Developmental Health Knowledge as a Catalyst for Healthy Family Policies in Canada

April 2012

Briefing Note

For up-to-date knowledge relating to healthy public policy

This briefing note is part of the research conducted by researchers at the Saskatchewan Population Health and Evaluation Research Unit and the Human Early Learning Partnership to develop a Canadian Family Policy Assessment Tool, to monitor and report on progress.[1]

Introduction

While Canadians have invested heavily in areas such as health care and education for years, the country has fallen behind in terms of providing resources for our children. Approximately 27% of kindergarten-aged children in Canada do not have all the developmental assets they need to thrive both upon entering school and into the future (Kershaw, Irwin, Trafford & Hertzman, 2005; Willms, 2002).

Public health actors are increasingly aware of the impact this situation can have on the health of Canadians, young and old, in the short and the long term. This briefing note presents a definition of developmental health, discusses the social determinants of developmental health, shows some key figures for Canada and suggests a healthy public family policy framework to support developmental health.

Developmental health defined

Developmental health is a term used to refer to a broad range of states, skills and abilities, and competences and achievements that define and determine growth and development in the early years. The term includes such measureable outcomes as physical health, mental health, social and emotional competences, cognitive abilities and skills, and educational attainment (Keating & Hertzman, 1999). Developmental health is broader than other commonly used terms that refer to children's developmental outcomes, such as school readiness,[2] health, academic achievement, or well-being. The term "developmental health" represents children's development in a global sense, and therefore is the term preferred in this briefing note. Two reasons justify this use.

First, institutions, structures, and systems in our society are primarily designed to address aspects of development one at a time: the health apparatus primarily focuses on physical health; the educational system has traditionally focused on cognitive abilities; and the social service system has traditionally placed families' and communities' social and emotional needs at the forefront. Accordingly, different domains of development are often conceptually and practically segregated in our society. This compartmentalization of aspects of child development results in fragmented and often uncoordinated care—requiring children and families to try to adjust their needs to fit in different bureaucratic structures—rather than coordinating and integrating the bureaucratic structures to holistically address the needs of young children and their families.

The second reason to emphasize the holistic nature of development is that outcomes in different developmental domains are highly interconnected. In other words, development in one area depends and builds on development in other areas, and this process is mutually reinforcing, as it is iterative. For example, a child who is emotionally secure and is not distracted by social anxieties is likely more able to concentrate on her learning experiences; in turn, once the child begins to achieve success in her learning experiences, and this success is met with positive

[1] To access more background and in-depth material on this framework, the full report is available at this address: www.kidskan.ca/policyassessment.

[2] It must be noted, however, that recent conceptualizations of school readiness and well-being themselves have become increasingly broad and holistic terms. For example, Janus & Offord (2007) define school readiness as including the five domains of physical health and well-being, social competences, emotional maturity, language and cognitive skills, and communication and general knowledge.

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reinforcement by parents, teachers, and peers, the child's self-confidence and motivation is likely to increase even more. The brain architecture and developing abilities are built sequentially, from the "bottom up," much like a house and all its component systems, as shown in Figure 1.

Equally important, there are **sensitive periods of development** in these interdependent domains during the first years of life, starting with conception, as shown in Figure 1, below. That is, beginning from conception and throughout the early years, development in the social, cognitive, emotional, and physical domains is highly sensitive to, and highly dependent upon, contextual influences, whether the context is the womb, family, neighbourhood, community, child care centre, prekindergarten, or more broadly in society. This interaction between the developing child and his or her environments and experiences work in a "serve and return" manner, where a child is engaged and responded to by parent or caregiver in a back and forth manner, which not only fosters secure attachment but also biologically builds the brain's architecture. Recent research on the developing brain has demonstrated these developmental concepts convincingly.

One area of neuroscience research that has attracted particular attention demonstrates that early experiences and exposures have long-term consequences, by chemically altering the structure of genes in the developing brain (National Scientific Council on the Developing Child, 2010).

The brain is not only malleable—it is changed by the environments and experiences in the early years. These experiences can be positive or negative, and negative experiences can be graded by degree, such as tolerable or toxic. It has also been shown that an exposure to common, everyday challenges and developmentally appropriate tasks can be beneficial in the long term, if children are given the care, support, and opportunity to learn how to overcome and cope with them. In other words, a well-balanced combination of care and support on the one hand, and exposure to challenges on the other, can prepare children for life, just as inoculators prepare the immune system to function well later in life (Hertzman & Boyce, 2010; Pluess & Belsky, 2009; Boyce & Ellis, 2005).

