared to White ($M = 0.27, SD = 0.97$), other visible minority ($M = 0.26, SD = 0.97$), and unidentified children ($M = 0.41 SD = 1.08$). This finding suggests that Black children are exposed to more socioeconomic disadvantage prior to entering out-of-home placement. Black children spend an average of 443 days ($SD = 724$) in placement, compared to White children who spend an average of 308 days ($SD = 501$), other visible minority children who spend an average 242 days ($SD = 447$), and unidentified children who spend an average 173 days ($SD = 302$). The large standard deviations for each of these categories suggests a high degree of variability within the sample, also implying that a subset of each population spend an extensive time in care. Of children who are placed and subsequently reunified,

Table 2
Child descriptive factors by racial category.

	White		Black		Other visible minority		Unidentified	
	Placed (N = 566)	Placed & reunified (N = 483)	Placed (N = 342)	Placed & reunified (N = 283)	Placed (N = 218)	Placed & reunified (N = 191)	Placed (N = 192)	Placed & reunified (N = 173)
Child age at placement								
0–5	26.0%	21.1%	34.5%	30.0%	25.7%	25.7%	30.7%	29.5%
6–10	15.0%	13.7%	21.1%	22.6%	13.3%	13.6%	7.8%	8.1%
11–17	59.0%	65.2%	44.4%	47.3%	61.0%	60.7%	61.5%	62.4%
Child sex								
Male	54.9%	54.5%	56.1%	58.0%	57.8%	59.7%	46.4%	46.8%
Female	45.1%	45.5%	43.9%	42.0%	42.2%	40.3%	53.6%	53.2%
Reason for investigation								
Psychological & emotional abuse	4.2%	3.3%	5.8%	4.2%	2.3%	2.6%	5.7%	6.4%
Physical, material & health neglect	5.1%	5.0%	7.3%	7.1%	4.1%	2.1%	2.6%	2.9%
School truancy & neglect	4.1%	4.3%	5.3%	4.6%	4.1%	3.1%	4.2%	4.0%
Parents' high-risk lifestyle	31.4%	27.3%	33.3%	30.4%	30.7%	30.4%	29.2%	28.3%
Risk of sexual abuse	0.5%	0.2%	0.3%	0.4%	0.5%	0.5%	0.5%	0.6%
Sexual abuse	1.8%	1.2%	0.6%	0.4%	3.2%	3.1%	2.6%	2.3%
Behavioural problems	42.8%	48.2%	28.9%	33.2%	33.0%	37.7%	39.1%	41.0%
Risk of physical abuse	0.9%	0.6%	0.6%	0.7%	0.5%	0.5%	2.6%	2.9%
Physical abuse	9.2%	9.7%	17.8%	19.1%	21.6%	19.9%	13.5%	11.6%
Declarant								
Citizen	25.7%	25.7%	15.1%	15.5%	13.7%	13.5%	26.3%	27.5%
Professional	74.3%	74.3%	84.9%	84.5%	86.3%	86.5%	73.7%	72.5%
Initial placement type								
Residential or group home	56.7%	63.1%	37.7%	43.8%	46.3%	49.7%	45.3%	46.8%
Foster home	43.3%	36.9%	62.3%	56.2%	53.7%	50.3%	54.7%	53.2%
	Mean (S.D)		Mean (S.D)		Mean (S.D)			
Number of out-of-home placements	1.99 (1.37)	1.87 (1.31)	2.15 (1.84)	1.90 (1.59)	1.89 (2.05)	1.68 (1.13)	1.80 (1.66)	1.71 (1.33)
Socioeconomic disadvantage	0.28 (0.97)	0.23 (1.01)	0.68 (0.81)	0.65 (0.82)	0.26 (0.97)	0.30 (1.04)	0.41 (1.08)	0.42 (1.11)
Number of days in placement	308.29 (501.21)	179.11 (292.50)	442.92 (724.24)	220.95 (382.37)	242.20 (447.30)	120.58 (165.17)	172.96 (302.00)	124.88 (200.33)

Percentages are column percentages for each category.

other visible minority children spend an average of 121 days in placement ($SD = 165$), unidentified children spend an average of 125 days in placement ($SD = 200$), White children spend an average of 179 days in placement ($SD = 292$), and Black children spend an average of 221 days in placement ($SD = 382$).

