

# Supporting older youth in care: The role of caregivers

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## Abstract

Adolescents living in care are vulnerable to a range of negative outcomes. Although the mental health and substance use problems of foster youth are widely documented, significantly less research examines the influence of caregivers on these two dimensions of health and wellbeing. Given the importance of caregivers to the development of adolescents in child welfare, the present study investigates the relationship between caregiver characteristics, caregiver attachment and placement type on mental health and substance use. The sample consists of 1,093 young people taken from the 2016 Ontario Looking After Children project who are between 16 and 17 years of age. Findings suggest that caregiver attachment, caregiver gender and the caregiver's school expectations are all significantly associated with mental health and substance use among this population. Results will inform child welfare professionals about a number of risk-predictive factors of mental health and substance use problems among a sample of young people preparing to transition to adulthood. These findings will help service providers design policies and intervention strategies to improve the future outcomes of youth involved in child welfare.

## Plain language summary

There is a lack of research investigating the role of caregivers in the development and prevention of mental health issues and substance use among youth living in care. The goal of this study is to examine the relationship between caregiver characteristics, caregiver attachment and placement type on two dimensions of mental health and substance use among a sample of older youth living in care. The data used for this study were collected as part of the Ontario Looking After Children project, which was developed to assess the needs and developmental progress of children and young people who have been in care for at least a year. Findings from this study show that caregiver attachment, caregiver's gender and caregiver's school expectations are all significantly associated with mental health and substance use among older youth living in care. These findings

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highlight the importance of developing and maintaining healthy caregiver–child relationships as well as active involvement by the caregiver in the youth’s schooling. Stable living environments will also help these young people to build and maintain healthy bonds with their community and peers. These results will inform future policies and intervention strategies aimed at improving the future outcomes for youth involved in child welfare.

### **Keywords**

Child welfare, youth in care, mental health, substance use, caregiver characteristics, caregiver attachment, caregiver

### **Introduction**

Under the Child and Family Services Act (CFSA, 1990), foster care is defined as the placement of a child or young person in the home of someone who receives compensation for caring for them but is not their biological parent. In Canada, provincial and territorial governments are responsible for providing services to children who are ‘in need of protection’. When the court system decides to remove a child from their home, they may be placed with relatives, non-relative foster families, or another form of care such as an institution or a group home (Bass, 2004). In Ontario, when children are removed from their parents and placed into care, it is most often due to requests for assistance, child exposure to parent violence, caregiver with a problem, physical force and/or maltreatment, or inadequate supervision (Ontario Association of Children’s Aid Societies, 2021). When the child is removed from their biological parent’s household, child welfare agencies attempt as much as possible to maintain the family structure by offering supports and services with the long-term goal of reunification with the biological family. However, if a reunification plan is not possible, youth become Crown Wards, meaning that their legal care, custody and control are permanently transferred to the child welfare agency (Guibord et al., 2011). All provinces and territories in Canada provide protective services to children until they reach the age of majority, generally 18 years (Tweddle, 2007). Historically, family reunification has not been the goal of the child welfare system for Indigenous Peoples. Rather, the system has been used as a mechanism to force Indigenous Peoples into accepting the dominant values and customs of the western hemisphere (Blackstock and Trocmé, 2005; Menzies, 2010; Partridge, 2010).

Current research suggests the number of Canadian children entering foster care has been decreasing for both Indigenous and non-Indigenous youth (Black et al., 2022). In 2021, an estimated 26,680 children in Canada were reported living in foster care, which is a slight decrease from the estimated 29,590 Canadian children (aged 0–14) in foster care in 2016. Although the literature suggests many reasons for the decrease in the number of children in care across Canada, of most importance is the shift to increase family preservation services that keep the child at home or, alternatively, toward improving access to permanency options such as adoption or reunification (Ministry of Children and Family Development, 2016). This is in stark contrast to the dramatic increase in children living in care in the UK. Some estimates suggest that the prevalence of children living in care in England increased from 54 to 65 per 10,000 children over the past decade, a rise of roughly

20% (Bennett et al., 2020). Some of the key factors attributed to this increase include a shifting understanding of the impact of different forms of childhood adversity and exposure to adverse socioeconomic circumstances (Bywaters et al., 2016; Cancian, Yang and Slack, 2013; Hillson and Kuiper, 1994).

These statistics raise questions as prior research conducted in North America and the UK has consistently documented a range of negative outcomes for youth living in care, including substance misuse, addiction, victimisation, homelessness, poor educational outcomes, unemployment, mental health problems and involvement in the criminal justice system, which place them at a significant disadvantage as they transition to adulthood (Courtney et al., 2001; Long et al., 2017; Tweddle, 2007; Wildeman and Waldfogel, 2014). This study builds upon existing research by examining the influence of caregiver characteristics, caregiver attachment and placement type on two dimensions of mental health and substance use among a sample of youth preparing to transition out of care. Not only are youth in care more likely to experience mental health issues and use substances at higher rates than the general population; research also indicates that lifetime rates of mental health disorders for this group are much higher and they are also more likely to use drugs and alcohol at higher frequencies (Braciszewski and Stout, 2012; Stott, 2012). This is particularly concerning as access to mental health professionals and substance use treatment programmes begin to decline rapidly as older youth transition out of the care system (Braciszewski and Stout, 2012; Casanueva et al., 2011).

### **The influence of caregiver characteristics on youth living in care**

Very little research has been conducted on the effects of the particular caregiver and subsequent outcomes of young people living in care. Of the research that does exist, much has examined the relationship between caregiver gender and caregiver–child attachments. For example, Aigner and colleagues (2013) found that both male and female caregivers perceive relationships with girls as more secure than relationships with boys. However, male caregivers reported closer relationships with boys than did female caregivers. Findings from this study also suggested that boys show more attachment-related behaviours with male caregivers. More recently, van Polanen and colleagues (2017) investigated the role of the gender of both children and caregivers in child–caregiver interactions and child attachment. These researchers found that both boys and girls reported positive attachment relationships with their caregivers, but boys were less securely attached to those who were female.

