International Journal of Child, Youth and Family Studies (2022) 14(1): 30–46
DOI: 10.18357/ijcyfs141202321283

NEUROSCIENTIFIC EVIDENCE AND CARE LEAVING: A MULTIDISCIPLINARY CRITICAL COMMENTARY

Amit Sundly, Meghan Keating, Andem Effiong, and Abdullah Omar Saif

Abstract: While neuroscientific literature suggests that some parts of the brain are not fully developed until the mid-20s, public discourse is skewed toward early child development (ECD) because of its supposed long-term economic benefits. Some researchers have gone so far as to say that society overinvests in remedial programs for disadvantaged adolescents. Such claims resist advocacy efforts for extended care for children in out-of-home care and discourage policy and legislative concerns regarding investing in early adulthood. In this commentary, we unpack the literature on brain development and critically discuss its selective use by legislators and policymakers for investments in ECD. Despite the availability of neuroscientific and economic evidence, it is not prominent in the discourse surrounding supportive interventions like extending care. Using Bourdieu's theory of social reproduction, we discuss how preference is given to only the type of knowledge that preserves the social structures that work to ensure the multigenerational flow of capital among dominant groups. Also, social institutions act within the dimensions set by the social structure, constantly shaping and reshaping ways of facilitating capital preservation among the upper classes. We conclude that, in addition to moral argument, the current neuroscientific evidence may support investment in extended care programs.

Amit Sundly MEd (corresponding author) is a PhD candidate at the Division of Community Health and Humanities, Faculty of Medicine, Memorial University, 300 Prince Phillip Drive, St. John's, Newfoundland and Labrador A1B 3V6. Email: as0887@mun.ca

Meghan Keating JD is an LLM candidate at Osgoode Hall Law School, York University, 92 Edison Place, St. John's, Newfoundland and Labrador A1E 6H9.
Email: meghanskeating@gmail.com

Andem Effiong MACE is a Clinical Epidemiologist at the Faculty of Medicine, Memorial University, 300 Prince Phillip Drive, St. John's, Newfoundland and Labrador A1B 3V6.
Email: aeffiong@mun.ca

Abdullah Omar Saif MSc is a Ph.D. candidate at the Division of Community Health and Humanities, Faculty of Medicine, Memorial University, 300 Prince Phillip Drive, St. John's, Newfoundland and Labrador A1B 3V6. Email: aosaif@mun.ca

Acknowledgement: Amit Sundly would like to thank Dr. Diana L. Gustafson, Honorary Research Professor, Division of Community Health and Humanities, Memorial University, for her consistent motivation and valuable input on academic writing and grantsmanship. He would also like to thank Janeway Children's Hospital Foundation for the financial support towards his doctoral degree. All the authors would like to thank the reviewer and the editor from the International Journal of Child, Youth and Family Studies for their valuable feedback.

A multinational study of care-leaving legislation in 36 countries by Strahl et al. (2020) revealed that few countries have well-developed legislation in this area and that such legislation, where it exists, generally provides little support to youth beyond 18. Canada, where care-leaving legislation is a provincial/territorial responsibility, places among the countries with rudimentary care-leaving legislation. The limited attention given to such programs, despite the evidence that youth in transition face social and economic adversities, implies that interventions at the age of transition (later childhood/early adulthood) and extending care are not a priority for Canadian legislators and policymakers. With regard to the other end of the spectrum of childhood — the early years — the last two decades have evidenced considerable motivation globally for investment and interventions (Beddoe & Joy, 2017; Wastell & White, 2012).