3.1. Time to family reunification by racial category at initial placement

A one-way ANOVA was conducted to compare the effect of the race variable on the average days spent in out-of-home placement (see Table 3). The results demonstrate that days spent in out-of-home placement varied significantly by racial category ($F (3, 1318) = 12.215$, $p = 0.000$, $\omega = 0.16$). Post hoc analyses were conducted given this statistically significant result. Specifically, Tukey HSD tests were conducted to compare pairwise contrasts between Black children and all other racial categories. Black children ($M = 443$, $SD = 724$) spend statistically longer time in out-of-home placement compared to White ($M = 308$, $SD = 501$), other visible minority ($M = 42$, $SD = 447$), and unidentified children ($M = 174$, $SD = 302$).

Table 3
Analysis of variance between racial category and time spent in out-of-home care.

	df	SS	MS	F	p	ω
Between groups	3	10,642,705.2	3,547,568.41	12.215	0.000	0.16
Within groups	1314	381,633,140	290,436.180			
Total	1317	392,275,845				

The observed hazard rate in Fig. 2 shows that for all children, irrelevant of racial category, reunification occurs almost immediately after entering placement. Fig. 2 also illustrates that the unidentified category of children have the highest probability of family reunification, followed by other visible minority children, White children, and Black children. While the unidentified children reunify at a faster rate compared to the other children, some children still spend a significant amount of time in out-of-home placement.

3.2. Hazard model of family reunification

From the sample of $N = 1318$, 14.3% of children ($N = 188$) remained in out-of-home placement throughout the follow-up period (see Table 4). Block 1, which included only the race variable, statistically influenced the chances of reunification, with Black children being less likely to reunify compared to other racial categories (White and other-visible minority children). When child welfare case characteristics were added in Block 2, the race variable remained significant with age and reason for investigation also being factors influential to reunification. As the age at initial placement increases, so does the likelihood of reunification. As far as reasons for investigation were concerned, children investigated for psychological and emotional maltreatment; physical, material and health neglect; and parents' high-risk lifestyle were statistically less likely to reunify than children investigated for other maltreatment concerns (i.e. physical abuse, sexual abuse, and behavioural concerns). With the addition of a variable for the number of placement moves, in Block 3, the previously mentioned child and case characteristics remained significantly associated with reunification, although the child's racial identity was no longer statistically found to influence reunification.

4. Discussion

As previous studies have established in the United States, this study found that Black children in Montreal, Quebec experience longer lengths of stay in out-of-home placement, and are less likely to reunify, compared to White and other visible minority children (Cheng, 2010; Connell et al., 2006; Shaw, 2010). Our study did not include First Nations children, whom research has already determined are less likely to reunify and face higher rates of neglect compared to children within the child welfare system as a whole (De La Sablonnière-Griffin et al., 2016).

These differences in reunification outcomes may be explained by several characteristics that differentiate Black from other children. Black children are placed in care at a younger age, and as a result, reflect different reasons for investigations from the other categories of children. They have the highest proportions of children being investigated for neglect and parental high-risk lifestyle concerns, both of which have been shown to significantly decrease the likelihood of reunification compared to other forms of maltreatment (McDonald et al., 2007; Shaw, 2010). While a higher proportion of Black children are investigated for physical abuse (Lavergne et al., 2008), our findings suggest that concerns for neglect rather than physical abuse negatively impact their odds for reunification. Compared to the other racial categories, Black children had the highest proportion of children placed in foster homes and on average experienced more placement instability. Research has previously demonstrated how these factors influence the likelihood of reunification considerably. Lastly, it's important to note that socioeconomic disadvantage did not appear to influence reunification outcomes for our sample and that Black children were less likely to reunify even after controlling for this variable in block 2.