Prior research has also demonstrated a significant relationship between the caregiver–child relationship, substance use and mental health among youth in care (Geenen and Powers, 2007; Guibord et al.; 2011; Kim, Buchanan and Price, 2017; Traube et al., 2012; Wall and Kohl, 2007). Using a sample of 1,179 children in care, Wall and Kohl (2007) investigated the characteristics associated with different levels of substance use and found that low levels of caregiver relatedness increased its likelihood among this sample. Guibord and colleagues (2011) used Canadian data collected from the Assessment and Action Record to investigate the relationship between numerous risk and protective factors for substance use among a sample of 122 youth in care aged 12–15 years. These researchers found that the greater the perceived quality of the youth–caregiver relationship, the lower the risk of depression and substance use.

Taken together, these findings provide support for the main tenets of Hirschi's (1969) social bond theory. For Hirschi (1969), four interrelated aspects of the social bond constrain

our behaviour: attachment, commitment, involvement and belief. That is, people conform to the norms of society because they possess strong bonds to significant others, have stakes in conformity, are involved in usual activities and have a strong belief in conventional norms. Most of the literature examining the link between the family and delinquent behaviour has focused on the attachment component of social bond theory (Cernkovich and Giordano, 1987; Demuth and Brown, 2004; Hirschi, 1969; Kierkus and Baer, 2002; Rankin and Kern, 1994). These studies have found overwhelming support for the proposition that those youth who do not possess strong affective attachments with their caregivers are more likely to engage in delinquent or risky behaviours.

Hirschi (1969) posited three major dimensions of parent–child attachments. The first is affectional identification, which he described as the love and respect that children have for their parents. Second is the intimacy of communication – the child’s sharing of personal concerns and opinions with parents. The final dimension is monitoring, referring to the ‘psychological’ presence of parents when opportunities for delinquency arise (Rankin and Kern, 1994). Past research has operationalised parent–child attachments in a variety of ways, including indicators of affection and love, interest and concern, support and help, caring and trust, encouragement, lack of rejection, desire for physical closeness, amount of interaction, positive communication, control and supervision, parental conflict, identification with parents, and identity support (Rankin and Kern, 1994). These studies all concluded that close ties to parents are moderately and inversely related to self-reported delinquency.

Caregiver ethnicity and caregiver level of education have also been identified as important factors with respect to outcomes for children in care. Jewell and colleagues (2010) examined behavioural outcomes in an out-of-home placement depending on whether the young person’s ethnicity was similar to or different from the ethnicity of the caregiver. Using a sample of 427 children and young people from the Midwest, the findings showed that African American children in transracial placements were significantly more likely to exhibit internalising and externalising behaviour problems compared to either Caucasian children in transracial placements, or African American or Caucasian children placed with caregivers of the same ethnicity. Specifically, African American youth in a transracial placement had higher rates of observed aggressive behaviour compared to African American youth in a same-race placement.<sup>1</sup> In 2018, Day and colleagues conducted a systematic review of research relating to key factors and characteristics of successful caregiving for older youth in care. Results revealed that higher caregiver education was a significant factor that promoted permanency and placement stability among this sample of youth.

With respect to research conducted in the UK, Hiller et al. (2020) examined the role of foster caregivers and how they support children and young people in relation to emotional wellbeing and what they perceive as barriers and opportunities to providing effective support. These researchers ran three qualitative focus groups with 21 foster carers to gather information about their views on supporting their foster child’s health and wellbeing. One consistent theme to emerge from this research was caregivers’ perceived lack of support from social care or mental health services in dealing with extremely challenging behaviours. Although there were some examples of caregivers who reported receiving positive support from social care, this deficit was described by many as a significant contributor to placement breakdown and deteriorations in the child’s wellbeing. The same researchers also found evidence to support the importance of ensuring that caregivers have appropriate training on promoting the health and wellbeing of children and young people living in care.

In light of the very limited research on caregiver characteristics, this study uses cross-sectional data from a larger investigation of child welfare outcomes in the province of Ontario to explore whether a number of caregiver characteristics are associated with the mental health and substance use outcomes among an older sample of youth in care. Identifying important caregiver characteristics will help inform child welfare agencies with respect to the selection of appropriate foster carers which may, in turn, reduce the likelihood of mental health and substance use issues among these young people.

## **Risk-predictive factors of mental health and substance use among youth in care**

Although prior evidence emphasises the importance of parental behaviours and caregiver-child interactions when explaining outcomes of youth in care, some literature suggests that the type of placement may set in motion several challenges that will ultimately increase the likelihood of mental health and substance use problems. For example, Roy, Rutter and Pickles (2000) investigated two groups of children under the age of 12 and found a higher likelihood of emotional and behavioural disturbances among those raised in group care when compared with those in foster care. The researchers concluded that young people raised in group care experienced more caregiver changes, less personalised caregiving and were more likely to report negative contact with their biological parents, while those in foster care were more likely to experience a stable and long-term upbringing. Consistent with these findings, Burns and colleagues (2004) used a sample of 3,808 youth taken from the National Survey of Child and Adolescent Well-Being to examine the prevalence rates of mental health problems among children living in different placement types. The researchers found that 63% of children residing in foster care and 87% of children in group homes were in need of mental health services (defined by a clinical range score on the Child Behaviour Checklist).<sup>2</sup> With respect to kinship care, prior research has consistently found youth in these placement types to be less likely to experience mental health disorders and behavioural issues when compared to those in non-relative care. This suggests that kinship care provides a more stable, nurturing environment which ultimately helps buffer the impact of prior traumatic experiences (Winokur, Holtan and Batchelder, 2015).

Using a sample of 406 older youth in different types of foster care, Vaughn and colleagues (2007) explored the prevalence and predictors of current and lifetime substance use and found that residing in congregate care or an independent living situation significantly increased the likelihood of current and lifetime substance use and disorder. A year later, Ryan and colleagues (2008) used administrative records to investigate the likelihood of delinquency for older youth residing in group homes compared with a similar age group in foster care. Findings from this study revealed that those adolescents in group home placements are 2.5 times more likely to engage in delinquent behaviour as compared with those living in foster care. Keller, Salazar and Courtney (2010) investigated the prevalence and timing of substance use problems among older youth in care. They used longitudinal data and found that young people residing in unstructured living placements were substantially more likely to report alcohol-related disorders after entry into care, while those in kinship care reported the lowest rates of substance use.

