Recognizing and Addressing the Effects of Early Adversity on Children's Transitions to Kindergarten

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Abstract Children who have experienced early adversities such as maltreatment, high mobility/homelessness, or low socioeconomic status may have difficulties with the transition to kindergarten. This is particularly likely because these children demonstrate deficits in academic, social, and self-regulatory school readiness skills prior to kindergarten entry. Such deficits may result from the negative impacts of early adversity on children's early learning environments and their neurobiological functioning, as well as negative effects on their caregivers. However, there are ways in which to address these negative influences of early adversity and thus increase the chances of smooth and positive kindergarten transitions for these children. Such interventions include targeted programming to increase school readiness skills, the use of transition practices that engage caregivers, and teacher awareness of techniques that can help to manage children's behaviors and increase their self-regulation skills. The effects of early adversity are malleable and thus can be addressed to improve children's transitions and subsequent trajectories.

The experience of early adversity can have a number of long-lasting negative effects for children, including physical, social, emotional, and mental health symptoms (Baram et al., 2012; Lovallo, Farag, Sorocco, Cohoon, & Vincent, 2012; Shonkoff et al., 2012; Szepsenwol, Simpson, Griskevicius, & Raby, 2015; Taylor, Way, & Seeman, 2011). Although there is a range of possible sources of adversity in early childhood—the period from 0 to 5 years—three of the most widespread are the experiences of low socioeconomic status (SES; including poverty), high residential mobility (including homelessness), and maltreatment (Shonkoff et al., 2012). Because one adversity may often engender others—e.g., poverty may lead to the loss of stable housing—many children simultaneously experience multiple hardships (Lanza, Rhodes, Nix, & Greenberg, 2010). The effects of early adversity are pervasive, touching many different levels of a child's life, including not only the child but also their caregivers and learning environments. Those effects then can have cascading and long-term impacts on other areas of the child's life, such as school achievement and adjustment.

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Children from low SES backgrounds, those who experience high mobility and/or homelessness, and those who have been maltreated consistently demonstrate deficits in academic, social, and self-regulatory school readiness skills prior to kindergarten entry (Bulotsky-Shearer, Dominguez, & Bell, 2012; Entwisle, Alexander, & Olson, 1997; Pears, Heywood, Kim, & Fisher, 2011; Tran & Winsler, 2011). Such early gaps persist over time; children in these groups demonstrate lower academic achievement, higher likelihoods of special education placement, higher rates of behavioral difficulties, and higher rates of suspension across the school years (Ackerman, Brown, & Izard, 2004; Fantuzzo, LeBoeuf, Chen, Rouse, & Culhane, 2012; Herbers et al., 2012; Scherr, 2007). These patterns of academic failure and behavioral problems can translate into lower rates of high school graduation and lower educational attainment overall (Pecora et al., 2006; Rumberger, 2010). For example, children from low SES backgrounds are eight times less likely to complete college than those from higher SES backgrounds (Rumberger, 2010). These gaps in educational attainment can contribute to lower earnings that further perpetuate cycles of intergenerational poverty and psychosocial difficulties (Duncan, Ziol-Guest, & Ariel, 2010; Restuccia & Urrutia, 2004; Reynolds & Ross, 1998).

Although early adversity can have many negative impacts on children, research has shown that the cycle of negative effects can be broken, and sometimes reversed, through intervention (Almas et al., 2012; Dozier, Peloso, Lewis, Laurenceau, & Levine, 2008; Fisher, Stoolmiller, Mannering, & Chamberlain, 2011; Nelson et al., 2007). In order to help children who have experienced early adversity from the very start of their formal schooling, it is necessary to understand the pathways by which such adversity affects children's school readiness. Additionally, because the child is embedded within multiple systems (e.g., the family, school, community, and even social service systems), it may be necessary to intervene at multiple levels in order to be most effective. In this chapter, we explore some of the ways in which these three common sources of early adversity can affect children's transitions to kindergarten. Furthermore, we explore the implications for educators and how they may ameliorate the negative effects of early adversity on the outcomes of children with whom they work.

