



Implementing Positive Behavioral Intervention and Support: The Evidence-Base of the Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children

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The Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children (Fox, Dunlap, Hemmeter, Joseph, & Strain, 2003) is a positive behavioral intervention and support framework early educators can use to promote young children's social and emotional development and prevent and address challenging behavior. The Pyramid Model (shown in figure 1) organizes evidence-based practices that include universal promotion practices for all children, practices for children who need targeted social-emotional supports, and individualized behavior support practices for children with significant social skill deficits or persistent challenging behavior. These practices are based on research focused on effective instruction for young children (National Research Council, 2001; Burchinal, Vandergrift, Pianta, & Mashburn, 2010), strategies to promote child engagement and appropriate behavior (Chien et al., 2010; Conroy, Brown, & Olive 2008), the promotion of children's social skills (Brown, Odom, & McConnell, 2008; Vaughn et al., 2003), and the implementation of individualized assessment-based behavior support plans for children with the most severe behavior challenges (Conroy, Dunlap, Clarke, & Alter, 2005; Blair, Fox, & Lentini, 2010; McLaren & Nelson, 2008).

Pyramid Model practices were identified through a systematic review of the research on classroom promotion, prevention, and intervention practices that have been associated with positive social-emotional outcomes and decreases in challenging behavior in young children with and without disabilities (e.g., Dunlap et al, 2006; Howes & Hamilton, 1993; Walker et al., 1998; Webster-Stratton, Reid, & Hammond, 2004). This literature review was conducted by faculty associated with the Head Start and Child Care funded Center on Social Emotional Foundations for Early Learning (CSEFEL) and the Office of Special Education Programs funded Center for Evidence Based Practice for Young Children's Challenging Behavior initially in 2001, with updates in 2006 and 2010. The literature review resulted in identification of a set of practices aligned to the Pyramid Model levels to ensure a comprehensive three-tiered framework could be described, operationalized, and implemented (Hemmeter, Ostrosky, & Fox, 2006). Table 1 shows the specific practices aligned with each level of the Pyramid Model and representative examples of the empirical literature that supports the practices.