Positive mental health (PMH) is a type of subjective wellbeing based on the appraisals that individuals make about the quality of their lives and how they see themselves

functioning in life (Keyes et al., 2008). This includes aspects of feeling well (e.g., positive affect, happiness) as well as functioning well in life both socially and psychologically (Ryff, 1989; Ryff and Keyes, 1995). For Keyes (2005), mental health and mental illness are not opposite ends of a single continuum, rather they belong to two different yet related dimensions among the population. Thus, the presence of psychopathology does not equal the absence of mental health and vice versa (Westerhof and Keyes, 2010).

Although research is limited, some Canadian studies have investigated the relationship between PMH and future outcomes of youth in care. Tessier, O'Higgins and Flynn (2018) used a sample of 2,052 youth (aged 12–18) drawn from the 2010–2011 Ontario Looking After Children (OnLAC) project and concluded that better educational outcomes are associated with young people's educational aspirations, caregiver educational aspirations, time with current caregiver, internal developmental assets and PMH. More recently, Cullen and colleagues (2021) used a sample of 1,419 youth in care in Ontario and found having lower levels of self-control, experiencing multiple placement changes, group home placement and being female are associated with lower PMH. As such, these researchers emphasised the importance of developing programmes and strategies that focus on increasing the PMH of youth in care as a means of improving their future outcomes.

Prior research has also found a relationship between spending time in care and substance use. Barker and colleagues (2014) used data from the At-Risk Youth Study, a longitudinal project that examines a cohort of street youth aged 14–26 from Vancouver, Canada who use illicit drugs. Using a sample of 937 street-involved youth, these researchers found that those who use substances are 160 times more likely to have been exposed to the child welfare system than the general population of young people. Findings from this study also identified that youth exposed to child welfare were significantly more likely to initiate hard substance use at an earlier age. Results from the UK also have found that young people living in care are more likely to report substance use and poorer wellbeing compared to those youth not in care (Hiller et al., 2020; The Health and Social Care Information Centre, 2013). For example, using data drawn from the 2015 School Health Research Network, Long and colleagues (2017) found that young people (aged 11–16 years) living in foster care in Wales had higher rates of substance use and poorer subjective wellbeing than those in private households. These researchers specifically found youth residing in foster care to be significantly more likely to report mephedrone use, multiple substance misuse behaviours, poorer relationships with peers and teachers, bullying, dating violence and poor wellbeing. Taken together, these findings are consistent with prior research that found that youth exposed to the child welfare system are more likely to engage in risky behaviours and substance use later in life versus their peer group (Courtney et al., 2001; Rutter, 2001).

## **Current study and research hypotheses**

This study examines the extent to which caregiver characteristics, caregiver attachment and placement type influence the mental health and substance use outcomes of older youth in care. As such, the goals of this research are threefold: (1) to provide a recent snapshot of the severity of mental health and substance use problems among older youth in care; (2) to identify the caregiver characteristics associated with the high prevalence of mental health and substance use problems among youth in the child welfare system; and (3) to provide information on factors that are associated with the health disparities among youth in care. Identifying these factors is important for creating pathways to help develop programmes



and policies to better address the needs of this population, including protecting them from serious longer-term consequences of addiction and mental health disorders as they transition to adulthood.

The following four hypotheses guide this study:

1. Youth residing in group homes will score lower across both dimensions of mental health and report higher levels of substance use compared with those in foster care.
2. Youth residing with caregivers with no formal training, lower levels of education, different backgrounds to the young person, low school expectations and less experience will be significantly more likely to report poorer mental health and increased substance use in comparison to those youth living with caregivers with formal training, higher education, similar backgrounds, higher school expectations and greater experience.
3. Lower levels of caregiver attachment will be associated with poorer mental health and elevated substance use among this sample of young people.
4. The effects of placement type, caregiver characteristics and caregiver attachment will remain significant, after controlling for other variables in the analysis, such as gender, ethnic identity, placement stability and self-control.

## Method

### *Design and analysis*

The current study used a sample of 1,093 young people aged 16–17 years who had been in the care of a child welfare agency in Ontario in 2016. The data were collected as part of the OnLAC project which was developed to assess the needs and developmental progress of children and youth who have been in care for at least a year. The Assessment and Action Record-C2 (AAR-C2) is the key data-collection tool of the OnLAC project, which tracks and monitors the developmental trajectories of children and adolescents in care across seven developmental domains: health, education, identity, family and relationships, social presentation, emotional and behavioral development and self-care skills (Miller et al., 2016). The AAR-C2 is administered by the child welfare worker in the form of a structured conversational interview with the child (if over the age of 10) and the young person's caregiver (foster parent, kinship caregiver, or group home staff member) usually spread over one to three sessions (Bell, Romano and Flynn, 2015).

A number of steps were taken by The Ontario Association of Children's Aid Societies (OACAS) and OnLAC project to protect respondents' privacy and to ensure ethical compliance of the AAR-C2 as a clinical assessment and research tool. A legal representative was hired by the OACAS to review OnLAC's interview procedures, measures and data management processes. These measures adhered to the code of conduct found within the Ontario Human Rights Code and conformed to anonymity and confidentiality rules (Flynn and Ghazal, 2001; Osei and Gorey, 2021). Furthermore, every wave of OnLAC data contains a unique provincial identification number which is provided for each child upon system entry to protect the identity of children and young people. This study was cleared by the University of Guelph Research and Ethics Board.

## Measures

**Outcome variables.** The present study focuses on mental health and substance use. The first dimension of mental health is psychiatric services received, an objective measure that taps into a broader range of mental health issues. This variable was measured using a question that asked the child welfare worker, 'Has the young person seen a psychiatrist in the past 12 months?' and was rated as 0 (Never) or 1 (True).

The second dimension of mental health is PMH. The Positive Mental Health Scale (Mental Health Continuum-Short Form; Keyes, 2002) consists of 14 items divided into three categories: three items relating to emotional wellbeing (e.g., happiness, positive affect and life satisfaction); six items relating to psychological wellbeing (e.g., feelings of self-acceptance, purpose in life and positive social relationships); and five items pertaining to social wellbeing (e.g., feelings of social contribution, social acceptance and social integration) (Keyes et al., 2012). Responses are along a six-point scale from 0 (Never) to 5 (Every day). Total scores could range from 0 to 70, with higher scores indicating greater perceived PMH. This scale yielded acceptable to good internal consistency for this sample with a Cronbach's alpha reliability coefficient of .772 (see Bell, Romano and Flynn, 2015).

