The Ecology of Peace: Formative Childhoods and Peace Building

A Brief Note

Yale University & Mother Child Education Foundation (AÇEV) Partnership
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For further information
Pia Rebello Britto, Ph.D.
pia.britto@yale.edu

Members of the team
Yale University: Pia Rebello Britto, Ph.D., James Leckman, M.D., Catherine Panter-Brick, Ph.D., William Hodges, M.A., Rima Salah, Ph.D., Kyle Pruett, M.D., Maria Regina Reyes, Ph.D., and Anna L. Zonderman, M.P.H.

AÇEV: Cigdem Kağıtçıbaşi, Ph.D., Diane Sunar, Ph.D., Yanki Yazgan, M.D., Ayla Goksel, M.Sc., and Yasemin Sirali, M.B.A.

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**Introduction**

Scientific evidence in the field of early childhood development has demonstrated that the early years of life are crucial for all aspects of adult functioning, including competencies, attitudes and skills. Specifically, the nature and quality of early childhood are among the strongest predictors of later human development. Given the profound importance of early childhood and the devastating consequences that violence has for individuals, communities and societies, it would be surprising if the early years did not have fundamental implications for peace and violence as well. Globally, efforts to build peace in communities and among nations tend to involve top-down approaches, beginning with the setting of policies and national security agendas. Unexplored are alternate approaches to peace building that begin with the individual at the most important stage of human development: early childhood.

The aim of this brief note is to explore the significance of potential associations between early childhood development and peace building. The hypotheses presented here draw on the discussion paper *Building a Generation of Reconciliation: The Role of Early Childhood Development in Peace Building* (AÇEV, 2009) and on a conceptual framework that integrates the bio-behavioral evidence on early development with socio-ecological perspectives on contextual influences.

**Definition of Constructs**

**What is Early Childhood Development?**

In this examination, the term early childhood development (ECD) refers to a multifaceted concept that encompasses both the child and the context. At the level of the child, it includes the phases of development from the prenatal period through the transition to school, which is complete by age 8 or 9 (McCartney & Phillips, 2006; United Nations General Assembly, 1989). Holistic development during this period occurs across several domains: physical health and motor development; cognitive skills; social and emotional functioning; and competencies in language and literacy, ethical and spiritual development, sense of group membership, and identity within families, communities, cultures, and nation states (Britto & Kagan, 2010). In addition, context—at the family and community levels—is an important determinant of the achievement of developmental potential. Within the first few years of life, children make rapid strides in all aspects of development through interaction with their environment (Irwin, Siddiqui, & Hertzman, 2007; Richter, 2004; Richter, Dawes, & DeKadt, 2010; Shonkoff & Phillips, 2000). From an ecological perspective, theoretical models and practice-oriented frameworks—in which proximal (e.g., family) and distal contexts (e.g., international policies) are discussed with respect to their impact on child development—suggest a host of factors that may influence early human development (Britto & U Ekuer, 2012; Hodgkin & Newell, 2007; McCartney & Phillips, 2006).

**What is Peace Building?**

Peace building is the process of resolving conflict and establishing sustainable peace in a manner that maximizes justice, equality and harmony (AÇEV, 2009). It is important to note that peace building extends beyond prevention of violence. In the field of peace psychology, violence is categorized as direct or structural; direct violence refers to the interpersonal conflict that harms individuals, while structural violence is expressed through political and economic processes and oppression within a society. Both can have a toxic effect on human health. The causes of direct violence may be associated with physiological processes of development and may be informed by neurobiology. Contextual causes of direct violence include economic poverty, social discrimination and crowding as well as violent acts being condoned or left unaddressed by the family, community or state. The root causes of structural violence include systematic deprivation, unfair political systems and powerful, inequitable social hierarchies. Similarly, efforts to achieve peace can be categorized as peacemaking or peace building (Christie, Wagner, & Winter, 2001). Peacemaking is the process of reducing direct violence through conflict resolution and other non-violence means; it is temporally and spatially constrained by the situation—a reaction in response to the threat or the anticipation of violence (MacNair, 2003). Peace building refers to the process of reducing structural violence; it has a proactive focus with an emphasis on the development of an effective infrastructure to sustain social justice, healthcare and economic development. Peace building is multidimensional, with legal, cultural, political, medical and socio-economic elements (Galtung, 1969).