How Early Adversity Affects School Readiness

Some of the most widely used theories of development and school transition recognize that a child is affected by multiple factors both internal (e.g., temperament and biological systems) and external (e.g., the family, peers, and the environments in which a child interacts with others) (Bronfenbrenner, 1989; Rimm-Kaufman & Pianta, 2000). Consistent with these models, early adversity has the potential to affect children's school readiness—not only through its direct negative impacts on the children's skills but also on children's early learning environments, their caregivers, and their neurobiological systems. Figure 1 presents a conceptual model of some of the proposed pathways through which early adversity affects school
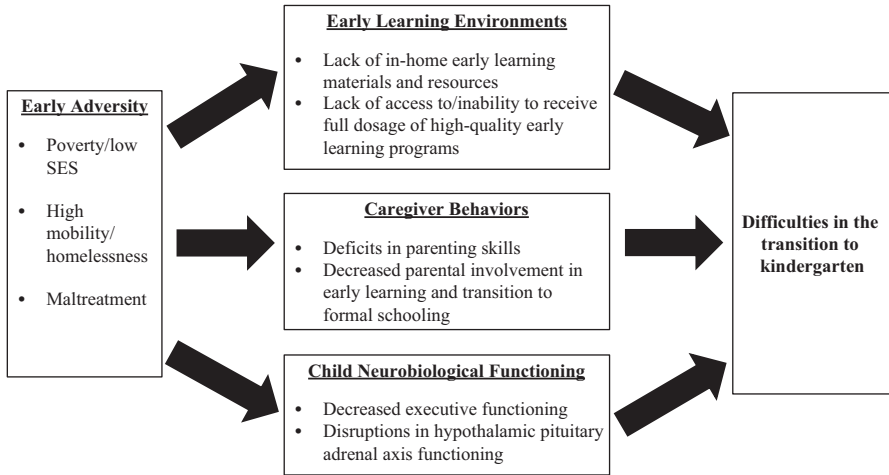
Fig. 1 Conceptual model of the effects of early adversity on the transition to kindergarten

readiness. Below, we discuss how early adversity affects each intermediate factor and what effects this may subsequently have on children's kindergarten transitions.

Impacts of Early Adversity on the Early Learning Environment

At the environmental level, children living in adverse circumstances are unlikely to be exposed to the materials and experiences that have been shown to support their early learning (Aviles de Bradley, 2008; Chazan-Cohen et al., 2009; Larson, Russ, Nelson, Olson, & Halfon, 2015). For example, the availability of educational resources in the home, such as books and other print materials and computers, is a robust predictor of reading abilities across multiple cultural and ethnic groups (Chiu & Chow, 2015). Steep gradients in the availability of these resources across income groups demonstrate that children from families with the lowest SES have the least exposure to such materials (Larson et al., 2015; Schick & Melzi, 2016).

The availability of high-quality preschool experiences appears to have positive effects on children's academic and social outcomes in school longitudinally and may continue to affect outcomes in adulthood (Heckman, 2006; Ramey & Ramey, 2004; Reynolds, Magnuson, & Ou, 2010). As with access to educational materials in the home, there are clear differences in usage of high-quality, center-based preschool experiences by income groups, such that children from lower SES backgrounds are significantly less likely to attend high-quality programs in the year before kindergarten (Larson et al., 2015). A number of efforts to make high-quality preschool available to high-risk families—either through targeted programs such as Head Start or through universal prekindergarten programs—have shown positive effects on children's school readiness (Gormley, Gayer, Philips, & Dawson, 2005;

Phillips & Meloy, 2012; Winsler et al., 2008; Zhai, Brooks-Gunn, & Waldfogel, 2011). However, children's access to these resources may be limited by the fact that the number of children who could benefit from the programs far exceeds the number of available slots in such programs (Bassok, Finch, Lee, Reardon, & Waldfogel, 2016).