The final outcome variable is substance use. The substance use measure consists of four items including alcohol use ('Which of the following best describes your experience with drinking alcohol in the past 12 months?'), marijuana use ('Which of the following best describes your experience with using marijuana products in the past 12 months?'), hard drug use ('Which of the following best describes your experience with using drugs like cocaine, heroin, crystal meth or ecstasy?') and non-prescription medication ('Which of the following best describes your experience with using drugs without a prescription or advice from a doctor?'). Rated by the young person, all questions were scored on a three-point scale from 0 (Never) to 1 (Experimental) and 2 (Occasionally/Daily). Scores range from 0 to 8 with higher scores indicating higher substance use. The Cronbach's alpha reliability coefficient for this scale is .742.

## Focal variables

**Type of foster care placement.** Child welfare workers were asked to indicate whether children in care were currently residing in foster care, kinship care or a group home.

**Caregiver characteristics.** Gender, level of education, training, ethnicity, caregiver's school expectations, and experience were used as caregiver characteristics. Caregiver's gender is coded 1 (male) and 2 (female).<sup>3</sup> The caregiver's level of education was measured using a single item that asked if they had 1 (high-school or less) or 2 (more than high-school). Ethnicity was coded as 1 (same or similar as child) or 2 (different). The caregiver's level of training was measured using a dichotomous variable that indicated whether the caregiver participated in any of the following training programmes: OnLAC; Parent Resources for Information, Development, and Education (PRIDE); agency-specific training; foster parenting technique; or another programme: 1 (yes) or 2 (no). In order to tap into caregivers' school expectations, each one was asked, 'How important is it to you the child or adolescent has good grades in school?' (1) Not important or somewhat important or (2) Important or very important. Finally, each caregiver was asked to report the number of years they have been providing care to children and/or adolescents.



*Caregiver attachment.* Caregiver attachment was measured using a seven-item scale to reflect the caregiver–child relationship. This measure includes three items on affectional identification (e.g., your caregiver praises you), three items on supervision/monitoring (e.g., caregiver knows your friends) and one item on intimacy of communication ('I talk with my caregiver about important issues'). Each variable used intends to operationalise an indicator of Hirschi's (1969) three major dimensions of parental attachment. The caregiver attachment measure was constructed through the combination of these seven questions into a single scale. Rated by the young person, each item is on a 4-point scale ranging from 1 to 4: (1) never, (2) sometimes, (3) often, and (4) very often. Adding the scores of the individual parental attachment variables created the caregiver attachment scale ranging between 7 (low attachment) and 28 (high attachment). This scale yielded a Cronbach's alpha reliability coefficient of .742.<sup>4</sup>

### *Risk-predictive and socio-demographic variables*

The demographic variables used in this study were the young person's gender and ethnic identity. Boys were coded as 1 and girls were coded as 2. Ethnic background was composed of four categories: Caucasian was coded as (1) First Nations, Metis and Inuit (2), Black (3) and Other (4).<sup>5</sup>

The analyses also include several common factors relating to risk-predictive variables which were selected due to their prominence in the existing research. To capture children who experienced multiple types of maltreatment, reason for admission was reported by the child welfare worker and measured using a series of binary variables (coded 0 = no and 1 = yes), where possible reasons included caregiver incapacity associated with child protection, child abuse, abandonment, neglect and emotional harm. The child welfare worker was also asked to report the number of times the young person had experienced a placement change within the past 12 months. Responses for this measure ranged from no changes, 1 (one change of placement) and 2 (two or more placement changes). The young person's contact with birth parent is coded 1 (once a year), 2 (once a month) and 3 (once a week). A measure capturing whether the youth was suspended from school during the past year was coded 0 (no) or 1 (yes) and a deviant peer association variable was created using a single question that asked whether the young person's friends model responsible behaviour, and was coded as 0 (yes) or 1 (no).<sup>6</sup>

Finally, a measure of self-control was constructed through the combination of six variables relating to child impulsivity, hyperactivity and inattention (e.g., 'Are you impulsive/ Do you act without thinking?'). Rated by the young person's caregiver or child welfare worker, all responses varied from one to three: (1) often, (2) sometimes and (3) never, which yielded a scale on which self-control could range between 6 (low) and 18 (high). This scale yielded a good Cronbach's alpha reliability coefficient of .835.<sup>7</sup>

### *Analytical strategy*

Logistic regressions are estimated to examine predictors of psychiatric services received while OLS regression is used to examine predictors of PMH and substance use. Both sets of analyses are comprised of five models. Model 1 is a zero-order model which examines the relationship between type of foster care placement and the young person's reported psychiatric services received in the first analysis, PMH in the second and substance use in the

third analysis. The second and third models introduce the variables that tap into caregiver characteristics and caregiver attachment. The goal of these models is to examine the effect of each variable on the outcomes independently. The fourth model examines the effect of caregiver characteristics and caregiver attachment on placement type. The final model includes all the variables, among them controls, to assess the partial effect of each predictor, net of the control variables. Multiple imputation was used to handle the missing data for this study (Rubin, 1987). All statistical procedures were performed using STATA version 15.

## Results

Descriptive statistics for all variables used in the analysis are shown in Table 1. Caregiver's experience, attachment, self-control, substance use and PMH are measured on a continuous scale. All other variables are categorical. The results in Table 1 reveal that over half of youth in the sample resided in foster care (64%). There were also more young people living in a group home (29%) compared to those in kinship care (7%).<sup>8</sup> In terms of caregiver characteristics, there was a high representation of female caregivers in comparison to male (85% female, 15% male). Approximately 82% of caregivers reported having the same or similar ethnicity to the young person, while 62% reported having completed some type of formal training programme. Roughly, 48% of caregivers had completed more than high school and 85% felt that school grades were important/very important. Finally, the average caregiver had 11 years of experience.

