Framework for the Social Determinants of Early Child Development

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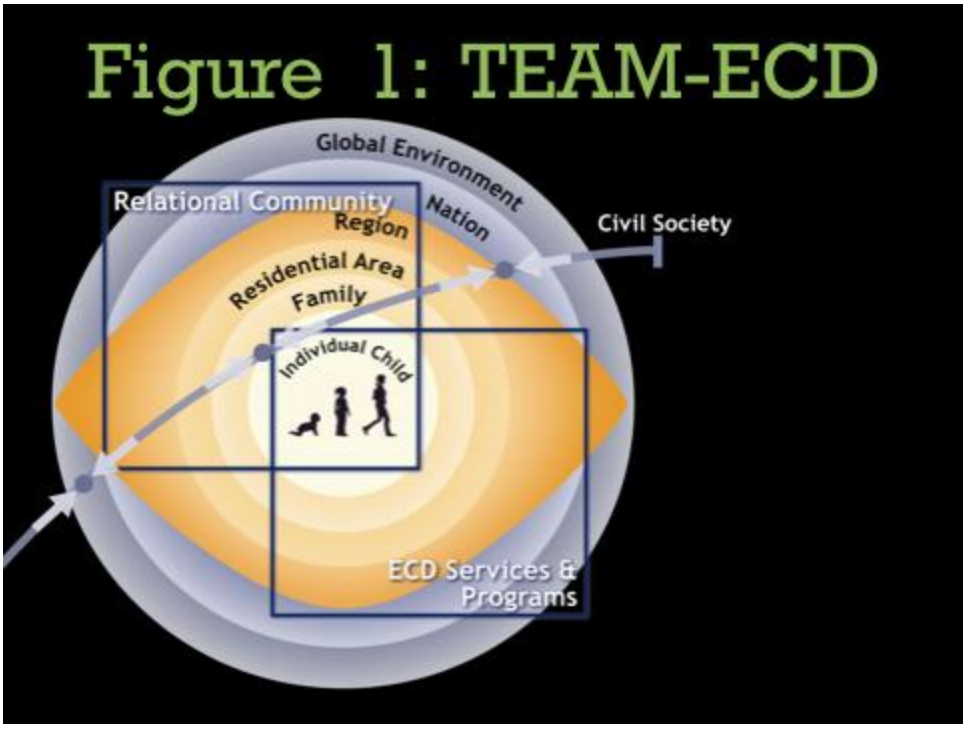
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The Total Environment Assessment Model for Early Child Development (see Figure 1 – TEAM-ECD) was developed for the World Health Organization's Commission on the Social Determinants of Health to highlight the environments and experiences that influence ECD.[1] TEAM-ECD builds on the bio-ecological model,[2] developmental psychology,[3] the concept of "biological embedding,"[4] the social determinants of health,[5,6] research regarding social relations in human society,[7] and political economy.[8] It features interacting and interdependent spheres of influence that are instrumental for ECD: the individual, family and dwelling, residential and relational communities, programs and services, regional, national and global environments, and civil society.

Figure 1. Total Environnement Assessment Model for Early Child Development (TEAM-ECD)

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The Individual Child

Early in life, sensitive periods occur in the brain when the child is disproportionately sensitive to the influences of the external environment.[2,9,10] The interplay of the developing brain with the environment is the driving force of development. The process of early experience shaping brain and biological development in ways that influence development over the life course is known as biological embedding.[4] Young children's optimal growth and development requires adequate nutrition, beginning in utero, with adequately nourished mothers. During the first months of life, breastfeeding plays a critical role in providing children with necessary nutrients but, the quality of relationships also matters right from the start. Children are social actors shaped by their environment[11,12,13,14] who, in turn, play a role in shaping it. Young children develop best in warm, responsive environments that protect them from inappropriate disapproval and punishment; environments in which there are opportunities to explore their world, to play, and to learn how to speak and listen to others.[15] Stimulation has an independent effect on perceptual motor development outcomes among stunted children, over and above nutritional supplementation.[16]

The Family

The family (defined here as any group of people who dwell, eat and participate in other daily, home-based activities together) is the primary environmental influence on children's development.[17,18] Any chronic domestic problem, especially of the mother or primary caregiver, such as intimate-partner violence[19,20] or chronic illness, can have a deleterious effect on child development. Family members provide most stimuli for children, and families largely control children's contact with the wider environment.[21] The most salient features of the family are its social and economic resources. Social resources include parenting skills and education, cultural practices and approaches, intra-familial relations, and the health status of family members. Economic resources include wealth, occupational status and dwelling conditions. The influence of family resources (herein, socio-economic status, or SES) is mediated by access to societal resources that enable families to make choices and decisions in the best interests of their children, including services such as parenting and caregiver support,[21] quality childcare,[22,23,24,25] and primary health care and education.