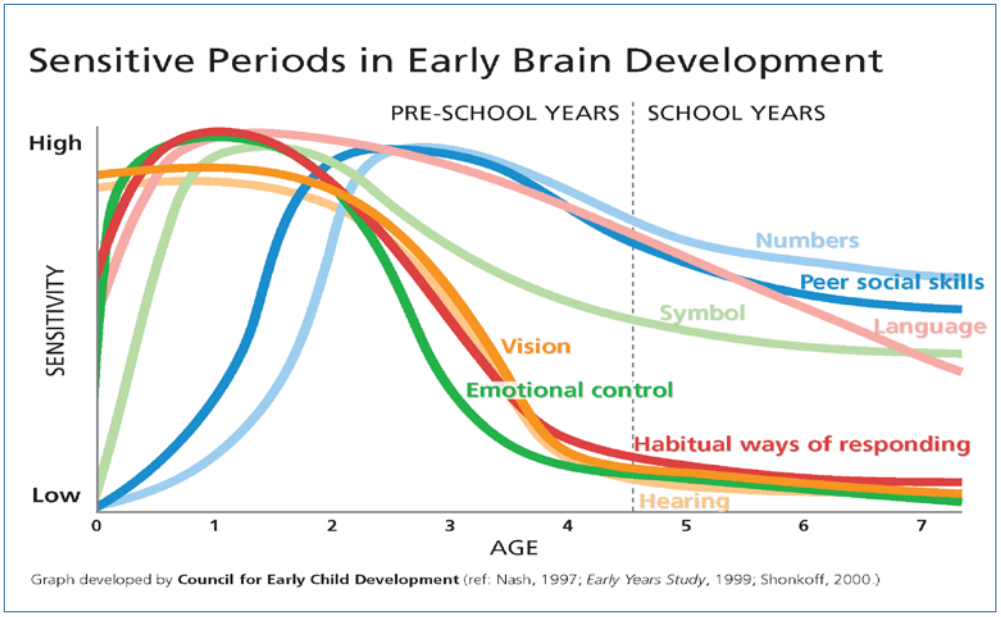

Figure 1 **Sensitive periods in early brain development**

Brain architecture is developed in a bottom-up sequential manner, and is especially sensitive to environments and experiences in the early years (Council for Early Child Development, 2010).

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Social determinants that support children's developmental health

Research has shown that there are key building blocks that serve as a foundation of children's developmental health. These building blocks, referred to as **social determinants** of developmental health (Keating & Hertzman, 1999), may be considered under three general themes:

- Care – consistently loving, guiding, and stimulating **care** from at least one caregiver (Ainsworth, 1989; Ainsworth & Bowlby, 1991);
- Support – the provision of healthy nutritious food, access to preventive care and **support**, screening, and medical care; and
- Opportunity – the **opportunity** to access dependable and increasingly complex social interactions, play activities, and learning experiences (Bronfenbrenner, 1979; Sroufe, Egeland, Carlson & Collins, 2005).

In most industrialized societies, including Canada, the presence of these three general building blocks of human development—care, support, and opportunity—is highly dependent on two enabling conditions:

- **Family time and resources** (that is, time to care personally for children, adequate income/financial resources and educational skills, knowledge and access to information); and
- **Universally accessible community services** such as high-quality education, care and health programs and services.

Developmental health generally follows a socioeconomic gradient (Keating & Hertzman, 1999; McCain & Mustard, 1999). This means that patterns of socioeconomic status closely follow patterns of numerous outcomes in health and education. The proportions of children with developmental vulnerability within a population increase (in a linear manner) with decreasing socioeconomic status—the lower the socioeconomic status, the more children with developmental vulnerability.

Though the likelihood of developmental vulnerability is highest in families with low socioeconomic status, including those experiencing poverty, the **largest number of children** with developmental vulnerabilities is spread across families in the middle socioeconomic spectrum in the nation—because the large majority of children come from families in the middle socioeconomic spectrum. This finding points to an inevitable fact: good developmental health, leading to the best outcomes for children and society, requires a mixture of policies and programs directed at families at the lower end of the socioeconomic spectrum as well as all families across the economic spectrum—that is, both targeted and universal policies and programs.