The motivation for promoting interventions for early childhood development (ECD) during the critical first 5 years of life is grounded in evidence from the field of neuroscience, and the economic benefits of investing in ECD (Center on the Developing Child at Harvard University, 2007; Heckman, 2006; Heckman & Masterov, 2007; Irwin et al., 2007). The influential Nobel prize-winning economist James Heckman used data from the Perry Preschool Program and the Abecedarian Project and estimated annual returns between 7% and 13% per year on investment in ECD programs with disadvantaged children and families (Heckman, 2016). According to Heckman and Mastrov (2007), ECD interventions are significantly more effective than interventions in later life. Heckman (2006) stated that:

> Early interventions targeted toward disadvantaged children have much higher returns than later interventions such as reduced pupil teacher ratios, public job training, convict rehabilitation programs, tuition subsidies, or expenditure on police. At current levels of resources, society overinvests in remedial skill investments at later ages and underinvests in the early years. (p. 1902)

Rea and Burton (2020) found "no support for the claim that social policy programs targeted early in the life course have the largest benefit–cost ratios, or that on average the benefits of adult programs are less than the cost of the intervention" (p. 241). With respect to children in care, multiple cost–benefit analyses have shown that increasing support for youth in transition outweighs the associated costs (Forbes et al., 2006/2016; Ontario Provincial Advocate for Children and Youth, 2012; Packard et al., 2008; Shaffer et al., 2016). Rea and Burton (2021) further state:

> A number of early intervention programs have been shown to be cost effective, as have a range of "remedial" or "second chance" programs targeting older individuals. Good public policy requires a case-by-case assessment of the evidence and benefit–cost analysis for each intervention being considered. (p. 1258)

Neuroscience is a rapidly developing field that continues to advance our understanding of brain physiology and functionality, although Munro and Musholt (2014) have suggested that

neuroscientific evidence at most confirms what is already known from the social sciences about the detrimental effects of childhood maltreatment. At present, the findings that 90% of the human brain develops by age 5 and that investing in ECD has long-lasting economic benefits continue to motivate significant investment in ECD programs worldwide (Beddoe & Joy, 2017; Wastell & White, 2012). However, neuroscientific evidence showing ongoing brain development during adolescence and the demonstrated economic benefit of investing in supports during adolescence and emerging adulthood have made comparatively little impact in the public policy domain.

While acknowledging that intervention in the early years is crucial and promotes future health, a growing body of neuroscientific evidence suggests that the prefrontal cortex (PFC) of the human brain does not fully develop until the mid-20s (Arain et al., 2013; Burns & Bechara, 2007; Giedd et al., 1999; Hochberg & Konner, 2020; Samango-Sprouse, 2007). According to Arain et al. (2013):

> The development and maturation of the prefrontal cortex occurs primarily during adolescence and is fully accomplished at the age of 25 years. The development of the prefrontal cortex is very important for complex behavioral performance, as this region of the brain helps accomplish executive brain functions (p. 459).

Despite these findings, there remains a contrast in both government and public rhetoric about investment aimed at disadvantaged children in early childhood versus young adulthood. Investment is skewed predominantly towards early childhood because of studies that show high returns on ECD interventions (Wastell & White, 2012). While critiquing the selective application of neuroscientific evidence and its use in economics research, Bruer lamented that "the findings of the new brain science have become accepted facts, no longer in need of explanation or justification, to support childcare initiatives" (Bruer, 1999, p. 61).

Why is the evidence from neuroscience and economics used selectively by legislators and policymakers to justify increased investments in early childhood but not in interventions with adolescents and young adults exiting care? Intrigued by this question, I (the first author) began to think beyond the practical matter of what policy, programs, and legislation are in place for young adults who grew up in the Canadian child welfare system. This led to the present critical commentary, which is a collaborative effort by an interdisciplinary scholar, a clinician, a lawyer, and a critical theorist to explore the question from a multidisciplinary and critical perspective.

In this commentary, we first briefly introduce Canadian care-leaving legislation and transition programs; this is followed by a section on neuroscientific evidence on brain development in adolescence and early adulthood. Finally, using Bourdieu's theory of social reproduction, we will explore why legislators and policymakers use evidence from neuroscience and economics to justify increased investment in early childhood but do not use the abundant similar evidence to justify increased investment in interventions with adolescents and young adults exiting care.