Children in highly mobile/homeless families and those who have been placed in foster care face additional barriers in accessing high-quality preschool programs. Because of their mobility, these children may not be able to get the full dosage of programs that typically run on an academic calendar year. Parents who were homeless reported that housing instability caused them to frequently interrupt their children's enrollment in preschool programs (Taylor, Gibson, & Hurd, 2015). In their study of preschool arrangements of children in foster care, Lipscomb and Pears (2011) found that children who were enrolled in Head Start had a history of *fewer* transitions than children enrolled in other types of early childhood programs.

The likelihood that early adversity will interfere with exposure to early learning resources and experiences has a number of implications for children transitioning to kindergarten. First, as noted above, the lack of exposure to educational resources in the home increases the likelihood that children will have deficits in their early literacy and numeracy skills (Anders et al., 2012; Britto & Brooks-Gunn, 2001). Second, the lack of exposure to early childhood education programming suggests that these children will be less familiar with the routines and expectations of a typical classroom. Third, because they are less likely to have had exposure to groups of peers in early childhood education settings, children who have experienced early adversity may also have less developed social skills than their peers who had access to preschools.

Impacts of Early Adversity on Caregivers

When children are experiencing early adversity, their parents are often facing the same circumstances. This can lead to difficulties in parenting skills, which in turn may affect the skills needed for a successful kindergarten transition. Parenting that is harsh (e.g., involving high levels of negativity) or inconsistent (e.g., difficulty following up on directions and providing consistent rules and structure) has been linked to lower levels of school readiness (Chazan-Cohen et al., 2009; Dodge, Greenberg, Malone, & The Conduct Problems Prevention Research Group, 2008; Morgan, Farkas, Hillemeier, & Maczuga, 2009; Pungello, Iruka, Dotterer, Mills-Koonce, & Reznick, 2009; Walker & MacPhee, 2011). Conversely, supportive parenting in which consistent rules and routines are provided appears to foster in children the early learning and social–emotional skills that are associated with better transitions to kindergarten (Baker, Cameron, Rimm-Kaufman, & Grissmer, 2012; Chazan-Cohen et al., 2009; NICHD Early Child Care Research Network, 2004).

Consistently, studies of parents in low SES families, those who are highly mobile or homeless, and those involved in family violence find that these parents exhibit

poorer parenting skills than their counterparts who are not experiencing such adversities (Bower-Russa, Knutson, & Winebarger, 2001; Bradley, Corwyn, McAdoo, & García Coll, 2001). However, studies also show that positive parenting can buffer the negative effects of adversity on children (Kiernan & Mensah, 2011; McNeil Smith, Holtrop, & Reynolds, 2015; Narayan, 2015). For example, children in homeless families were not adversely affected by high levels of parenting stress when their mothers used praise and incentives as discipline techniques (McNeil Smith et al., 2015), and they were more likely to be accepted by peers at school when their parents used responsive parenting techniques (Herbers, Cutuli, Supkoff, Narayan, & Masten, 2014).

Another component of parenting that is critical for the kindergarten transition is parental involvement in learning (Englund, Luckner, Whaley, & Egeland, 2004; Janus & Duku, 2007; Miedel & Reynolds, 1999). When parents show greater involvement in their children's learning and literacy activities during the preschool years, children demonstrate higher levels of school readiness skills, including literacy and social-emotional abilities (Chazan-Cohen et al., 2009; Englund et al., 2004; Miedel & Reynolds, 1999). This is consistent with evidence that once children enter school, parental involvement can be a positive predictor of better achievement and educational attainment (Barnard, 2004; Christenson, 1999; Zhang, Hsu, Kwok, Benz, & Bowman-Perrott, 2011).