Key figures for Canada

In the Canadian context, a number of indicators on children's developmental health-related outcomes illustrate how many of our children are not doing well. For example: the prevalence of mental health and psychiatric disorders among children is about 10%-20% (Breton et al., 1999; Offord et al., 1987; Spady, Schopflocher, Svenson & Thompson, 2001); approximately 26% of children 2 to 17 years are overweight or obese (Shields, 2005); approximately 3% of all children aged 5 to 14 are diagnosed with a learning disability (Statistics Canada, 2007); and about 10% of all children drop out of school (Bowlby, 2005).

It has been suggested—based on findings from the National Longitudinal Study on Children and Youth and from population-level studies using the Early Development Instrument (Janus & Offord, 2007)—that approximately 27% of kindergarten-aged children in Canada do not currently meet all of the developmental benchmarks (e.g., age-appropriate social, emotional, and cognitive competences), or do not have all the developmental assets (e.g., sufficient quality time with caregivers) they need in order to thrive both upon entering school and into the future (Kershaw et al., 2005; Willms, 2002).

Children's developmental health: long-term impacts

Evidence points us to another essential fact: developmental health during early childhood is strongly and consistently associated with increased likelihood of positive outcomes later in life, such as educational achievement, professional success, and better health, and reduced likelihood of negative outcomes such as unemployment, criminal behavior, and mortality (Schweinhart, Barnes & Weikart, 1993). In short, developmentally healthy children are

more likely to become developmentally healthy adults, with positive consequences both for the individual and for society as a whole.

As a result, collective developmental health is fundamental in optimizing the human capital Canada relies on to maintain high levels of societal well-being, sustainable progress, and economic prosperity. In fact, multiple international analyses show that the most cost-effective human capital interventions occur among young children (e.g., Belfield, Nores, Barnett & Schweinhart, 2006; Heckman, 2008).

A recent study from British Columbia predicts that the implementation of comprehensive family policy in that province will grow GDP by 20% over the long term, because improving developmental health in the early years reduces crime and increases employment, earnings and health outcomes in later years. In the short term, parental productivity grows and costs associated with work/life imbalance, poverty and child welfare decline (Kershaw, Anderson, Warburton & Hertzman, 2009). In total, the benefits flowing to society from comprehensive family policy have been estimated to outweigh the costs by a margin of more than six to one (Kershaw et al., 2009).