Transitioning Youth in Canada

In Canada, it is estimated that over 62,000 children are in care at any given time (Jones et al., 2015; Trocmé et al., 2019). The lack of federal uniformity or common standards among provinces and territories means that when these children are ready to transition out of care, they may experience different standards of services depending on where they live. Unsurprisingly, most children transitioning out of Canada's care system face significant obstacles that can lead to detrimental health and well-being outcomes (Rome & Raskin, 2019; Tweddle, 2007). Overrepresentation of individuals with care experience among the young homeless population (between 13 and 24 years of age) and historical negative care outcomes are viewed as evidence of ineffective and insufficient transition planning (Gaetz et al., 2016; Shewchuk, 2020).

Canada has no federal legislation with child protection oversight; instead, its 13 provinces and territories have the responsibility of handling child protection and welfare matters. The lack of national legislation means there is little uniformity across the country regarding child protection and welfare. For example, even the definition of a child — someone who has not reached the age of majority — is not consistent across each piece of legislation: in several provinces, a child is a person under 18 or 19; in others, it is a person under 16 (Public Health Agency of Canada, 2019). Further, some definitions include youth within the term "child", whereas others regard youth as a distinct age category (Public Health Agency of Canada, 2019).

Although programs and services are available for youth in transition in Canada, there are several issues that reduce the effectiveness of these programs. The cut-off age, at which individuals in care must exit the system and no longer receive protection services, is inconsistent, ranging from 16 to 19. In most provinces, 16- and 17-year-old youth who have no one to take care of them upon exiting care have the option of entering into services agreements to receive continued intervention services. Under these agreements, provinces provide financial, residential, supportive, and rehabilitative services to individuals who can no longer stay at home, through such initiatives as Newfoundland and Labrador's Extension of Youth Services Program (Sukumaran, 2021; Public Health Agency of Canada, 2019). Despite making services available for youth in transition, policymakers are criticized for their overt focus on measurable outcomes, such as education or employment (Antle et al., 2009; Barker et al., 2020; Lee & Berrick, 2014). However, a scoping review of high school outcomes of children in care found that neither researchers nor policymakers are well informed about the high school outcomes of children in care in Anglosphere countries (Sundly et al., 2023).

Most of these transition supports have conditions attached to them. According to Sukumaran (2021), the funding for education and employment support programs requires youth to attend post-secondary education or training to develop skills for future employment. Other programs that do not have an academic condition attached to them require youth to maintain regular contact with their case manager to update them on their transition plans. Some provinces and territories limit their support to individuals who are in specific care arrangements immediately before their cut-off

age. Not meeting the requirements means an end of support and services. Hence, the nature of the oversight attached to these programs is authoritarian, disciplinary, punitive, and hegemonic rather than just and empathetic (Featherstone et al., 2014).

Lee and Berrick (2014) and Shewchuk (2020) have argued that current programs do not emphasize the development of relational skills and social capital, which are crucial for post-care independent living. Some advocates who emphasize the social determinants of health have put forward proposals for models, frameworks, and best practices to improve the effectiveness of transition plans, with common elements that include an emphasis on interdependence, enhancing social capital and agency, extending support until mid-twenties, and a holistic approach to services (e.g., Armstrong-Heimsoth et al., 2021; Greeson, 2013; Sukumaran, 2021). Beyond the moral and ethical arguments for extending these services, abundant neuroscientific evidence also suggests an increased need for support during adolescence and early adulthood.

Neuroscientific Evidence in Brain Development During Adolescence and Early Adulthood

In public discourse, the value of the early years in a child's life is taken as established fact, largely on the basis of scientific findings on brain development that have been reported in the mass media and cited in advertisements. However, the neuroscientific evidence about brain development during adolescence and young adulthood — though sometimes invoked in the legal defence of juvenile offenders in the United States (Shah, 2016; Yoder & Decety, 2017) and within legal contexts in general (Chandler, 2015; Meixner Jr., 2018; Schwartz et al., 2018; Steinberg, 2014; Walsh, 2010) — seldom informs prevention and health promotion initiatives, including the provision of transition supports for care leavers. While acknowledging the importance of the early years, we argue that the neuroscientific evidence on brain development in later childhood and early adulthood clearly merits discussion.

