Self-Regulation in Children Birth to Five: Development, Deterrents, Support and Interventions

A Research Paper

Presented to

The Faculty of the Adler Graduate School

In Partial Fulfillment of the Requirements for

The Degree of Master of Arts in

Adlerian Counseling and Psychology

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April 2012

Adler Graduate School
Abstract

Self-regulation in the lives of children from birth through age five has recently become the object of much research. This paper explores the healthy development of self-regulation as well as the deterrents to its development within the first five years of life. It is necessary to understand the risk factors associated with the disruption of self-regulation in young children to accurately apply interventions in support of its repair. This work concludes with a brief discussion of the relationship between self-regulation and Adlerian psychology.
Self-Regulation in Children Birth to Five:
Development, Deterrents, Support, and Intervention

Self-Regulation, developed in the first five years of life, is a foundational component for healthy human development and a potentially critical factor for success in life. According to Vallotton and Ayoub (2011), “Self-regulation is widely recognized as a critical social-emotional skill underpinning children’s abilities to act pro-socially with peers and adults, participate productively in learning activities, and adapt successfully to new or challenging situations” (p. 169).

The inability to self-regulate can have serious effects on the lives of young children. One study by Gilliam and Shahar (2006) found that preschool children are expelled more frequently than any other school age group. The poor ability to self-regulate may well be a major contributor to this finding. Teachers have identified children’s difficulties with self-regulation as a major contributor to their lack of school readiness. According to Blair and Diamond (2008), “Teachers overwhelmingly endorsed factors such as being able to communicate wants, needs, and thoughts verbally, to be enthusiastic, and curious in learning, and sensitive to other children’s feelings as essential or very important for being ready to start kindergarten” (p.900).

One result of the difficulty both caregivers and teachers are encountering with young children’s self-regulatory struggles is the increased use of psychotropic medication to moderate their behaviors. Antidepressants and stimulants currently account for the sharpest increase in prescriptions for children under five years of age (Zito et al., 2000). A developing brain is especially susceptible to the detrimental long-term effects of drug use (Stanwood & Levitt, 2004). Therefore, it appears other interventions need to be utilized in order to repair children’s ability to self-regulate.
Many factors support or hinder the healthy development of self-regulation in early childhood. Although temperament, disposition, and personality can influence the development of self-regulation; the nature of children’s relationships, attachment, and environment are inextricably involved in its growth as well. Since the development of self-regulation appears to be a predictor of successful adaptation in life, this work includes a discussion of supports and interventions available for both families and mental health professionals interested in enriching self-regulation in the lives of children.

**Definition of Self-Regulation**

The definition of self-regulation is as varied as the disciplines studying, researching, and evaluating its importance in the lives of young children. It often includes the contextual ability to control behavior and reactions. Jahromi and Stifter (2008) define self-regulation broadly as, “The control or organization of behavior, or the active suppression process engaged for the purposes of pursuing a goal and involves control over a variety of processes, including emotion (emotion regulation), motor (i.e. behavioral control), and cognition (i.e. executive function)” (p. 125). Emotional regulation, behavioral control and executive functions form the basis for children’s self-regulation. Boyer (2009) described:

A self-regulated person as one who can comply with a request to initiate and cease activities according to situational demands, to modulate the intensity, frequency, and duration of verbal and motor acts in social and educational settings, to postpone acting upon a desired object or goal, to generate socially approved behavior in the absence of external monitors. (p. 175)

In sum, self-regulation is the human capacity to adaptively and appropriately consider, select, and implement goal-directed behavior within situational constraints.
It is important to mention at the outset that self-regulation, as defined in this work, is a value-laden construct heavily influenced by Western culture. Bronson (2000) notes, “This is a tradition that values independent effort and achievement, self-reliance, and personal responsibility. Other cultural traditions may place a lower value on these goals or may consider them to be negative outcomes” (p.243). Therefore, it is imperative to consider children’s cultural values and influences before implementing any intervention within given situations.

**Development of Self-Regulation**

Since the development of self-regulation is critical for achievement, whether socially or academically, it is important to understand both the factors that may contribute to and hinder its development in young children’s lives. Bronson (2000) states, “Because early childhood is a period when self-regulation is developing rapidly, in ways that form a basis for later development, it is important to understand what self-regulation is and how to support it” (p. 3).