Research on reunification and race is in a state of flux, offering varying findings in different studies and making different variables available for study. As a result, racial disparity in reunification outcomes may vary greatly depending on a particular combination of characteristics of the child and family or of the child welfare system, as well as external factors presented by the family. For example, being Black may only significantly decrease likelihood of reunification in the presence of younger children reported for parental risk concerns. Thus, being Black only leads to disparity when other factors are present. Given the absence of theoretical models explaining how race interacts with other factors, making sense of findings across studies, and deciding how to best address disparity, presents continuing challenges.
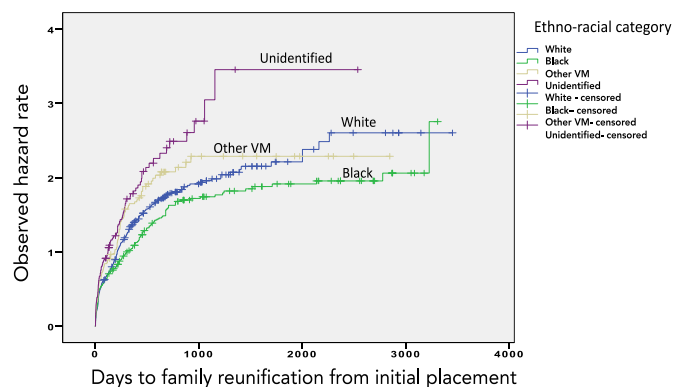

Fig. 2. The observed hazard rate of family reunification from the point of initial placement.

Table 4

Cox proportional hazard model for family reunification.

	Number of events and censored values					
	Total 1318	Events 1130	Censored 188	% Censored 14.3		
	Block 3 (final model)				Block 2	Block 1
	Beta	SE	Wald	Adj. HR (95% CI)	Adj. HR (95% CI)	Adj. HR (95% CI)
Race						
Black	−0.108	0.072	2.263	0.899 (0.781, 1.033)	0.823** (0.716, 0.947)	0.804** (0.702, 0.921)
Age (0–17)	0.027	0.007	14.693	1.027*** (1.013, 1.041)	1.025*** (1.012, 1.039)	
Reasons for investigation						
Psychological & emotional abuse	−0.335	0.162	4.262	0.715* (0.520, 0.983)	0.713* (0.519, 0.979)	
Physical, material & health neglect	−0.333	0.147	5.114	0.717* (0.619, 0.830)	0.739* (0.553, 0.988)	
School truancy & neglect	−0.224	0.156	2.072	0.799 (0.589, 1.084)	0.865 (0.639, 1.171)	
Parents' high-risk lifestyle	−0.300	0.085	12.326	0.741*** (0.627, 0.876)	0.724*** (0.614, 0.854)	
Declarant						
Professional	0.110	0.074	2.201	1.116 (0.965, 1.290)	1.153 (0.998, 1.332)	
Socioeconomic disadvantage	0.054	0.031	3.106	1.056 (0.994, 1.121)	1.055 (0.993, 1.121)	
Number of placement moves	−0.452	0.031	211.457	0.636*** (0.599, 0.676)		

* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

4.1. Limitations

This study uses clinical administrative data that provides a limited understanding of the relationship between the chosen variables and reunification. Administrative data prevents us from fully describing the environment in which children are parented and from documenting the experience of parents as users within the child welfare system. The study did not adjust for sibling pairs, because the dataset is anonymized and does not allow us to identify siblings. This may have caused a sampling bias given that each child belonging to the same family was treated independently. In the current sample, approximately 15% of children were unidentified by racial categories. The decision to include these children in the study may be questioned given that their profile may arguably differ from the other racial categories. Given their typically shorter stays in out-of-home placement, the unidentified category may represent children for whom emergency measures were required, as opposed to cases where out-of-home placement was part of a long-term plan to ensure the safety of the child, but this assumption is open to discussion. While values for these children were imputed, the limitations of this method should be recognized.

This study included a socioeconomic disadvantage index to better understand the role of poverty in family reunification outcomes. The lack of predictive power of this variable may be attributed to the urban setting of the study, where poverty is more concentrated and less dispersed. Secondly, as the sample of children in out-of-home placement have been engaged in the child welfare system for an extended period, they may share comparable exposure to risk conditions regardless of neighborhood socioeconomic characteristics.

Finally, our use of a main effect model assumes that the race variable operates similarly across all covariates; it does not address multi-factor interaction effects. Thus, while we found that race was significantly associated with reunification outcomes, we are unable to say whether its significance resulted from a certain constellation of risk factors not captured in the model. Data improvements may be needed to better understand service trajectories. The use of an urban sample also limits the generalizability of these findings to more rural settings.

This study is the first in Canada to explore reunification outcomes for Black children using longitudinal data. Its findings suggest that the overrepresentation of certain Black children is both a product of their entry and exit from the child welfare system. While we tend to prioritize prevention services for marginalized communities, this study indicates that attention must be given to services all throughout Black children's service trajectory to ensure that these children are able to exit the child welfare system in a timely manner.

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