Significant brain development occurs during early childhood, but not only then: dynamic alterations of the gray and white matter subregions of the brain persist during adolescence (Casey et al., 2009; Sowell et al., 2004). The motor and sensory systems underlying primary functions mature first (Gogtay et al., 2004), and higher order association areas that consolidate the primary functions mature later (Arain et al., 2013). Myelinogenesis, the development of the myelin sheath needed for adequate insulation, systematic control, and communication in the nervous system, extends beyond childhood (Arain et al., 2013). As a result, the brain during adolescence remains structurally and functionally sensitive to sex hormones (estrogen, progesterone, and testosterone) and environmental stimuli, affecting sex, eating, and sleeping habits (Arain et al., 2013).

Scientists have also argued that the neural mechanisms underlying changes in adolescent behaviour are characterized by an increased sensitivity to rewards and reduced control of impulses (Casey et al., 2008). Extant human and animal imaging research suggests a biological premise comprising disparate progression of limbic reward systems throughout adolescence in contrast to childhood and adulthood (Casey et al., 2008). Galvan et al. (2007) conducted a study "designed to examine neural correlates of risk-taking behaviour in adolescents, relative to children and adults"

(p. F8) and found that the predominance of glutaminergic neurotransmission juxtaposed with impaired gamma-aminobutyric acid (GABA) transmission may be behind immature behaviour, neurobehavioural excitement, and impulsivity commonly seen among adolescents.

The regulation of affective (emotional) arousal is a crucial facet of human social and cognitive development (Perlman & Pelphrey, 2011). The process and mechanisms involved in developing this executive functioning component include the PFC regulation of the amygdala — the brain's emotional center, responsible for primal feelings of fear and rage (Perlman & Pelphrey, 2011). Perlman and Pelphey (2011) found "reliable increases in affective connectivity between the anterior cingulate cortex [a region of the PFC] and the amygdala during times of increased demand for emotional regulation" (p. 607). Specifically, their study of how brain connectivity relating to emotions changes with age found that constructive connectivity increases throughout childhood, and in early, middle, and late adulthood. Meanwhile, according to Shah (2016), there is evidence that activation in the amygdala is less subject to inhibition by the PFC during adolescence: "visual [imaging] scans have established that while teens rely mostly on the use of the amygdala — the region that guides instinctual or 'gut' reactions — adults rely on the frontal cortex, which governs reason and planning" (p. 174).

Overall, adolescence is a time of marked sensitivity to environmental disturbances that can have long-term effects on PFC functioning (Blakemore & Mills, 2014). In particular, the adolescent brain is not fully mature: cognitive and neurological ontogenesis extends through adolescence and early adulthood (Rocque, 2015). The aggregation of these processes and changes in maturation enhances brain physiology, facilitates more rational thought, and makes information exchange more efficient, resulting in better impulse control and decision-making (Steinberg, 2014).

In recent years, research on the course of brain development has informed us that even late in the teen years and early adulthood, a person's capacity for judgement is limited because the PFC is not fully developed (Arain et al., 2013; Burns & Bechara, 2007; Giedd et al., 1999; Hochberg & Konner, 2020; Samango-Sprouse, 2007). These neurological findings second the theory of emerging adulthood, as propounded by Arnett (2000). Emerging adulthood is defined as:

> an extended period of development between adolescence and young adulthood, typically lasting from ages 18 to 25. Central to the theory is the tenet that emerging adulthood is a distinct period of development, different from the stage of adolescence that precedes it and the young adult period that follows. The theory of emerging adulthood stresses the psychological and subjective experiences of individuals aged 18 to 25, characterizing the age period as one of identity explorations, feeling "in-between," instability, self-focus, and possibilities. (Tanner & Arnett, 2016, p. 34)

