



American Academy of Nursing on Policy

Toxic stress: Urgent action needed to reduce exposure to toxic stress in pregnant women and young children

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Executive Summary

The American Academy of Nursing (The Academy) champions the reduction of toxic stress associated with adverse childhood experiences (ACEs) as a top priority for improving the health of the population (Mason & Cox, 2014). Toxic stress associated with adverse experiences during pregnancy and early childhood can have catastrophic neurobiological, social, emotional, and life-course effects (Anda et al., 2006; Erhuma, 2012; Gluckman, Hanson, Cooper, & Thornburg, 2008; Luby et al., 2013; Wright, 2010). Policies designed to address the effects of toxic stress on the mental health of infants and young children must also address support for parents in providing a safe, responsive, consistent, and nurturing environment.

Background

ACEs are a source of toxic stress, defined as the “strong, frequent, or prolonged activation of the body’s stress management systems in the absence of adult support” (Shonkoff, Boyce, & McEwen, 2009). Toxic stress can disrupt the child’s development and increase the risk for adult stress-related disease and cognitive impairment. Life events associated with ACEs and toxic stress include child abuse and neglect, parental mental illness and substance use, domestic and neighborhood violence, and poverty (Anda et al., 2006; Shonkoff et al., 2009). Toxic stress associated with adverse experiences during pregnancy and early childhood can have catastrophic neurobiological, social, emotional, and life-course effects (Anda et al., 2006; Erhuma, 2012; Gluckman et al., 2008; Luby et al., 2013; Wright, 2010). A dose-response relationship exists between the number of ACE exposures and the risk for developing a disabling mental disorder; the more the exposures, the greater the risk (Anda et al., 2006).

Neurobiology of Toxic Stress

The biological imperative to “fight or flee” from danger is essential for survival. Healthy adaptation relies on the return of stress hormones to normal levels when crises are resolved. For the child, comfort and supportive parenting brings the child’s stress hormones back to baseline. Toxic stress alters the developing brain and impairs functions required for sustained attention, emotional regulation, problem solving, and learning (Bock, Rether, Groeger, Xie, & Braun, 2014; Gluckman et al., 2008; Luby et al., 2013; Shonkoff et al., 2009). Adverse effects of toxic stress on other organ systems contribute to a higher lifetime risk for cardiovascular disease, obesity, diabetes, asthma, and immune disorders (Anda et al., 2006; Shonkoff et al., 2009; Wright, 2010). Toxic stress also reduces life expectancy through premature shortening of chromosomal telomeres (Drury et al., 2014; Epel et al., 2004; Zalli et al., 2014). Shortened telomeres have been found in newborns of mothers who experience high stress during pregnancy (Entringer et al., 2013) and in children exposed to family violence, particularly girls (Drury et al., 2014). Shorter telomeres are linked to deficient immune functions, cancer, cardiovascular disease, depression, and premature death (Epel et al., 2004).

The Role of Parents in Buffering the Effects of Toxic Stress on Infants and Young Children

Interventions to protect the child from toxic stress exposure are needed during the first 5 years of life when brain and organ systems are most responsive (National Scientific Council on the Developing Child [NSCDC], 2005/2014; Shonkoff et al., 2009). There is now extensive evidence showing that sensitive, consistent, and responsive parenting during the first 5 years of life can buffer the effects of toxic stress on children’s mental health and well-being, creating a

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psychological immune system enabling children to thrive even under stressful environmental conditions (Lyons-Ruth, Bronfman, & Atwood, 1999; Miller et al., 2011). However, raising young children in unsafe, unstable, and underresourced conditions takes a significant toll on parents' and children's mental health and well-being. Therefore, any policy designed to address the effects of toxic stress on the mental health of infants and young children must include resources and evidence-based programs to support parents. Interventions designed to strengthen and support parents must be cost-effective, accessible, and capable of being replicated with quality in real world settings and demonstrated to function well with families and communities exposed to high levels of chronic stress.

Responses and Policy Options

Child exposure to toxic stress begins prenatally. There are reliable measures for screening of indicators of toxic stress levels in pregnant women, parents, and children (e.g., screening tools for ACEs, parent depressive symptoms, substance abuse, behavioral dysregulation). Health care providers need specific skills to respond effectively to families who screen positive for toxic levels of stress. These skills include providing evidence-based treatments that support parents in providing a responsive, consistent, and nurturing environment for their infants and young children or referring families to appropriate resources that will provide that support. Many evidence-based programs address the social determinants that work against health (poverty, unemployment, violent environments, insufficient social skills, and social support) by offering parenting support directly.

Nurses are the largest and most trusted professional group in the health care workforce. They also work in the most diverse care settings serving families including community-based clinics and agencies, hospitals, schools, and homes. Educating nurses who work with pregnant women, parents, families, infants, and young children to accurately recognize and screen for signs of toxic stress will accelerate the process of linking families at risk to community resources. Joining forces with other child and family organizations advocating for policies that strengthen and expand access to programs and services for families at risk for toxic stress will help ensure that once screened, pregnant women and families with infants and young children will receive the support critically needed to promote mental health and well-being.

The Academy's Position

The American Academy of Nursing (the Academy) champions the reduction of toxic stress associated

with adverse experiences during pregnancy and early childhood as a top priority for improving the health of the population (Mason & Cox, 2014).

Recommendations

1. Strengthen the role of nurses in accelerating the process of linking families at risk for toxic stress exposure to community resources (Horner, 2015) by promoting efforts to educate nurses about (a) the root causes of toxic stress, (b) the use of valid screening tools to detect conditions leading to toxic stress, and (c) strategies and resources to connect families and children to available programs and services.
2. Partner with child and family advocacy organizations such as the American Academy of Pediatrics, Trust for America's Health, and ZERO to THREE Policy Center to strengthen family safety nets that target prevention of ACEs and provide evidence-based mental health and parenting support interventions that reduce the harmful effects of toxic stress on infants and young children (American Academy of Pediatrics, n.d.; Levi, Segal, Rayburn, Martin, & Miller, 2015; Zero to Three, n.d.).
3. Urge Governors to remove barriers to reimbursement for evidence-based programs and services to families experiencing toxic stress, for family support and counseling through the child's enrollment in state Medicaid plans (Wachino, 2016).

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