Early adversity may interfere with parental involvement in early learning (Di Santo, Timmons, & Pelletier, 2015; Pears, Fisher, Bruce, Kim, & Yoerger, 2010; Zhang et al., 2011). For example, Pears, Fisher, et al. (2010) showed that children in foster care experienced lower levels of caregiver involvement in their early school experiences than did their peers who were not in foster care, and these lower levels of caregiver involvement predicted lower levels of social–emotional adjustment in early elementary school. Parents of children who have experienced early adversity may have particular difficulties becoming involved with their children's schooling if they did not have positive experiences in school themselves (Carlisle, Stanley, & Kemple, 2005). Research indicates that parents in low SES homes understand that involvement is important and want to be involved in school (Abrams & Gibbs, 2002; Myers, 2015; Yoder & Lopez, 2013). However, these parents often feel that their opinions and needs are not heard by school staff and that those staff look down on them or make incorrect assumptions based on their SES or ethnicity (Abrams & Gibbs, 2002; Hanafin & Lynch, 2002; Myers, 2015; Yoder & Lopez, 2013). This situation may be amplified for parents who have previously had their children placed into foster care (Colton et al., 1997).

Parental lack of involvement in schooling may have a number of negative effects, specifically on the transition to kindergarten for children who have experienced early adversity. On a practical level, parents may not be aware of kindergarten pre-registrations and events such as opportunities to visit the school and meet the teachers prior to the beginning of the kindergarten year. Exposure to such events may make the transition to school easier and more successful for children (LoCasale-Crouch, Mashburn, Downer, & Pianta, 2008). If their parents are not aware of, or are hesitant to attend, such events, children with histories of early

adversity may arrive at school with less knowledge of the school environment, their classroom, and their teachers than their peers whose parents are more involved. Furthermore, without parent involvement at home, children may also struggle with learning the new routines that come with entry into school—such as completing and returning homework (Serpell, Sonnenschein, Baker, & Ganapathy, 2002). Finally, when parents have strong relationships with teachers, this may buffer children from some of the effects of early adversity on kindergarten performance (Iruka, Winn, Kingston, & Orthodoxou, 2011). Therefore, if parents are less involved in school and thus have weaker relationships with teachers, this may mean that children do not benefit from the potential buffering effects of a strong parent–teacher relationship.

Impacts of Early Adversity on Children's Neurobiological Functioning

For children, early adversity can have several detrimental effects on their neurobiological development that may influence a range of skills and behaviors critical for success in the school transition. Children's abilities to regulate their behaviors and emotions are essential to both learning and social adjustment in school (Blair & Diamond, 2008). Central to self-regulation are executive functions, which have been linked to the prefrontal cortex region in the brain (Casey, Tottenham, & Fossella, 2002). Children with histories of low SES, homelessness, maltreatment, and placement in foster care tend to have poorer executive functioning skills than their peers who have not experienced adversity on a variety of indices (Brown, Ackerman, & Moore, 2013; Hughes, Ensor, Wilson, & Graham, 2010; Lengua, Honorado, & Bush, 2006; Loman et al., 2013; McDermott, Westerlund, Zeanah, Nelson, & Fox, 2012; Pears, Bruce, Fisher, & Kim, 2010). In the classroom, low executive function skills are likely to translate into poor attention, impulsivity, poor organizational skills, and disruptive behaviors such as aggression and tantrumming (Blair & Diamond, 2008; Brophy, Taylor, & Hughes, 2002; Lynam et al., 2000; Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008).

Poor executive functioning may be particularly detrimental during the transition to kindergarten, because this is a period during which children need to learn the rules and routines of their classrooms as well as establish relationships with new peers. Children who have difficulties focusing their attention and regulating the emotions and behaviors may not be able to attend to the new information that they are receiving about how to behave at school. Additionally, if children are feeling anxious about the transition and cannot regulate their emotions, their anxiety may be expressed in disruptive and aggressive ways (Nantel-Vivier, Pihl, Cote, & Tremblay, 2014). Such behavior can then earn the children a negative reputation with teachers and peers that may be difficult to change over time.