While these findings are interesting, there might be concerns that such research could be used to justify calls for increasing the legal age of driving, drinking, voting, and so on. Using simulated driving activities, Foy et al. (2016) studied PFC activation and young driver behaviour. According to them, although there was no difference in how many overtakes each group performed, age-associated differences did occur in PFC activity. Yet when comparing younger drivers' PFC activity in regard to inhibitory control and mental workload with that of older drivers, younger drivers did not exhibit different risk-taking behaviours. Nonetheless, older drivers used more inhibitory control, suggesting they were safer when they decided to overtake. Although younger drivers exhibited significantly lower PFC activity than older drivers, brain size reductions and cognitive slowing in older adults may also lead to increased crash risk and lower performance. Thus, examining other ages and populations in future longitudinal studies may be advantageous before setting age limits for tasks such as driving, voting, or drinking. Assessing changes in PFC functional activity and related structural maturation over time via a longitudinal study design with structural imaging scans would provide sounder justification for implementing age limits for task choices hitherto determined primarily by age-related differences in experience, cognition, and behaviour.

Within the context of the child welfare system, we argue that young adults in the general population typically have significant adults (e.g., parents) to support them during this sensitive period of brain development. While their own PFC is still in maturation, they have mature, caring adults with fully developed PFC to guide and advise them — such guidance compensates for the natural impairment that results in impulsivity and helps them make better decisions about such activities as drinking and driving. However, most young adults exiting care have to make judgement calls without the benefit of caring individuals who can provide them with proper guidance or put limits on them. Whether to exit care at the earliest opportunity, regardless of consequences in the outside world, is one such judgement call. The overrepresentation of individuals with care experience among the young homeless population in Canada may be the result of adolescents' tendency to make impulsive decisions based on gut reactions.

Previously, studies on youth in transition stressed the importance of support during the transition out of the care system (Mann-Feder, 2007; Mann-Feder & Goyette, 2019; McGhee & Deeley, 2022; Toulany et al., 2022). Despite these findings, the welfare discourse continues to be dominated by the idea of the "critical years" of ECD, leading to a disproportionate distribution of funds. While acknowledging the importance of investment in ECD, the evidence from neuroscience and economics shows that emerging adulthood is also a critical phase in human development. We ask why, despite the current neuroscience and economic evidence, child welfare legislators and policymakers continue to regard early childhood interventions and investments as more important than interventions for and investments in transitioning youth and young adults? Our critical assessment follows.

A Critical Analysis of ECD Investment

The evidence informing social and public policies and the policies themselves should undergo critical scrutiny. Unfortunately, health policies often result from political considerations without regard to scientific rigour; the selective emphasis on investing in ECD programs is one example (Bruer, 1999). Beddoe and Joy (2017) and Wastell and White (2012) have accused policymakers of predominantly relying on neuroscientific claims that are often not critically examined nor validated by further experimentation.

Multiple researchers have criticized the notion that the first few years determine the life trajectory in later years. For example, in his influential book *Three Seductive Ideas*, Kagan (2000) questioned whether early years really determine future development. Kagan provided counterevidence of war orphans who, despite having experienced traumatic early childhood, came to achieve intellectual levels that were similar to those achieved by average children. In their study of child maltreatment and brain development, Twardosz and Lutzker (2010) stated, "The precise effects on the human brain and the extent to which they might be reversed or modified by intervention are still far from clear" (p. 66). A limitation of using neuroimages as evidence is that they do not tell us anything about genetic or environmental influences on the brain (Munro & Musholt, 2014; Schmitz & Höppner, 2014). In fact, "The apparent tendency in the literature to think of them [neuroimages] as akin to photographs leads to a tendency to over-estimate their reliability" (Munro & Musholt, 2014, p. 19), and the decontextualized public use of such images can be misleading (Wastell & White, 2012). However, these images continue to be used in government reports that inform public policies and investments (Beddoe & Joy, 2017; Wastell & White, 2012).

Our intent is not to nullify the neuroscience or economics behind investing in ECD programs. We simply want to express the view that neuroscience, like any other branch of knowledge, has complexities whose interpretation can result in contradictory perspectives. Some researchers suggest that more research is needed to establish causation in factors influencing brain development. As Wastell and White (2012) put it: "Neuroscientists and clinicians concern themselves with understanding the workings of the brain, the aetiology of neurodevelopmental disorders and eventually their work may produce new treatments, but currently the knowledge is not 'policy ready' " (p. 411). So, why does investment in early childhood receive so much attention despite evidence that critical brain development continues to occur later? We investigate this question in light of Pierre Bourdieu's *social reproduction theory*.