There was a fairly even distribution between male and female youth. Over half of the young people reported experiencing no placement changes, 24% had experienced one change and 19% of respondents had experienced two or more such moves over the past year. Most youth described themselves as Caucasian, followed by First Nations, Metis and Inuit, Black and Other. The majority reported a high level of caregiver attachment and moderate levels of self-control.

Five binary indicators of maltreatment were used to measure the youth's reason for admission. Forty-two percent of child welfare workers reported caregiver incapacity on the young person's behalf, 33% emotional harm or abandonment, 25% neglect and 23% child abuse. More than half of the young people reported hanging around friends who model responsible behaviour, while only 27% reported being suspended from school. Most of the youth in this sample reported being in contact with their birth parents once a week.

With respect to the dependent variables in the analyses, 27% of respondents had received psychiatric services over the past 12 months, while most reported moderate levels of PMH and little substance use at the time of the survey.

Below I discuss how the regression analyses were used to assess each hypothesis.

### *Hypothesis 1: Youth residing in group homes will score lower across both dimensions of mental health and report higher levels of substance use in comparison to those in foster care*

As hypothesised, there is a significant relationship between placement type, psychiatric services received and PMH ( $p < .001$ ). Model 1 of Tables 2 and 3 reveals that youth living in group homes report significantly higher levels of psychiatric services received ( $OR = 3.611$ ,  $p < .001$ ) and lower levels of PMH ( $b = -3.487$ ,  $p < .001$ ) than those who

**Table 1.** Descriptive statistics for 1,093 youths in out-of-home care in Ontario, 2016.

<i>Categories</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Mean</i>
<i>Focal variables</i>			
<i>Placement type</i>			
Foster care	700	64	
Kinship care	77	7	
Group home	316	29	
<i>Caregiver gender</i>			
Male	164	15	
Female	929	85	
<i>Caregiver background</i>			
Same or similar	896	82	
Different	197	18	
<i>Caregiver education</i>			
High school or less	568	52	
More than high school	525	48	
<i>Caregiver training</i>			
No	678	38	
Yes	415	62	
<i>Caregiver school expectations</i>			
Not important/Somewhat important	164	15	
Very important/Important	929	85	
Caregiver experience (years)			10.92
Caregiver attachment			24.01
<i>Sociodemographic variables</i>			
<i>Sex</i>			
Male	579	53	
Female	514	47	
<i>Ethnicity</i>			
Caucasian	721	66	
FNMI <sup>a</sup>	197	18	
Black	98	9	
Other	77	7	
<i>Risk-predictive variables</i>			
<i>Reason for admission<sup>b</sup></i>			
Caregiver incapacity	459	42	
Child abuse	251	23	
Abandonment	361	33	
Neglect	274	25	
Emotional harm	361	33	
<i>Placement changes</i>			
No placement changes	623	57	
One placement change	262	24	
Two or more placement changes	208	19	
<i>Age of first admission</i>			
0–2	163	15	
3–5	186	17	
6–10	274	25	
11–16	470	43	

(continued)

**Table 1.** Continued.

Categories	Frequency	Percentage (%)	Mean
Contact with birth parent			
Once a year	208	19	
Once a month	415	38	
Once a week	470	43	
Suspended from school			
Yes	295	27	
Deviant peer association			
No	382	35	
Yes	711	65	
Self-control			12.9
<i>Outcome variables</i>			
Psychiatric services received			
Yes	295	27	
Positive mental health (PMH)			53.57
Substance use			1.82

<sup>a</sup>First Nations, Metis, and Inuit

<sup>b</sup>The sum of category percentages is greater than 100% as there can be multiple reasons for admission.

come from foster care. There is no significant effect of living in kinship care on either dimension of mental health.

Findings also suggest a significant relationship between placement type and substance use ( $p < .001$ ). Model 1 of Table 4 reveals that youth living in group homes ( $b = 0.978$ ,  $p < .001$ ) report significantly higher levels of substance use than those in foster care. Findings from Model 1 of Table 4 also reveal that children living with kin ( $b = -0.902$ ,  $p < .01$ ) are less likely to engage in substance use when compared with those in foster care. Consistent with previous research, these findings suggest an association between the type of foster care placement and the development of mental health issues and substance use among older youth in care (Burns et al., 2004; Perry, 2006).

***Hypothesis 2: Youth residing with caregivers with no formal training, lower levels of education, different backgrounds than the youth, low school expectations, and less experience will be significantly more likely to report poorer mental health and increased substance use***

Model 2 in Tables 2, 3 and 4 shows partial support for the stated hypothesis. As hypothesised, Model 2 in Table 2 suggests that the caregiver's gender, level of education and school expectations are important factors in explaining the relationship between time spent in care and mental illness. Specifically, a young person whose primary caregiver is female ( $OR = 0.550$ ,  $p < .05$ ), has completed more than high school ( $OR = 0.845$ ,  $p < .05$ ) and reports important or very important school expectations for the young person ( $OR = 0.570$ ,  $p < .01$ ) is less likely to report visiting a psychiatrist in the past 12 months. With respect to PMH, Model 2 of Table 3 indicates that female caregivers ( $b = 3.111$ ,  $p > .01$ ) and placing a high importance on good school grades ( $b = 3.270$ ,  $p > .01$ ) are