Another key neurobiological system that may be negatively impacted by childhood experiences of early adversity is the hypothalamic-pituitary-adrenal (HPA)

axis. The HPA axis helps the body to mount a response to environmental challenges through its production of cortisol (Hennessy & Levine, 1979; Johnson, Kamilaris, Chrousos, & Gold, 1992). Elevated cortisol levels facilitate such survival functions as mobilization of energy, modulation of immune systems, and inhibition of long-term restorative functions that would otherwise utilize energy (Sapolsky, Romero, & Munck, 2000). The HPA axis has two primary functions, and its functioning is often measured through determining an individual's level of cortisol at a given time-point. The first function of the HPA axis is to regulate the body's resources through-out the course of the day. Thus, there is a diurnal rhythm to cortisol release—it is higher in the morning, allowing an individual to be awake and alert to start the day. The level of cortisol in the body then gradually decreases throughout the course of the day until it reaches its lowest point at night when the individual should be rest-ing (Sapolsky et al., 2000). The second function of the HPA axis is to help the body to mount a response to acute stressors by elevating cortisol levels to facilitate an array of survival functions such as mobilization of energy (Sapolsky et al., 2000). Moderate, but short-lived, activation of the HPA axis in the face of environmental challenges is adaptive, allowing an individual to respond to the immediate demands of the environment and adjust behavior to maintain optimal longer-term functioning (Blair & Peters, 2003; Boyce & Ellis, 2005).

Disruptions in HPA axis diurnal functioning and reactivity have been noted in children who have experienced early adversity. For example, maltreated children show blunted diurnal rhythms, such that their morning cortisol levels are lower than those of their non-maltreated peers (Bernard, Butzin-Dozier, Rittenhouse, & Dozier, 2010; Bruce, Fisher, Pears, & Levine, 2009). Similar blunted patterns have been found in children raised in low SES environments (Willner, Morris, McCoy, & Adam, 2014), although not always consistently (Hill-Soderlund et al., 2015). In terms of reactivity, children who have experienced early adversity often show lower cortisol reactivity to stressful situations than their peers who have not experienced adversity (Blair, Berry, Mills-Koonce, Granger, & The Family Life Project Investigators, 2013; Fisher, Kim, Bruce, & Pears, 2012). Especially pertinent for the discussion of the kindergarten transition, Graham and colleagues (Graham et al., 2011) demonstrated that children with a history of maltreatment and living in foster care showed less reactivity in their diurnal cortisol rhythm to that transition than their non-maltreated peers.

The transition to school represents a developmental challenge. Children must enter a new environment, learn new rules and routines, adjust to the signals and responses of a new group of peers, and be compliant with requests from unfamiliar adults. Such a moderate challenge has been shown to activate a child's HPA axis (Boyce et al., 1995). Failure to show a heightened HPA axis reactivity during the transition might signal that a child is not paying enough attention to the transition and consequently may not adjust as well to the new situation. Consistent with this hypothesis, a recent study by Graham and colleagues (Graham, Pears, Kim, Bruce, & Fisher, 2017) shows that the slope of the diurnal cortisol rhythm on children's first day of school predicted teacher ratings of adaptation and learning behavior in the fall of kindergarten. Specifically, children who had shown a higher cortisol slope

on the first day of school, potentially signaling that they were anticipating and thus more attentive on that critical day, were better adjusted by the middle of the fall than were children who showed a less steep slope. This suggests that children who have atypical HPA axis functioning due to early adversity may struggle with the transition to school.

Ameliorating the Effects of Early Adversity on the Kindergarten Transition

Although early adversity may negatively affect the transition to kindergarten through the pathways discussed above, these same avenues also indicate potential points of intervention by which to improve these children's transitions and overall kindergarten adjustment. In the next section, we present suggestions for interventions at each level in the model in Fig. 1. This is not intended to be an exhaustive review but rather an overview of the types of interventions that could be offered to prevent negative transitions, and thus poor educational outcomes, for children who have experienced early adversity. Furthermore, as early adversity is a complex phenomenon involving impacts at multiple levels of development, ameliorating the effects of such adversity is unlikely to be accomplished with a single program or intervention. Rather, intervention is expected to require multiple efforts at different timepoints of development, and groups of children with varying experiences may need different types of interventions. Thus, combinations of the interventions described below at the levels of the child, family, teacher, and school are likely to be necessary for the greatest and most sustainable impact.