Pierre Bourdieu's Social Reproduction Theory

One aspect of social reproduction theory explains how social disparities are reproduced within society. Social disparities are created when certain social groups gain more ability to access different types of *capital* than others have. Bourdieu (1986/2010) categorizes these types of capital as economic, social, symbolic, and cultural. Economic capital comprises resources such as money and wealth. Social capital generally refers to an individual's connections with their social network,

while symbolic capital refers to the resources or prestige that individuals gain through their positions in society. Cultural capital refers to the skills (e.g., language skills, knowledge) people learn as a result of belonging to a certain social group or class. The notion of cultural capital is crucial to understanding how social reproduction produces disparities in society. For example, learning a language from an elite institution can enhance a person's skills, which may help them achieve more economic capital (e.g., money). According to Bourdieu, access to capital is essential for human development: the more capital we have, the more powerful we can be in society. People belonging to the upper or hegemonic class have better access to all four types of capital than those belonging to poorer classes.

Also, important for understanding social reproduction is the concept of *habitus*, which helps explain how access to capital is linked with the *reproduction of knowledge*. Bourdieu's (2004) term "habitus" refers to a person's internalization of experiences of the social world in which they live. Knowledge derived from such internalization can be personal, meaningful, and seem commonsensical to the individual. However, Bourdieu wanted us to consider that the processes through which the individual internalizes their continuous flow of experiences are not independent of the influences of social structures. A social structure is a space consisting of different social groups that struggle to exert power over each other regarding capital accumulation.

Since they have more access to capital than others do, dominant groups have more power to shape and reshape social institutions that disseminate knowledge, and so these institutions work to maintain and continue the existing social structure with all its disparities (Bourdieu, 2004). In other words, knowledge reproduction in a society emanates from the social structure and is carried out by institutions that perpetuate the knowledge used by the dominant culture to maintain its multigenerational dominance. The necessity of promoting the dominant knowledge through institutions comes from the capitalist desire to pass accumulated capital from one generation to another. However, this knowledge only reflects the lived experiences of the dominant groups. The experiences and knowledge of other groups are not captured when knowledge is reproduced unless they help preserve the existing social structure. This explains why knowledge disseminated in educational institutions often fails to capture other voices. The distribution of knowledge or cultural capital occurs in such a way that only dominant groups, or groups near them, can use this knowledge to ensure the flow of the various forms of capital among themselves, creating disparities in society. In Bourdieu's (1973) words, "The educational system reproduces all the more perfectly the structure of the distribution of cultural capital among classes (and sections of a class) in that the culture which it transmits is closer to the dominant culture" (p. 493).

To maintain the passing on of capital to hegemonic classes, the social structure selectively picks up knowledge favourable to the upper classes and perpetuates it through institutions such as schools, universities, and research organizations (Bourdieu, 2004; 1986/2010). Bourdieu wanted us to analyze the structures of institutions to understand the reproduction of knowledge as a consequence of the flow of capital among dominant groups.

Applying Bourdieu's Theory to ECD

Bourdieu's conceptualization of social reproduction provides us with a lens to understand why a certain habitus or knowledge is preferred over others (Bourdieu, 2004). In our case, we have noted that there is a focus on investment in ECD, ignoring neuroscientific and economic claims suggesting that investment in later years could also be beneficial. We discuss two points below in light of the concept of social reproduction.

First, using a Bourdieusian analytical approach, we see that in a capitalist society, the reproduction of knowledge is associated with wealth accumulation. The dominant groups within a capitalist society are driven by the desire to accumulate capital. This indicates that in a capitalist system, preferences will be given to only those types of knowledge that preserve the existing social structure, which works to ensure the flow of capital among the dominant groups from generation to generation. This also means that ideas that are not economically justifiable — "cash-worthy" — will not be prioritized. The idea of spending more on ECD is regarded as cash-worthy because investing in early childhood has been deemed economically beneficial, with a potential high return (Heckman, 2006). Wastell and White (2012) provided interesting evidence that shows how dominant capitalist discourse wants to make investing in the early years attractive to the masses. One influential report on investing in ECD in the United Kingdom features a "brain image on the cover, … joined by symbolic bars of gold emphasizing the economic sense behind 'early intervention'" (Wastell & White, 2012, p. 397). We argue that the accepted cash-worthiness of investing in ECD demonstrates that hegemonic forces working through different institutions of knowledge production see young children as better "capitalist assets" than adolescents or young adults are.