**Table 2.** Logistic regression of psychiatric services received, 2016 OnLAC survey.

	Model 1 OR 95% CI	Model 2 OR 95% CI	Model 3 OR 95% CI	Model 4 OR 95% CI	Model 5 OR 95% CI
Placement type					
Foster care	*** (Ref)			*** (Ref)	*** (Ref)
Kinship care	0.759 [44–1.4]			0.890 [72–1.1]	0.561 [26–1.4]
Group home	3.611 *** [2.8–4.1]			3.601 *** [2.5–5.3]	3.290 *** [1.9–5.2]
Caregiver gender					
Male				(Ref)	(Ref)
Female		(Ref) 0.550* [41–75]		(Ref) 0.505* [.30–.80]	(Ref) 0.474* [.28–.81]
Caregiver background					
Same or similar		(Ref)		(Ref)	(Ref)
Different		0.282 [.02–2.4]		0.111 [.02–2.2]	0.208 [.04–1.4]
Caregiver education					
High school or less		(Ref)		(Ref)	(Ref)
More than high school		0.845* [.71–.99]		0.715 [.10–5.2]	0.500 [.20–1.3]
Caregiver training					
No		(Ref)		(Ref)	(Ref)
Yes		0.750 [.43–1.4]		0.852 [.63–1.1]	0.909 [.74–1.2]
Caregiver school expectations					
Not important/Somewhat important		(Ref)		(Ref)	(Ref)
Very important/Important		0.570** [.43–.74]		0.520** [.32–.83]	0.207 [.02–1.6]
Caregiver experience (years)		0.948 [.77–1.2]		0.701 [.35–1.2]	0.687 [.40–1.3]
Caregiver attachment			0.699*** [.59–.89]	0.695*** [.55–.90]	0.691** [.54–.88]
Sociodemographic					
Sex					
Female					0.473 [.17–1.3]
Ethnicity					(Ref)
Caucasian					0.753 [.52–1.7]
FNMI					0.924 [.77–1.3]
Black					0.564 [.20–1.7]
Other					

(continued)

**Table 2.** Continued.

	Model 1 OR 95% CI	Model 2 OR 95% CI	Model 3 OR 95% CI	Model 4 OR 95% CI	Model 5 OR 95% CI
Reason for admission					
Caregiver capacity					0.989 [.79–1.3]
Child abuse					1.333* [.10–1.8]
Abandonment					0.109 [.01–1.5]
Neglect					0.870 [.73–1.1]
Emotional harm					0.288 [.08–1.7]
Placement changes					***
0					(Ref)
1					2.560*** [.15–4.2]
2 or more					3.290*** [.19–5.2]
Contact with birth parent(s)					(Ref)
Once a year					0.700 [.36–1.4]
Once a month					0.549 [.11–3.0]
Once a week					
Suspended from school					
Yes					0.950 [.76–1.2]
Deviant peer association					(Ref)
No					0.524 [.20–1.6]
Yes					
Self-control					
Self-control					0.801 *** [.66–.95]
Substance use					0.984 [.78–1.3]
N	1093	1093	1093	1093	1093
Pseudo R2	0.038	0.030	0.040	0.080	0.206

Significance levels \*p < .05, \*\*p < .01, \*\*\*p < .001

Notes: All analyses are two-tailed

Odds-ratios shown

Odds-ratios derived with 95% confidence intervals



**Table 3.** OLS regression of PMH, 2016 OnLAC survey.

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Placement type	***			***	*
Foster care	(Ref)			(Ref)	(Ref)
Kinship care	0.998			0.780	-0.909
Group home	-3.487***			-3.098***	-2.425**
Caregiver gender					
Male		(Ref)		(Ref)	(Ref)
Female		3.111**		1.884*	0.850
Caregiver background					
Same or similar		(Ref)		(Ref)	(Ref)
Different		0.668		0.315	0.236
Caregiver education					
High school or less		(Ref)		(Ref)	(Ref)
More than high school		0.672		0.808	0.224
Caregiver training					
No		(Ref)		(Ref)	(Ref)
Yes		0.763		0.428	0.564
Caregiver school expectations					
Not important/Somewhat important		(Ref)		(Ref)	(Ref)
Very important/Important		3.270**		2.680**	2.456**
Caregiver experience (years)		1.645*		0.459	0.079
Caregiver attachment			1.138***	1.130***	1.100***
Sociodemographic					
Sex					
Female					0.712
Ethnicity					
Caucasian					(Ref)
FNMI					0.809
Black					0.098
Other					0.065
Reason for admission					
Caregiver capacity					0.076
Child abuse					1.345*
Abandonment					0.562
Neglect					-0.087
Emotional harm					-0.240
Placement changes					***
0					(Ref)
1					0.755
2 or more					-2.999***
Contact with birth parent(s)					*
Once a year					(Ref)
Once a month					0.809
Once a week					3.124*
Suspended from school					
Yes					2.711**

(continued)

**Table 3.** Continued.

	Model 1	Model 2	Model 3	Model 4	Model 5
Deviant peer association					(Ref)
Yes					0.565
Self-control					
Self-control					0.730***
Substance use					-0.737*
N	1093	1093	1093	1093	1093
R2	.033	.035	.134	.190	.299

Significance levels \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Note: Regression coefficients shown.

significantly associated with better PMH. Youth whose caregivers are more experienced also reported higher levels of PMH ( $b = 1.645$ ,  $p > .05$ ).

As seen in Model 2 of Table 4, the caregiver's gender and years of experience are associated with substance use among the sample of youth. That is, caregivers with more experience ( $b = -0.424$ ,  $p > .01$ ) and being a female primary caregiver ( $b = -0.622$ ,  $p > .05$ ) are associated with less substance use among older young people in care. These findings provide some support for the hypothesis that caregiver characteristics are associated with mental health and substance use among youth in care.

### ***Hypothesis 3: Lower levels of caregiver attachment will be associated with poorer mental health and elevated substance use among this sample of youth***

As hypothesised, the effect of caregiver attachment will have a positive impact on psychiatric services received, positive mental health and substance use. Model 3 in Tables 2, 3 and 4 suggests that youth living in care with high levels of caregiver attachment are less likely to report visiting a psychiatrist within the past 12 months ( $OR = 0.699$ ,  $p < .001$ ), have better PMH ( $b = 1.138$ ,  $p > .001$ ) and lower substance use ( $b = -0.255$ ,  $p > .001$ ). This provides evidence to support the hypothesis that youth with lower levels of caregiver attachment are more likely to report mental health issues and higher substance use.