Interventions Focused on Early Learning Environments

As is noted above, children who have experienced early adversity are less likely than their peers to have access to high-quality early childhood education opportunities (Larson et al., 2015). Efforts to provide universal access to prekindergarten programming, often provided by the K–12 educational system, have been increasing over the past 25 years (Barnett, 2007). In general, these efforts have been shown to benefit children who have experienced early adversities such as living in low-income circumstances (Christina & Goodman, 2005; Gormley et al., 2005). Thus, one way in which to ameliorate the effects of early adversity on the kindergarten transition is to continue to increase funding for and provision of prekindergarten programs for high-risk families.

However, as is also noted above, many children might not be able to receive the full dosage of prekindergarten programs due to high residential mobility. Thus, in addition to longer-term, high-dosage programs, it may also be beneficial to target

high-risk children who have experienced early adversity using shorter-term programs specifically focused on providing them with the skills necessary to make a successful transition to kindergarten. Additionally, timing such interventions to occur immediately prior to and/or during the period of the kindergarten transition may leverage children's and parents' focus on school, as well as capitalize on the changes that are naturally occurring during this period (Pianta, Rimm-Kaufman, & Cox, 1999). Examples of such programs are presented in the third section of this book, including the Kids in Transition to School (KITS) Program, an intervention that has been tested with students who have experienced such early adversities as maltreatment and placement in foster care and high poverty.

Additionally, as is noted above, there is a significant income gradient in the availability of home literacy materials. Efforts to remediate this gradient for children facing such early adversities as poverty have included the distribution of literacy materials and information about the importance of reading to children through libraries and other community-based agencies (e.g., Peifer & Perez, 2011). The results of the few studies that have rigorously investigated the effectiveness of such programs have been mixed (Neuman & Celano, 2006; Peifer & Perez, 2011; Vanobbergen, Daems, & Van Tilburg, 2009; Whaley, Jiang, Gomez, & Jenks, 2011). It appears that programs that provide parents with explicit instruction on how to read to children, as well as with materials that support the literacy activity, produce clearer and stronger improvements (Peifer & Perez, 2011; Vanobbergen et al., 2009; Whaley et al., 2011) than programs that simply provide materials alone (Neuman & Celano, 2006). Furthermore, having multiple agencies participate in communicating a consistent message and provision of materials across time seems to contribute to greater efficacy (Peifer & Perez, 2011; Whaley et al., 2011).

Interventions Focused on Caregivers

As is noted above, parents of children who have experienced early adversity are likely to show deficits both in parenting skills and involvement in early learning that may impede the smooth transition into kindergarten. There are a number of evidence-based parenting programs to teach effective parenting skills that could be utilized by both school districts and community agencies as part of transition activities (see Gewirtz & Youssef, 2017 for a review). When working with families experiencing early adversity, the potential barriers to participation discussed in relation to children's use of early education programs are also relevant to parents' use of parenting programs. Thus, programs to intervene with parenting skills will need to be adapted to these specific populations (Holtrop, Chaviano, Scott, & Smith, 2015). This has been successfully done with a number of interventions (Perlman, Cowan, Gewirtz, Haskett, & Stokes, 2012; Petra & Kohl, 2010; Self-Brown et al., 2015).

Whereas the creation of programs to teach parenting skills in general is likely to be a more systemic effort to promote a positive transition for children who have experienced early adversity, efforts to involve parents in school may be more local-

ized to schools and teachers. The transition practices employed by teachers have been shown to improve children's school readiness (LoCasale-Crouch et al., 2008), and such improvements can partially be explained by the positive effects of transition practices on parent involvement (Schulting, Malone, & Dodge, 2005). However, families who have experienced early adversity may be more difficult to engage in school in general and transition practices in particular (Schulting et al., 2005). Teacher expectations may add to this difficulty. For example, in one nationwide survey, 76% of teachers noted that they believed parents took an adversarial stance toward their children's schools (Markow & Martin, 2005). Other studies have shown that teachers report the least amount of contact and lowest levels of comfort with low-income families whose children are experiencing behavioral issues (Stormont, Herman, Reinke, David, & Goel, 2013).