Since capital accumulation is one of the major objectives of capitalism, any intervention that does not generate maximum capital is often discarded. For example, Bruer, cited in Smith (2014), stated that there is a concern that funding for educational programs in prisons will be withdrawn because the dominant discourse discourages investment in later years. Although neuroscientific research suggests that important parts of the brain continue to develop up to age 25 or so, the hegemonic forces see investing in later years as less profitable than spending money on ECD.

Second, the idea of investing in ECD is promoted to policymakers through research organizations that are often run by wealthy families and individuals. Even government agencies and international authoritative bodies are susceptible to political motivations. These institutions are acting within the dimensions set by the social structure, which is constantly shaping and reshaping ways to facilitate capital preservation among the upper classes. Therefore, these organizations continue to promote ECD investment, ignoring the extensive body of literature that invites policymakers to extend their thoughts beyond the early childhood framework. We posit that there is a need to use a critical stance to demystify narratives based on ideas regarding human brain development, and the economic studies grounded in these narratives.

Concluding Comments

According to the Center on the Developing Child at Harvard University (2022b), "Helping adults build and use … core capabilities is essential not only to their own success as parents and workers, but also to the development of the same capabilities by the children in their care" (p. 8). Moreover, "current health promotion and disease prevention policies focused on adults would be more effective if evidence-based investments were also made to strengthen the foundations of health in the prenatal and early childhood periods" (Center on the Developing Child at Harvard University, 2022a, p. 2). Therefore, we argue that ECD programs can complement interventions and investments in adolescence and early adulthood but are not an adequate substitute for them.

We have shown in this article that legislators and policymakers use evidence from neuroscience and economics selectively to argue for increased investments in early childhood, rather than also applying such evidence to interventions with adolescents and young adults exiting care. To explore why this is so, we have offered a multidisciplinary critical commentary on: (a) the current Canadian care-leaving legislation and programs and their limitations; (b) current neuroscientific evidence supporting the argument that critical brain development is not limited to early childhood but continues throughout adolescence and early adulthood; and (c) the selective application of the available evidence, drawing on Bourdieu's theory of social reproduction. While discussing the capitalistic structural and hegemonic forces that may have skewed investment towards programs in ECD, we add our voices to those who call for increased investment in programs for care leavers in emerging adulthood. For children in care, this would mean extending care until their mid-20s. Moreover, supporting individuals who have grown up in care is a moral responsibility of the state (Mendes et al., 2022). The argument on extending support for transitioning youth that is currently grounded in moral and sociological findings — what Munro and Musholt (2014) called soft science — can also be backed by hard neuroscientific evidence, as we have shown. According to Munro and Musholt (2014), neuroscientific evidence may be more appealing to policymakers and legislators "due to an implicit bias towards so-called 'hard sciences', which are somehow seen as providing better, more reliable evidence than 'soft sciences', such as the social sciences" (p. 19).

Even though we have made an argument for extended supports for care leavers, we stress that the evidence informing social and public policies, like the policies themselves, should undergo repeated critical scrutiny. This proposition is nothing new: critical scholars and philosophers have clearly shown that discourses around health need to be deconstructed and decolonized (Holmes et al., 2006). From the philosophical works of Deleuze, Guattari, and Foucault, we see that health discourses are heavily laden with positivistic or post-positivistic paradigms that exclude evidence that is incongruent with the hegemonic intent in various socially located institutions producing health knowledge. The arguments we have presented in this paper call for a more nuanced and critical study of knowledge production to better understand how capitalist social structures shape the way we see scientific evidence and lead us to prefer one type of evidence over the others.

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