### ***Hypothesis 4: The effects of placement type, caregiver characteristics, and caregiver attachment will remain significant, after controlling for all other variables in the analysis***

Model 5 in Tables 2, 3 and 4 includes all variables in each analysis. As hypothesised, youth living in a group home continued to have a significant negative relationship with psychiatric services received ( $OR = 3.290$ ,  $p < .001$ ), positive mental health ( $b = -2.425$ ,  $p < .01$ ) and substance use ( $b = 0.790$ ,  $p < .05$ ). That is, those residing in group homes were significantly more likely to report visiting a psychiatrist, have lower levels of PMH and engage in substance use when compared with those in foster care. This would suggest that there is a significant relationship between these types of living arrangements, mental health outcomes and substance use among older youth in care. The relationship between caregiver

**Table 4.** OLS regression of substance use, 2016 OnLAC survey.

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Placement type	***			***	*
Foster care	(Ref)			(Ref)	(Ref)
Kinship care	-0.902**			-0.780*	-0.205
Group home	0.978***			0.811**	0.790*
Caregiver gender					
Male		(Ref)		(Ref)	(Ref)
Female		-0.622*		-0.592*	-0.256
Caregiver background					
Same or similar		(Ref)		(Ref)	(Ref)
Different		0.131		0.365	0.282
Caregiver education					
High-school or less		(Ref)		(Ref)	(Ref)
More than high-school		-0.022		-0.025	0.060
Caregiver training					
No		(Ref)		(Ref)	(Ref)
Yes		0.881		0.071	0.030
Caregiver school expectations		**		**	**
Not important/Somewhat important		(Ref)		(Ref)	(Ref)
Very important/Important		-0.031		-0.063	0.122
Caregiver experience (years)		-0.424**		-0.390*	0.034
Caregiver attachment			-0.255***	-0.210***	-0.090**
Sociodemographic					
Sex					
Female					0.070
Ethnicity					**
Caucasian					(Ref)
FNMI					0.941***
Black					-0.541*
Other					0.088
Reason for admission					
Caregiver capacity					0.076
Child abuse					0.870*
Abandonment					0.509
Neglect					-0.009
Emotional harm					-0.278
Placement changes					***
0					(Ref)
1					0.070
2 or more					0.533***
Contact with birth parent(s)					*
Once a year					(Ref)
Once a month					0.398
Once a week					0.536*

(continued)

Table 4. Continued.

	Model 1	Model 2	Model 3	Model 4	Model 5
Suspended from school					
Yes					0.588*
Deviant peer association					
No					(Ref)
Yes					-1.155***
Self-control					
Self-control					0.030
Positive Mental Health (PMH)					-0.024*
Have you seen psychiatrist?					-0.241
Yes					
N	1093	1093	1093	1093	1093
R2	.039	.025	.116	.134	.338

Significance levels \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Note: Regression coefficients shown.

attachment ( $OR = 0.691$ ,  $p < .01$ ) ( $b = 1.100$ ,  $p < .001$ ) ( $b = -0.090$ ,  $p < .01$ ) also remained significant in Model 5 for both dimensions of mental health and substance use.

With respect to the variables measuring caregiver characteristics, only two significant findings remained when all variables were included in each analysis. The primary caregiver's gender continued to have a significant effect on psychiatric services received ( $OR = 0.474$ ,  $p < .05$ ) and youth whose caregivers placed a high importance on good school grades were more likely to also report higher PMH ( $b = 2.456$ ,  $p < .01$ ), after controlling for all other variables. This suggests that one possible avenue for future research would be to test the mediating effects of the variables representing placement type, socio-demographics and risk-predictive factors on caregiver characteristics.

The pseudo  $R^2$  in Table 2 and  $R^2$  in Tables 3 and 4 all suggest that the young person's level of caregiver attachment may be the strongest predictor explaining the relationship between youth in care, mental health and substance use. The pseudo  $R^2$  in Table 2 reveals that the explanatory power of the caregiver attachment variable is 4%, which is slightly stronger than the placement type and caregiver characteristic variables in Model 1 and Model 2, respectively.<sup>9</sup> In Table 3, caregiver attachment also appears to be the strongest predictor of PMH among youth in care, when compared with placement type and the caregiver characteristics; specifically, the explanatory power of the  $R^2$  for caregiver attachment is 13.4%, which is roughly four times larger than the placement type and variables used to measure caregiver characteristics. Similar to the findings in Table 3, caregiver attachment is the strongest predictor of substance use when compared to placement type and caregiver characteristics.

## Discussion

This study seeks to contribute to the very limited research on the influence of caregiver characteristics on the mental health and wellbeing among older youth in care. Findings suggest a significant association between the gender of the caregiver and substance use and PMH. Specifically, youth whose primary caregivers are female were less likely to

report visiting a psychiatrist. This finding should be interpreted with caution as this study used cross-sectional data which precludes any conclusion of the youth's health and well-being as a result of the caregiver's gender (see Newton, Litrownik and Landsverk, 2000). That is, we cannot say for certain from the results of this study whether young people struggling with substance use and abuse issues and/or poor mental health are more likely to be placed with a male caregiver. It may also be that their prior experiences with substance use and mental health issues are affecting the care they are offered. Future research examining the relationship between caregiver gender and the health and wellbeing of children and youth living in care would benefit from using longitudinal data to help untangle this association.

Results from this study also suggest a significant relationship between caregiver attachment, both dimensions of mental health and substance use. This finding is consistent with prior research conducted in North America and the UK (Cohen, 2004; Long et al., 2017; Rutter, Kim-Cohen and Maughan, 2006). Hirschi's social bond theory (1969) posits that individuals conform to the norms of society because they possess strong affective attachments to significant others, have stakes in conformity, believe in conventional norms and become involved in conventional activities. Hence, a strong responsibility is placed on the family to effectively instill a sense of attachment, commitment and obligation to conform to pro-social values. Therefore, if the child welfare system is able to provide a healthy and stable environment for these youth, one can expect them to build or re-establish stronger bonds with society. Thus, Hirschi would argue that strong caregiver-child relationships act as a buffer against substance use and mental health problems. From a policy perspective, programmes should be designed that emphasise the caregiver's responsibility for developing and maintaining healthy bonds with their children, which may reduce the likelihood of substance use and mental health problems among older youth as they prepare to transition out of the care system.

Results also reveal a significant association between the caregiver's school expectations and positive mental health. These findings are consistent with prior Canadian research (Cheung, Lwin and Jenkins, 2012; Tessier, O'Higgins and Flynn, 2018). For example, Cheung, Lwin and Jenkins (2012) examined data taken from the 2006–2009 OnLAC project to test the effect of the placement on academic outcomes in youth living in care in Ontario. Their results demonstrated that young people residing with caregivers who had higher academic expectations were more likely to achieve higher academic success. As such, future training programmes should educate the caregiver about the importance of strong expectations for the young person's schooling and teach effective ways of taking an active role in their everyday school activities. Some possible examples include but are not limited to asking the young person about homework or more generally, how school is going on a daily basis; offering support (parental or tutors) for completing homework and other school projects; communicating with the youth's teachers regularly; and suggesting study groups with friends. It also may be possible that youth whose caregivers hold higher educational expectations will be more likely to develop stronger attachments to them, which, in turn, could reduce the likelihood of mental health and substance use problems.