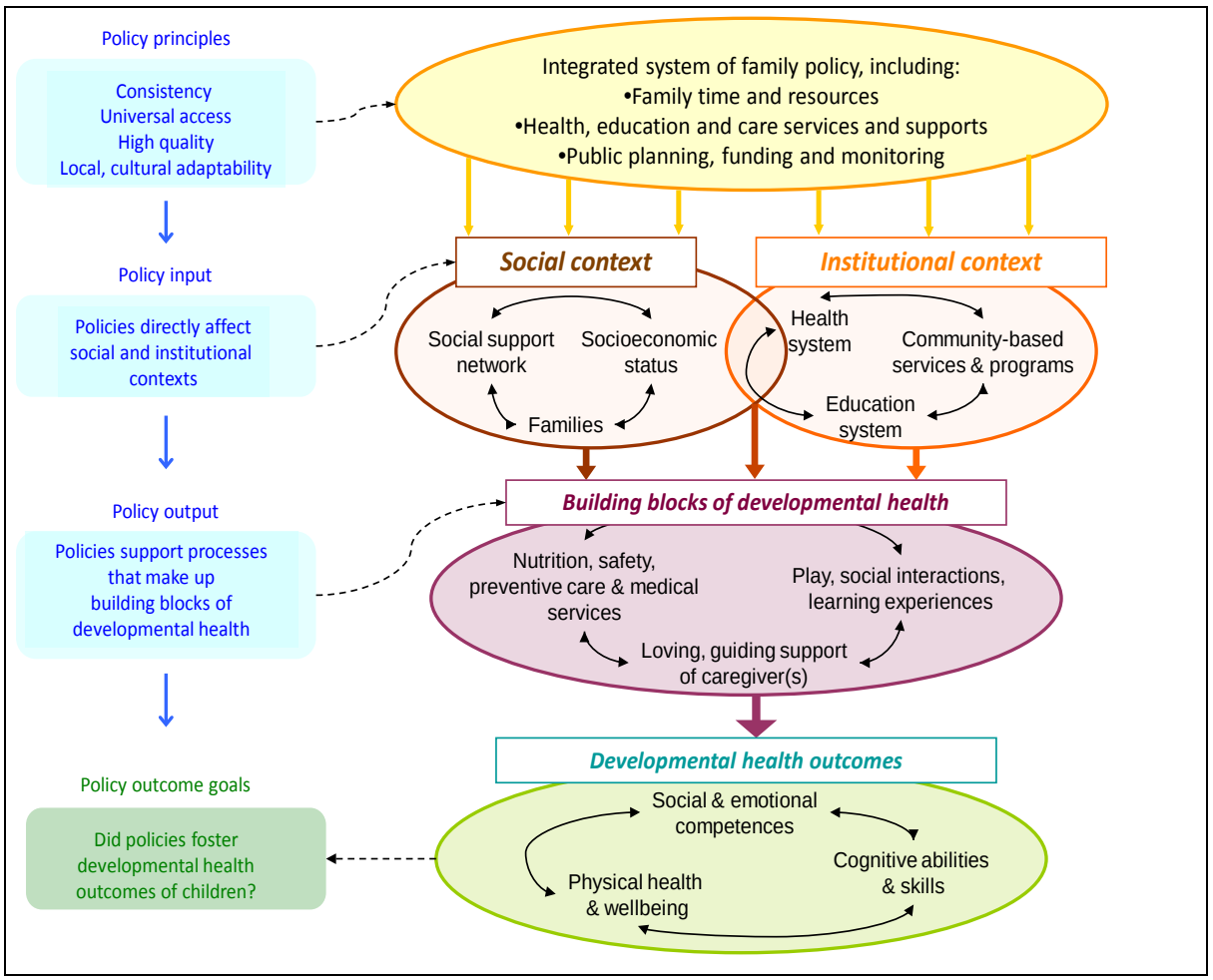

Figure 2 Family Policy Framework for Developmental Health

(Saskatchewan Population Health and Evaluation Research Unit, 2010).
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Family Policy Framework for Developmental Health

Based on the concepts and research evidence presented so far, a Family Policy Framework has been developed, as shown in Figure 2, which captures the essential enabling conditions and building blocks for developmental health in young children. The policy framework illustrates, in principle, the relationship between children's developmental health, the social determinants of developmental health, and the social and societal institutional contexts (i.e., family, social networks, and health, education and care services in communities) that underpin developmental health.

The Family Policy Framework introduces four guiding policy principles:

- Consistency
- Universal access
- Quality
- Adaptability to local context and culture

CONSISTENCY

First, the principle of consistency is based on research that demonstrates that human development is contingent on the degree to which children's first environments are predictable and the conditions can be anticipated. Therefore, families and communities, in their efforts to raise developmentally healthy children, must be able to rely on the availability of certain supports over time and place, and across various local contexts (Bronfenbrenner, 1979, 1992; Bronfenbrenner & Morris, 2006).

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Second, the implementation of the recommended policies should be guided by the principle of universal access, which is in balance with approaches targeted to ensure full physical, social and cultural inclusion.

QUALITY

Third, policies and programs must promote consistently effective nurturing and stimulating environments for all young children, generally referred to as quality in programs and services.

ADAPTABILITY TO LOCAL CONTEXT AND CULTURE

Finally the policy implementation process should be informed by the principle of sensitivity and adaptability to local and cultural contexts, specifically to communities' competences, resources, and needs (Domitrovich & Greenberg, 2000; Elias, Zins & Graczyk, 2003). The principle of sensitivity and adaptability to local and cultural contexts is closely tied to the principle of universal access. It has been shown that policies and programs, which are mandated to be implemented in a universally consistent fashion, but which, at the same time, disregard or ignore differences in cultural and local contextual factors, commonly fail, are typically unsustainable, and frequently even lead to counterproductive results (Rogers, 1995; Smith, Pepler & Rigby, 2004).

Conclusion

Widespread early developmental vulnerability in Canada is not an unchangeable reality. In order to achieve higher and more equitable levels of developmental health for young children, policy goals must ensure families have adequate time and resources, along with universal access to quality education, care and health services. These could thus be considered healthy family policies, fostering developmental health for all children in Canada.

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