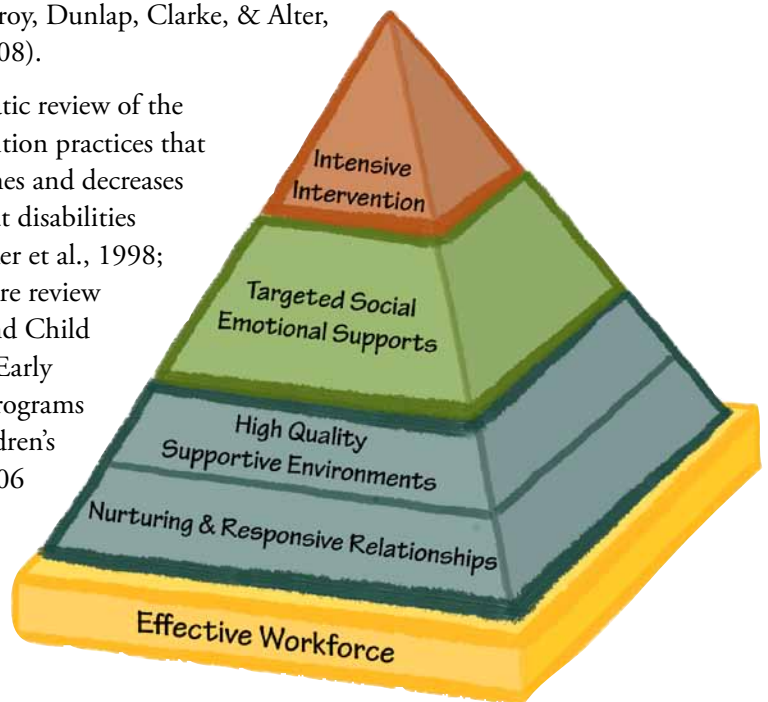


Figure 1.
Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children


Table 1. Research Base of Pyramid Model Practices

Level	Component	Practices	Evidence
Universal	Nurturing and Responsive Relationships	Supporting children’s play; Responding to child conversations; Support communication of children with special needs; Specific praise and encouragement of appropriate behavior; Build relationships with children; Responsive relationships with families	Burchinal, Vandergrift, Pianta, & Mashburn, 2010; Fullerton, Conroy, & Correa, 2009; Howes & Smith, 1995; Kontos, 1999; Mill & Romano-White, 1999; National Research Council, 2001; Peisner-Feinberg et al., 2000; Pianta, 1999; Pianta et al, 2002; Stormont, Smith, & Lewis, 2007
	High Quality Supportive Classroom Environments	Adequate materials; Defined play centers; Balanced schedule (large & small group); Structured transitions; Individualized instructions for children who need support; Teach and promote small number of rules; Design activities that are engaging to children; Provide clear directions	Brown, Odom, & Conroy, 2001; Chien et al., 2010; DeKlyen & Odom, 1998; Ivory & McCollum, 1999; Jolivette et al., 2001; National Research Council, 2001; Peisner-Feinberg et al., 2000; Sainato, Jung, Salmon, & Axe, 2008
Secondary	Targeted Social Emotional Supports	Teach children to identify and express emotions; Teach and support self-regulation; Teach and support strategies for handling anger and disappointment; Teach and support social problem solving; Teach and support cooperative responding; Teach and support friendship skills; Teach and support collaboration with peers; Partner with families in teaching social emotional skills	Bierman et al., 2008; Denham & Burton, 1996; Domitrovich et al., 2007; Hune & Nelson, 2002; Kam, Greenberg, & Kusche, 2004; Sheridan et al., 2010; Vaughn et al., 2003; Webster-Stratton, Reid, & Stoolmiller, 2008; Webster-Stratton, Reid, & Hammond, 2001
Tertiary	Intensive Individualized Interventions	Convene a team; Collect data to determine nature of problem behavior; Develop individualized behavior support strategies; Implement behavior support plan with consistency; Conduct ongoing monitoring of child progress; Revise plan when needed; Partner with families and other colleagues in plan implementation	Blair, Fox, & Lentini, 2010; Carr et al., 1999; Duda, Dunlap, Fox, Lentini, & Clarke, 2004; Dunlap & Fox, 1999; Kern, Ringdahl, Hilt, & Sterling-Turner, 2001; McLaren & Nelson, 2008; Strain & Timm, 2001; Wood, Ferro, Umbreit, & Liaupsin, 2011

The Center on the Social Emotional Foundations for Early Learning (<http://csefel.vanderbilt.edu>) and the Technical Assistance Center for Social Emotional Intervention for Young Children (www.challengingbehavior.org) have worked systematically within 15 states to build the capacity of programs to implement the Pyramid Model within child care, head start, early intervention home visiting, public preschool, and early childhood special education programs. Project leaders from these centers estimate that over 5000 trainers and 2500 coaches have been trained in a professional development approach to support the implementation of the Pyramid Model by practitioners. A key component of the centers’ work was focused on building internal state competence and sustaining the

practices. States report sustaining and scaling up their Pyramid Model work 3-8 years after formal technical assistance has been completed. Nationally, the Pyramid Model work is being sustained through the Pyramid Model Consortium (<http://www.pyramidmodel.org>) as well as the annual meeting of states implementing the Pyramid Model state-wide which is held in conjunction with the National Training Institute on Effective Practices: Addressing Challenging Behavior (<http://nti.cbcs.usf.edu/>).

State reports on their efforts towards systematic implementation, the integration of the model into programs, and the satisfaction of program staff with the



model are available within state reports on both Center web sites. The Pyramid Model has been recognized by many states as an evidence-based approach to promoting young children's social emotional competence and has been included in their SAMHSA funded Project Launch efforts to promote young children's social emotional and behavioral wellness as well as other state efforts such as QRIS and professional development recognition systems.

A randomized study of the implementation of the Pyramid Model within preschool classrooms for both children with and without disabilities has been recently completed in Nashville and the Tampa Bay area by faculty at the University of South Florida (Lise Fox), Vanderbilt University (Mary Louise Hemmeter), and University of Florida (Patricia Snyder). In classrooms where the Pyramid Model was implemented, there were significant improvements in children's social skills. Target children, children with persistent behavioral challenges, showed statistically significant decreases in challenging behavior (Hemmeter, Fox, & Snyder, 2013; Hemmeter, Snyder, Fox, & Algina, 2011). This study provides evidence that when the Pyramid Model practices (all of which have research support) are delivered within a classroom, there are notable outcomes for children.

Program-Wide implementation of the Pyramid Model (also referred to as Program-wide Positive Behavior Support) is a model of School-Wide Positive Behavior Intervention and Support (PBIS) that is designed specifically for the unique contexts of early childhood programs (Fox, Carta, Strain, Dunlap, & Hemmeter, 2010; Fox & Hemmeter, 2009; Hemmeter & Fox, 2009; Hemmeter, Fox, & Doubet, 2006; Hemmeter, Fox, Jack, & Broyles, 2007) (see www.pbis.org/community/early_childhood for more information). PBIS is a systems approach to establishing the social culture and behavioral supports needed for all students in a program to achieve both social and academic success. PBIS is not a packaged curriculum, but an approach that defines core elements that can be achieved through a variety of strategies that are linked to the three-tiered promotion, prevention, intervention model (Dunlap, Kincaid, Horner, Knoster, & Bradshaw, 2014). Randomized evaluations of the SWPBS have been conducted by multiple investigators and demonstrate notable outcomes for student learning and behavior (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008; Bradshaw, Koth, Thornton, & Leaf, 2009; Bradshaw, Mitchell, & Leaf, 2010; Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008; Horner, Sugai, Smolkowski, Eber, Nakasato, Todd, & Esperanza, 2009).

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