Findings also suggest that placement type is significantly associated with both dimensions of mental health and substance use among this population. Specifically, older youth in group homes were significantly more likely to visit a psychiatrist, exhibit lower levels of PMH and report higher levels of substance use compared with those in foster care. These findings support past research that finds youth living in unstructured foster placements are

more at risk of experiencing mental health problems and engaging in substance use (Burns et al., 2004; Vaughn et al., 2007; Winokur, Holtan and Batchelder, 2015). Again, while it is hard to delineate whether youth with behavioural or mental health issues are more likely to be placed in group care, it is evident that more interventions are necessary to support those in group homes to avoid or manage substance use and mental health issues (Barth, 2002; Cheung et al., 2011). Although the number of children and youth entering group homes has been gradually declining over the past decade, funds should continue to be dedicated towards establishing stable and supportive social environments for older youth in child welfare services. Future policies should continue to focus on shifting these young people out of group care and into more stable, nurturing environments that would better promote healthy development. These findings also suggest the need for more government funding to be dedicated to prevention programmes and promising innovations that improve access to mental health professionals and substance use and abuse programmes for youth in group care.

The number of placement disruptions experienced by these young people was also significantly associated with poorer mental health and engaging in substance use (Barn and Tan, 2012; Stott, 2012). Youth experiencing two or more placement changes over the past year were significantly more likely to use substances and report poorer mental health, while the impact of one placement change was associated with an increase in psychiatric visits. Prior research has consistently found that youth experiencing multiple placement changes increases the likelihood of a range of negative outcomes, including involvement with the criminal justice system, mental health problems and elevated rates of substance use (Barn and Tan, 2012; Menzies, 2010; Perry, 2006; Rubin et al., 2004; White et al., 2009). Research conducted by Newton, Litrownik and Landsverk (2000) provided a prospective look at the relationship between foster care placement disruptions and problem behaviours over a 12-month period among a cohort of foster children from San Diego. Findings from this study again suggest that placement instability contributes negatively to both internalising and externalising behaviours of foster children, and that children who experience multiple placement changes may be at a higher risk of these deleterious effects. As such, the government of Canada and Children's Aids societies should continue to focus on strengthening initial placements and achieving stable living situations for older youth in care. Achieving permanency for these young people will allow them to build and maintain healthy relationships with positive adults, peers their own age, the education system and employment, all of which help to facilitate a successful transition to adulthood (Pecora et al., 2005; Perry, 2006; Stott, 2012).

### **Limitations and future research**

The current study had several limitations worth noting. First, although the use of cross-sectional data allows for the testing of the relationship between youth in care, caregiver characteristics, caregiver attachment, placement type and measures of health and wellbeing, the data preclude establishing the causal relationships between variables. Thus, this study was unable to determine if mental health and substance use issues preceded placement into care or vice-versa. Future research will benefit from a longitudinal approach that can specify the process by which substance use and mental health influence youth in care, or the other way round. Second, while this study was able to improve our knowledge of the influence that certain caregiver characteristics can have on mental health and wellbeing, future research should aim to tap into a number of factors pertaining to the caregiver that could



help explain this relationship. Information on the socioeconomic status, reasons for becoming a caregiver and past mental health and/or substance use records would help to extend research in this area. Also, the findings associated with the psychiatric services received variable should be interpreted with caution as a number of youth living in care may be excluded. That is, this variable fails to account for the large proportion of young people with mental health difficulties who are unable to access mental health professionals or those treated by other mental health professionals who are not psychiatrists. Finally, the data used for this study were not designed to clinically assess mental health and substance use outcomes and as such, the outcome variables employed here are not based on a diagnostic tool.

## **Conclusion**

Findings from this study provide information that can be used to inform policies that will support youth in care and provide them with the necessary tools to successfully transition to adulthood. Efforts to reduce the likelihood of mental health and substance use problems among older young people in care should emphasise the importance of developing and maintaining healthy caregiver–child relationships and active involvement by the caregiver in the young person’s schooling. Findings also highlight the importance of diverting older youth in the care system away from group home placements and into more stable living environments that will ultimately help them to build and maintain healthy bonds with their community and peers. This study updates our knowledge of the risk-predictive factors for substance use and mental health among older youth in the child welfare system. By doing so, this information becomes relevant to developing critical intervention strategies and programmes aimed at improving the health and wellbeing of youth in care as well as promoting resilience among this population.

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## **Supplemental material**

supplemental material for this article is available online.

## **Notes**

1. Of the 427 children and youth in this sample, 101 identified as African American and 326 as Caucasian.

2. Notably, there is an important body of research that suggests there is significant selection bias into kinship care and that children entering kinship care tend to have fewer behavioural problems and higher cognitive functioning (Barth, 2002; Cheung et al., 2011).
3. The term caregiver refers to the person who is considered the most knowledgeable about the young person, usually because they are the individual most actively involved in the young person's care. If two or more caregivers know the young person equally well and are equally involved, they are asked to nominate one person as main.
4. See Appendix A, B and C for a more comprehensive outline of positive mental health, self-control and attachment measures.
5. Other category consists of Filipino, Japanese, Chinese and Asian.
6. All questions relating to the young person's socio-demographic characteristics and risk-predictor factors were answered by the child welfare worker (with assistance from the caregiver, as needed).
7. These measures have been collectively used in a variety of different research reports as indicators of self-control (see Boals, Vandellen and Banks, 2011; Tangney, Baumeister and Boone, 2004).
8. These numbers are particularly interesting as current statistics on placement type show an overall increase in the number of children entering kinship care and a decrease in the number of children entering group care in Canada (Ontario Association of Children's Aid Societies, 2021). The age of the sample used in this study (16 to 17 years of age) may explain this discrepancy.
9. Please interpret with caution as this is the pseudo  $R^2$  reported.

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