The difficulties of engaging high-risk parents in the transition may be further complicated by a lack of training for teachers on how to engage families in school (Hoover-Dempsey, Walker, Jones, & Reed, 2002; Mahmood, 2013). Twenty-three percent of new teachers surveyed reported that they were not prepared to engage parents in their children's schooling (Markow & Martin, 2005). Thus, one way to begin to promote more positive parental involvement and kindergarten transitions for children who have experienced early adversity is to provide explicit training (both preservice and in-service) on methods by which to involve parents. Furthermore, such training should specifically focus on how to engage parents from high-risk backgrounds because, although some training may give teachers information about techniques to involve parents, it may not prepare teachers for problem-solving if the techniques do not work or only work with certain groups of families (Mahmood, 2013).

Additionally, trainings should also stress the importance of positive, interpersonal contact. The most common transition practice employed by teachers is to send newsletters to parents. This is also a common way that teachers communicate with parents once children are enrolled in school (Miretzky, 2004). However, this may seem impersonal and may not reach parents from high-risk backgrounds (either because children do not bring information home or because of parents' low reading levels). Direct contact with the parents either through parent–teacher meetings, phone calls, or home visits may promote more positive relationships (Miretzky, 2004).

However, it is also important that such contacts be positive, at least the majority of the time (Miretzky, 2004). If teachers only directly contact parents when the student is having difficulties, parents will come to see teacher contacts as negative and may try to avoid them. This may be particularly true for parents of children who have experienced early adversity as they have negative memories of school (Carlisle et al., 2005). One way in which teachers may work to create positive expectations around communications from school is to call or write parents notes when children do well. This can help teachers to establish positive relationships with parents early in schooling that may increase the likelihood that parents will become involved in school in other ways. It also gives the parents and teachers a positive foundation from which to work if the student does start to experience difficulties in school.

One of the most cited reasons that teachers do not engage in transition practices is perceived lack of support from school administrators. Teachers also commonly cite the lack of administration support as a reason for not trying to make direct contact with parents (Miretzky, 2004). Thus, it is likely that school cultures will need to shift in order to support teacher efforts to engage parents.

Interventions Focused on Children

As is noted above, one way in which to intervene directly with children in order to increase the likelihood of a smooth kindergarten transition is to provide them with prekindergarten programming focused on school readiness. Because children who have experienced early adversity may have deficits in their neuro-regulatory systems, as discussed in the previous section, the curricula of such programming should specifically focus on teaching children self-regulatory skills and allowing them to practice and further strengthen these skills (Blair & Diamond, 2008; Pears, Fisher, et al., 2010). School readiness programming that has included an explicit component addressing self-regulation has shown positive effects on high-risk children's behaviors (Bierman, Nix, Greenberg, Blair, & Domitrovich, 2008; Pears et al., 2013) and neurobiological functioning (Graham et al., 2017; McDermott et al., 2017). Although the need to include self-regulation skills in preschool curricula is becoming increasingly recognized, many programs have yet to make this a specific focus (Bierman et al., 2008).

At the level of the kindergarten classroom, there are a number of steps that teachers can take to help children whose regulatory skills have been negatively impacted by early adversity. Primary among these is establishing and familiarizing the children with consistent classroom rules and routines. Inconsistency appears to be particularly detrimental to self-regulatory skills, especially to inhibitory control—children's ability to inhibit one response in order to make another response (Lengua et al., 2006; Valiente, Lemery-Chalfant, & Reiser, 2007). Children who have experienced frequent residential mobility due to low income, homelessness, or placement in foster care are likely to have experienced a high degree of inconsistency. In general, children who are in classrooms with consistent, explicit routines appear to fare better in school during the early elementary school years (Bohn, Roehrig, & Pressley, 2004; Cameron, Connor, Morrison, & Jewkes, 2008). Thus, such routines are likely to be even more essential to children who have histories of early adversity. Introducing high-risk children to the routines of the classroom prior to the start of school can ease the transition and allow children to experience the new routines prior to the first day of school when there are likely to be multiple distractions competing for the children's attention. A preview of the classroom and its rules and routines may also help to ease the anxiety that children who have already experienced multiple transitions in their lives may be feeling.