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1 In this examination, violence is defined as any form of physical, emotional, verbal, institutional, structural or spiritual behavior, attitude, policy or condition that diminishes or dominates individuals, groups, societies and culture (Galtung, 1969).
The Ecology of Peace (Figure 1) is a conceptual framework that provides a model for exploring the multiple relationships between ECD and peace building. Both of these constructs are complex and expressed at multiple interrelated levels: individual, family and community. Therefore, the associations between them are varied and elaborate. To understand fully the relationships between ECD and peace building, each level needs to be closely examined. The framework provides a theoretical and empirical foundation for understanding the bi-directional and mediated relationships that exist among the multiple levels of this model, as well as a set of hypotheses to illuminate the associations between ECD and peace building. Five pathways that connect bio-behavioral and socio-ecological models of development related to ECD and peace building have been identified: (i) the neurobiology of peace; (ii) affiliative bonding; (iii) parenting and peacemaking; (iv) early learning and peacemaking; and (v) peacemaking to peace building. This component-driven approach allows for discussion of these pathways based on existing scientific theory, and for separate analyses of specific relationships, without diffusing or conflating other relationships in the framework.

![The Ecology of Peace](image)

**Component 1: The Neurobiology of Peace**

The focus of Component 1 is the pathway between biology and behavior at the level of the child (see Figure 1)—specifically, early neuronal development as a predictor of peace building. A primary point of interest in neuroscience research is how early life experiences, especially the initial bonds formed between infants and their caregivers, can set the stage for future interactions. When investigating the physiology involved in early life bonding, the neuropeptide oxytocin (OT) should be a major focus of research. The OT system is not only involved with processes of bonding, but also interacts with multiple neurophysiological systems in the brain and body. When studying the biology that may be associated with peace building, it is crucial not only to choose physiological components that are directly involved in the behavioral building blocks of peace (e.g., early-life bonding), but also to focus on systems that have an interactive role in the body. Therefore, the OT system is a prime candidate for peace-building research, due to the complex neural and somatic systems that it influences during the emergence of intimate dyadic relationships throughout development. Recent discoveries in OT research point to the OT system’s extensive involvement in behaviors that pertain to peace, including trust (Van Ijzendoorn & Bakermans-Kranenburg, 2012) and cooperation (De Dreu et al., 2011) among in-group members, and the ability to read others’ mental states and empathize with others’ feelings and experiences (Bartz et al., 2010; Domes et al., 2007; Guastella et al., 2009).

The existing literature has many gaps, leaving several important questions to be answered by future research on OT and bonding in early life.

- **What is the developmental trajectory and function of the OT system throughout infancy?**
- **What behavioral, neurophysiological, genetic and environmental mechanisms inform parent-infant OT synchrony?**
- **How does stress in early life (via family and/or environment) interact with the development of OT functioning?**
- **What early experiences in the family act as resilience factors in the development of OT function and what contexts hinder optimal OT development?**
Component 2: Affiliative Bonding (Oxytocin and Bonding in Early Life)

The focus of Component 2 is the pathway between biology, at the level of the child, and parenting as part of the family context (see Figure 1)—specifically, early bonding as a precursor to behaviors associated with peacemaking. The information in this component is derived directly from a recent review of OT and social motivation (Gordon et al., 2011). Numerous studies assessing the involvement of the OT system in human bonding have examined the expression of micro-level social behavior in each partner, during dyadic or triadic interactions, through the dimensions of gaze, proximity, arousal, touch, affect, exploratory behavior and vocalizations. The expression of these behaviors in various social contexts (e.g., face-to-face interactions; exploratory play; interactions between children or adolescents and their best friends or a peer group; and exchanges between romantic partners) has been assessed in relation to peripheral measures of OT. Such micro-level behaviors are integrated into meaningful behavioral constellations with distinct temporal patterns and can advance understanding of the intricate relationships between the oxytocinergic system and attachment processes in humans. Neuroimaging studies of new mothers also point to the involvement of OT-related circuitry in sensitive care giving (Kim et al., 2011; Strathearn et al., 2009). With respect to the premise of this brief note on ECD and peace building, the oxytocin hypothesis needs further clarification. The degree to which the OT hypothesis can be extended beyond dyadic relationships and in-groups to the wider community and inter-group relations must be explored further.