As one goes from the bottom to the top of family SES in virtually all societies, child developmental outcomes, on average, improve. This is the "gradient effect," which is a principal source of modifiable inequality in ECD.[26] Family SES has an impact on outcomes as diverse as low birth weight, risk of dental caries, cognitive test scores, difficulties with behaviour and socialization, and risk of disengagement from school.[3] Children born into low SES families are more likely to be exposed to – and affected by –conditions that are adverse for development, such as homelessness, crowding, slum living conditions or unsafe neighborhoods.[27,28] Low levels of parental education and literacy affect the knowledge and skill-base of children's caregivers. Feeding and breastfeeding practices vary according to SES, as does parental stress. Low SES parents are at increased risk for a variety of forms of psychological distress, including negative self-worth and depression. The severity and chronicity of maternal depression are predictive of disturbances in child development.[24,29] SES gradients in language and cognitive development are strongly influenced by the richness of the domestic language environment.[30] Family SES is also associated with ability to access other resources, such as health care and high-quality childcare.[31]

Residential and Relational Communities

Socioeconomic, social capital, physical and service characteristics of residential communities influence ECD.[32] Socioeconomic inequalities among residential communities are associated with inequalities in children's development, but there are important caveats. Children from low SES families living in economically-mixed neighbourhoods often do better in their development than

low SES children living in poor neighbourhoods.[33] There is an inverse association between the socioeconomic status of a community and the chances that its residents will be exposed to toxic or otherwise hazardous exposures such as wastes, air pollutants, poor water quality, excessive noise, residential crowding or poor housing quality.[34] Physical spaces accessible to children create both opportunities and constraints for play-based learning and exploration, both critical for motor, social/emotional and cognitive development.[12,35] Access to high quality services often varies according to community SES: learning and recreation, child care, medical, transportation, food markets and opportunities for employment.[36] Child development is also influenced by the quality of community social capital – an umbrella term that encompasses constructs such as informal social control (e.g., I can leave my door unlocked because the neighbourhood teenagers respect the citizens here), norms of reciprocity (e.g., I believe that something promised will be kept because the standards in my community are like that), social engagement, participation, cohesion and trust.[37,38,39]

The relational community is the group that gives children and families their identity and, often, how outsiders identify them. It is a primary source of social inclusion or exclusion, sense of self-worth, self-esteem and gender socialization. Relational communities transmit information regarding child-rearing practices and norms of child development. The extent to which adults and children in communities are linked to one another, whether there is reciprocated exchange (of information, in-kind services and other forms of support), and whether there is informal social control and mutual support is, in part, a function of the relational community. These are aspects of social capital, highlighting the overlap in the influences of relational and residential communities.[7,40,41,42]

ECD Programs and Services

Investment in early childhood is a powerful economic strategy, with returns over the life course many times the size of the original expenditure. ECD programs promote the quality of human capital; that is, individuals' competencies and skills for participating in society and the workforce.[43] The competencies and skills fostered through ECD programs are not limited to cognitive gains, but also include physical, social and emotional gains – all of which are determinants of health over the life course.[44] Accordingly, ECD programs, which incorporate and link health-promoting measures (e.g., good nutrition, immunization) with nurturance, participation, care, stimulation and protection, offer the prospect of sustained improvements in physical, social, emotional, language and cognitive development.

Regional Environment

Interrelated aspects of regions that are significant for ECD include physical (e.g., degree of urbanization, the physical lay-out of cities), social, political and economic factors. In low- and middle-income countries, inequalities in child health outcomes – for example under-five mortality rates – vary according to geography, such as between rural and urban areas; often due to unequal allocation of resources.[45] But regional inequalities in ECD are also seen in resource-rich countries.[46] At the sub-national level, regional and relational communities may intersect in ways that create nurturant conditions systematically different from the rest of a country. For example, norms in some regions of southern India, in contrast to northern India, provide women more exposure to the outside world, more voice in family life and more freedom of movement than do the social systems of the north.[47] Women's autonomy itself is determined largely by women's education, which is much more accessible in southern regions of India, such as the state of Tamil Nadu.[47,48] Women's autonomy, in turn, demonstrably influences opportunities for successful ECD.[49]

National Environment

National policy and economic factors are significant for ECD. Although child development tends to be more successful in wealthy than poor countries, the priority given to children in social policy can overcome national poverty in child developmental outcomes. Kamerman's review[50] of child welfare policies across countries identified five domains that make a difference: income transfers (cash and tax benefits); employment policies; parental leave and other policies to support maternal employment; early childhood education and care services; and prevention and other interventions related to teen pregnancy. The transformation of the "Tiger Economies" of Southeast Asia from resource-poor, low life expectancy societies to resource-rich, high life expectancy societies was accomplished primarily through investment in children, from conception to school completion.[51]

The Global Environment

The global environment influences ECD through its effects on economic and social conditions within nations. Heymann's[52] research on children and families in resource-poor countries demonstrates the importance of access to quality child care for families worldwide. Due to increased female participation in the global workforce millions of children worldwide are home alone, in informal child care (often by other children), or are brought to work where they are

exposed to unsafe working conditions. The global environment is also characterized by international treaties that affirm the rights of children[53] and of women,[54] which are meant to enhance the well-being of children. In particular, General Comment No.7: Implementing Rights in Early Childhood[55] creates an opportunity to hold signatory countries responsible for the physical, social/emotional and language/cognitive development of young children.

Civil Society

Non-governmental international bodies and civil society have a role in holding countries accountable for adopting policies that positively benefit children's well-being. Within many countries civil society groups take direct action or stimulate government and community action on the social determinants of ECD. They have been instrumental in organizing strategies at the local level to provide families and children with effective delivery of ECD services; to improve the safety, cohesion and efficacy of residential environments; and to increase the capacity of local and relational communities to better the lives of children.

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