Teachers working with children who have experienced early adversity might also employ "calm down," "time away," or "time out" spaces and techniques in order to

help children increase their abilities to regulate their negative emotions. When faced with situations in which their impulses or desires conflict with those of others—such as when a teacher gives an instruction that a child does not want to or cannot follow or when a peer disagrees with a child—most children are likely to feel negative emotions. Those with well-developed regulatory skills will be able to inhibit negative feelings in order to follow directions or engage in problem-solving. However, children who have experienced early adversity and thus have deficits in their regulatory abilities may become overwhelmed by these emotions and subsequently engage in oppositional, disruptive, and/or aggressive behaviors (Kim & Cicchetti, 2010; Langevin, Hebert, & Cossette, 2015). These children benefit when the escalation from negative feelings to negative behaviors can be interrupted. This may be accomplished by allowing the child to leave the situation and go to a quiet place in which he or she can calm down before continuing the discussion. Such a place can be within the classroom and can be as simple as a comfortable chair or as elaborate as a small play tent. Some areas may also include pictures of things that the child can do to help calm him-/herself. Such a space allows the child the extra time needed to regulate emotions and behaviors so that active, positive problem-solving can take place (Australian Childhood Foundation, 2010). The teacher can also help the child utilize other calming behaviors, such as regulating breathing or using calm imagery (Klein, 2008). All of these techniques allow both the teacher and student to avoid becoming involved in a cycle of escalation in which the child becomes increasingly disruptive while the teacher becomes increasingly punitive, resulting in negative outcomes for all (Lapointe & Legault, 2004). If these techniques can be put into place before the transition to school and the child told about the purpose of them, this can increase the likelihood of a positive transition and reduce the need for the techniques in the longer run.

Central to the efficacy of all of these techniques are the attributions that teachers, and other school personnel, make about these students (Lapointe & Legault, 2004). If these students' reactive and unregulated behaviors are seen as a result of willful attempts to be oppositional, teachers are likely to react with negative sanctions. The teachers are also likely to have less positive relationships with these students, which can further negatively impact the student's achievement and school adjustment over time (Silver, Measelle, Armstrong, & Essex, 2005). If teachers and others view the behaviors of children who have experienced early adversity as a result of deficits arising from their negative experiences (or lack of positive experiences), then teachers are more likely to engage in proactive, solution-oriented approaches to problematic behaviors. Through developing an understanding of the multiple ways in which adversity can impact children's skills and behaviors, teachers and other school personnel may be better able to make attributions that will increase the likelihood that children will make positive transitions and experience better school adjustment over time.

Conclusions

This chapter has outlined how the experience of a number of types of early adversity—including low SES, high mobility and/or homelessness, and maltreatment—can negatively impact children's transitions to school. Early adversity affects children at a number of levels, including limiting their opportunities for early learning experiences, decreasing the involvement of their parents in early learning and then formal schooling, and producing deficits in a number of neuro-regulatory systems that are central to school readiness and adjustment. Although the effects of early adversity are wide ranging, a number of studies have shown that it is possible to positively influence children's trajectories toward better outcomes, particularly through helping children to have a positive transition to formal schooling (Ramey & Ramey, 2004; Reynolds et al., 2010). In the latter portion of the chapter, we examined a number of potential points of intervention to increase these children's opportunities for a positive transition. The most effective interventions, or combinations of interventions, are likely to be those that address deficits at multiple levels—including the environment, family, and child's individual skills—and that are tailored to the specific needs of children who have experienced early adversity—including the needs for increasing regulatory skills and adapting programming for high levels of mobility.

Overall, in order to positively influence these children's trajectories, researchers, practitioners, and educators must continue to work toward understanding the mechanisms through which early adversity impacts children's transitions to school and their adjustment in school. Through such knowledge, the most potentially efficacious points and methods of intervention can be identified. Such efforts can then enhance educators' potential to reverse the negative effects of early adversity and help to create more positive outcomes for these vulnerable children.

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