These findings linking parental behaviors with relatively stable peripheral levels of OT raise a number of questions that must be resolved.

• How are stable OT concentrations maintained in the periphery?
• How is this related to events in the brain?
• Is somatodendritic release and diffusion sufficient or is this maintenance of peripheral OT due to release from axon collaterals extending into the forebrain from magnocellular hypothalamic neurons?

Component 3: Parenting and Peacemaking

The focus of Component 3 is the pathway between family context and behavior at the level of the child (see Figure 1)—specifically, understanding the impact of parenting programs on parent and child peacemaking behaviors. The foundation for development in the early years is the way that caregivers meet a child’s physical, cognitive, and social-emotional needs. Responsiveness and care in addressing these needs are critical to healthy growth and development (Bornstein & Putnick, 2012), and optimal parenting is every child’s right. Parenting can be defined as interactions, behaviors, knowledge, beliefs, attitudes and practices associated with child health, development, learning, protection and wellbeing (Britto & Engle, forthcoming). As such, parents and other primary caregivers (e.g., grandparents, community elders or older siblings) determine the environment in which children grow, develop and learn. Based on existing literature, there are five distinct and identifiable elements of parenting: caregiving, stimulation, support and responsiveness, structure, and socialization (Bradley & Corwyn, 2005). Each of these domains manifests in parents’ behaviors, knowledge and/or attitudes. Research consistently demonstrates that violence against children is highly prevalent and has severe developmental and physical consequences (Mikton, 2011). A child’s protection should be primarily secured by the family, but indicators of violence in the home (measured across twenty-four low- and middle-income countries) show that nearly two-thirds of children ages 4 and under experience mild physical and psychological aggression by parents (Lansford & Deater-Deckard, 2012). Furthermore, tolerance of violent behavior is learned in early childhood, often by witnessing violence in the home. Through early exposure, violence can become the accepted or normal method for resolving conflict in later life (Landers et al., forthcoming). Parenting programs are activities, services or interventions for parents aimed at improving any or all aspects of parenting (Kaminski et al., 2008; Moran et al., 2004; Shulruf, O’Loughlin, & Tolley, 2009). These programs are offered through a variety of modalities, including home-based individual services and group-based sessions, and can vary greatly in their focus and scope.

This strong conceptual foundation demonstrating the impact of parenting, coupled with nascent empirical results with respect to peacemaking, provokes several important questions.

• From a developmental perspective, what is the critical window in which an intervention should begin, in order to maximize the positive impact of the program? How can the influence of the timing of different interventions be measured, comparing, for example, those that begin at conception (see Olds, 2011; Slade et al., 2005) with those that
begin during the preschool years (see Kağıtçıbaşı et al., 2001; Koçak & Bekman, 2009; Pruett, Cowan, Cowan, & Pruett, 2009)?

- How strong are intergenerational patterns of parenting?
- How do experiences such as early trauma, abuse, and bullying influence children’s developing brains? How does psychological conflict in the family setting affect children’s mental health outcomes?
- What new research is required to produce empirically valid data to fill the current gaps in knowledge about the association between intra-family relationships and peacemaking in early childhood?

Component 4: Early Learning and Peacemaking

The focus of Component 4 is the pathway between ECD programs and behavior at the child level (see Figure 1)—specifically, the association between early learning programs and peacemaking. The roles of curricula, teacher training and desired outcomes are important to understand when examining early learning programs as strategic entry points for peacemaking. Early learning programs represent a rich tapestry of modalities (e.g., home-based and center-based) and typologies (e.g., formal, non-formal and informal?), serving children from birth until primary school enrollment (e.g., 8 years of age). This component is different from Component 3 in that the programs addressed here serve children directly, whereas the programs discussed in the previous component are those that serve parents. Six dimensions of early learning programs have been identified in the literature and can be used to delineate the theoretical foundation for examining the relationship between ECD and peacemaking: holistic child outcomes; responsive interpersonal relationships between key caregivers or teachers and children; training and capacity of service providers; curriculum; school and home relationship; and presence of provisions for children in higher risk situations (Bowman, Donovan, & Burns, 2001). Application of these dimensions of quality ECD programs to peacemaking initiatives has yet to be tested. Although several theoretical frameworks have been proposed in this context, none have been evaluated (Una Peacebuilding Learning Group, 2010).