**Development of Healthy Self-Regulation**

The period from infancy through age five is a time of creating foundational capabilities on which children build competence in self-regulation. Florez (2011) states, “Self-regulation is clearly not an isolated skill. Children must translate what they experience into information they can use to regulate thoughts, emotions, and behaviors” (p. 47). Three of these vital self-regulatory areas of skill development include: social-emotional, behavioral, and cognitive skills. For young children, these are highly interrelated and at times, almost indistinguishable from one another. McClelland and Cameron (2011) note, “Self-regulation reflects the core feature of the developmental systems perspective through the integration of emotion, cognition, and behavior over time and within contexts” (p. 31). Therefore it is necessary to consider the developmental

**Infants.** The capacity for self-regulation begins in infancy as reactive responses to environmental influences grows with increasing capacity for proactive, purposive application. Bronson (2000) reports during this time children are “increasingly able to direct external behavior and internal thought processes and to successfully influence the social and physical environment” (p. 2). The growth of self-regulation continues to progress rapidly in early childhood as children begin to develop greater capacity for cognitive, emotional, and behavioral control and directedness. Sroufe (1995) suggests that different experiences can therefore lead to differences in the brain circuits that mediate emotions, and result in “variations in the auto regulation of affect and self-regulation more generally” (p.203).

Infancy is also a time of rapidly developing behavioral regulation connected to children’s emotions (Bronson, 2000). Environmental factors support or hinder this development. Caregiver warmth, availability, consistency, communication, and responsiveness within a loving, supportive environment sustain its progress. During infancy children develop capacities for self-stimulation and self-soothing. Voluntary control over both motor activity and interactions with others advance during this time. Infants’ development is greatly influenced by their attachment to caregivers during this time of growth.

**Attachment foundation.** “Many researchers believe that the development of self-control in young children grows out of the quality of the infant-caregiver relationship” (Bronson, 2000, p. 69). Therefore, to fully understand the development of self-regulation in young children, it is important to note the interrelatedness between self-regulation and attachment to distinguish this quality. Ainsworth and Bell (1970) described attachment as an “affectional tie” formed
specifically between two people who desire to stay in close proximity (p. 50). Attachment theory is a field of study pioneered by John Bowlby (1958) which theorized that available and responsive mothers provide a secure base from which children are able to learn and explore. It is the dependable presence of this one to whom these infants are “attached” which provides the security necessary to engage in exploration of and engagement with their environment.

Ainsworth and Bell (1978) uncovered three behavioral styles in which children are attached to their caregivers: secure, ambivalent, and avoidant. Securely attached infants are able to expect their caregivers to both respond to their needs and to be dependably available. Children with an ambivalent/resistant attachment style become highly distressed when a primary caregiver leaves, and are unlikely to warm to the caregiver when she returns. They seek contact with the caregiver but angrily resist it when it occurs. These children are consistently anxious due to caregivers’ inconsistency. They have learned their caregivers are undependable and will likely be unavailable to meet their needs.

Avoidant children display no preference between caregivers and strangers. Since there is little or no response to their distress, these infants become independent. They feel there is no attachment to their caregiver and avoid relational intimacy even when it is offered. Disorganized attachment is a fourth type of attachment identified by Main and Solomon (1990). This type of attachment is identified by infants’ incoherent coping strategies. Relationship with caregivers has been characterized by frightening interactions and is often associated with maltreatment and various forms of abuse. These children have learned to expect harm and not loving, dependable support from caregivers. Therefore ambivalent, avoidant, and disorganized children believe they are essentially alone in the world and must be vigilant within their environment to care for
themselves. This “hyper-vigilance” deters them from exploring their environment and inhibits them from being able to learn freely.

Infants’ early self-regulation then, is dependent upon caregiver dependability and availability. Available, dependable caregivers contribute to the lives of infants by helping them “Become capable of control as displayed in social demand awareness, the ability to engage in meaningful behaviors, and compliance” (Kochanska, Coy, and Murray 2001, p. 1091). Early positive interactions with warm and caring adults, who are not the parent, may promote greater ability in children’s self-regulation than in those with more negative parental responses (Kochanska, Aksan, Penney, & Doobay, 2007). When infants are soothed and met with warm, loving attention when in need, they are provided the tools for developing self-calming strategies (Florez, 2011). Attachment then, is foundational to the building of self-regulation and exerts influence on its formation as infants become toddlers.

**Toddlers.** Bronson (2000) states, “Development of self-regulation is focused on types of experiences provided in the external environment and on the types of caregiver nurture and guidance that supports intrinsic interest in self-regulation, the development of early impulse control and awareness of goals” (p. 4).