A variety of important questions must be answered with regard to the association between early learning programs and peacemaking.

- Based on the accepted domains of development (e.g., motor and physical, linguistic, cognitive, social and emotional), where does peace fit in? Does peace consist of traits that are part of these given domains or must peace be considered a separate domain of development?
- At the interfamilial and societal levels, what is the definition of peace and how does it correspond with the definition of peace within the framework of domains of development?
- How much do contextual factors such as poverty, poor nutrition and ongoing violence and conflict in the larger community influence the efforts of early childhood and family interventions?
- What framework generates a set of standards to evaluate the effectiveness of early childhood interventions for peace building?

Component 5: From Peacemaking to Peace Building

The focus of Component 5 is the pathway between the level of the child and the outermost societal contexts (see Figure 1)—specifically, the association between individual-level outcomes and community- and societal-level functioning. Most parenting and early learning programs operate at the level of the individual and the family. In peace nomenclature, this translates to the peacemaking level. However, a distinctive feature of the Ecology of Peace framework is the exploration of how families can influence communities and how peacemaking can be translated into peace building. Therefore, this component addresses the macro level of the model, which considers social, cultural, political and economic contexts.

The first hypothesis to explain this relationship involves the development of human capital. As early childhood is known to be the optimal phase of development for human capital formation, investments in early childhood programs

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2 Non-formal education is typically understood as the provision of education and learning by non-state actors, which occurs outside of formal, national and public systems. Informal education is the learning that occurs daily, through naturally occurring interactions.
provide the greatest return on investment (Heckman & Kruger, 2003). By investing in ECD, investment in communities is enhanced, consequently forming the foundation for building social capital (Coleman, 1988). A second mechanism by which peacemaking becomes peace building involves the outcomes of family-based intervention programs permeating not just individual homes but entire communities (AÇEV 2009). This path, which suggests a bottom-up approach, promotes the idea that grassroots changes at the family level cumulatively create change in communities and societies. A particularly important feature of these programs is that they facilitate the formation of diverse in-groups. By focusing on the commonalities among families, these group programs provide an opportunity for friendships to develop across ethnic, cultural and religious divides.

Other such examples need to be evaluated and alternative hypotheses tested to demonstrate that the path from peacemaking to peace building can be achieved through early childhood programs. Many questions exist regarding this endeavor.

- **Can peace within the family contribute to peace within the community?** Most models of family and community interactions have examined whether community-level factors influence family functioning. This forum is novel in that it addresses the association from the opposite direction: how does individual family functioning influence the larger community?

- **From a socio-ecological and political perspective, can person-to-person approaches alter the biology of the brain and allow combatants or competitors for power to become good neighbors?** Or, are culturally informed narratives and self-interest too strong? For example, in regions of chronic conflict, is there a possibility that person-to-person initiatives focusing on enhancing child development can reduce hostility between warring groups?

- **Is there a set of principles that can guide the translation of science into useful material for diverse audiences (e.g., educators, community leaders, mass media, international development agencies and national-level policy makers) who need this information for program and policy development?** How does a country move from the micro to the macro level of policy making with a focus on peace and human rights in early childhood?

- **Can a set of superordinate goals be established to lead to a reduction in violence and an increase in peace across the world community?**

**Conclusions**

Young children and their families are progressively being exposed to greater violence in homes, schools and communities, and among nations. In our search for solutions we turn to science. Evidence from the field of early childhood development clearly demonstrates that lasting and intergenerational change can occur through interventions early in life. To break the cycle of violence and promote peaceful societies, young children must be the focus.

The Ecology of Peace conceptual framework provides a set of hypotheses to explore the viability of promoting peace through early childhood. The hypotheses are rooted in neurobiology, affiliative bonding, parent education, early learning, and grassroots movements. However, these hypotheses need to be tested. In the next phase of this undertaking by the Yale University and AÇEV Partnership, a systematic review study will be conducted to explore the role of parenting and early learning programs in (i) promoting positive development and well-being in young children, (ii) promoting peace building through improving interactions within the home and classroom, and among peers, and (iii) promoting peace building through the formation of culturally diverse parenting groups, particularly groups of fathers.
References