Developmentally, toddlers are beginning to be able to understand both external and internal controls. These children are most interested in exercising personal control. Since these children are limited in their capacity to regulate emotions and behaviors it can be a difficult time (Bronson, 2000). For them to develop the capacity for self-regulation, it is important to give toddlers the opportunity for limited independence. Sensitive, gentle guidance within a predictable environment provides the nurture necessary to foster self-regulation. The encouragement of responsibility within developmentally appropriate expectations increases
toddler’s capacity to self-regulate (Florez, 2011). Positive reinforcement enhances children’s desire to try new and more challenging tasks. Modeling positive behaviors increases children’s capacity to learn how to move through the world in a more socially responsible manner.

Language development is becoming more important in the role of self-regulation during this time. One commonly held belief is that language skills support self-regulation (Vallotton & Ayoub, 2010). Toddlers use of expressive language has been shown to enrich their ability to get their needs met in more socially acceptable ways, thus enhancing both emotional and behavioral regulation.

**Prekindergarten and kindergarten.** Four- and five-year-old children are, according to Bronson (2000), “Increasingly capable of true internal self-regulation that uses internalized rules, strategies, and plans to guide behavior” (p. 83). Growing capabilities in symbolic play and language use increase their capacity to problem solve and navigate social relationships. The ability to shift from external to internal control is becoming more evident. Consequently, the need for less adult supervision is apparent, but the need for structured environmental support is still important. As these children begin to exercise their ability to self-regulate, missteps will occur. At this time, the sensitive guidance of adults assisting in the process of “co-regulation” becomes imperative. Vygotsky ([1934], 1986) discussed the nature of co-regulation as the movement from externally motivated behavior monitored by adults to internally motivated behavior completed independently.

Imitation and internalization of modeled behaviors are emerging. Significant adults and peers become the models for children’s foray into behaviors within interpersonal relationships. “Opportunities for positive interactions with peers that include adult monitoring of peer
interactions, mediating disputes (if necessary) in a problem-solving way, and an expressed value for cooperative interactions, increase positive self-regulation” (Bronson, 2000, p. 85).

The use of language as a regulator for emotions and behaviors becomes increasingly essential during this time. Caregivers’ modeling and coaching three- to five-year-olds in the use of language can promote positive emotional and behavioral control. (Vallotton & Ayoub, 2011). Children with appropriate language capacity utilize self-talk called “private speech” to monitor and temper personal behavioral choices. Winsler, Carlton, and Barry (2000) suggest the use of private speech is an important component of self-regulation. Vallotton & Ayoub (2011) report, “private speech among preschool children predicts social skills, such that children who use more private speech to solve problems have greater social skills and few problem behaviors” (p. 170). Children’s use of self-talk can be both a monitor and moderator of behavior and social skills.

Deterrents to Healthy Development of Self-Regulation

Since self-regulation is a building process throughout early childhood, a number of factors can impede its formation over these early years. McClelland and Cameron (2011) cite numerous risk factors associated with the development of self-regulation: low income, poverty, maternal depression, and disadvantaged minority status. Poverty-related factors include unsafe community living, stress from lack of resources, unhealthy environment, social disadvantage, and lack of stimulating materials within the home.

Variations may occur in the development of self-regulation that may appear as risk factors. One such variation in self-regulatory ability may be gender. Weinburg and Tronick (1999) suggest that in the first year of life, boys are less able to consistently maintain their self-regulatory control, with a less diversified repertoire of regulatory strategies in their mothers’ absence, than were girls. Boys also appear to lag in their verbal expression, which can also be a
risk factor associated with self-regulation.

**Infants.** Poor attachment to primary caregivers, as previously noted, can significantly impair infants’ ability to self-regulate. Without a significant attachment figure, children become preoccupied with personal safety or providing for their own needs. They are unable to explore their environment or develop foundational social-emotional, behavioral or cognitive skills. Infants’ living in “chaotic, over stimulating or under stimulating environment impedes development of adaptive arousal and wake-sleep patterns” (Bronson, 2000, p. 85) which in turn decreases their ability to self-regulate.

**Toddlers.** Toddlers’ environmental conditions contribute significantly to their ability to regulate themselves. An unsafe environment which does not support toddler exploration, independence, and experience impedes self-regulatory development. Negative, insensitive or unresponsive caregivers who model controlling behavior rather than encouraging limited autonomy block their development of self-regulation. McClelland and Cameron (2011) cite, “parents who emphasize compliance and following rules rather than supporting their child’s autonomy tends to have children with lower self-regulation” (p. 36).

Parental misunderstanding of appropriate developmental expectations can be a deterrent to toddler self-regulation. Florez (2011) reports,

Punishing young children when they fail to sustain attention longer than a few minutes, or fail to calm themselves quickly when frustrated, does nothing to help them learn self-regulation. Likewise failing to provide challenging opportunities for children to advance their skills can hinder their growth (p. 48).

**Prekindergarten and kindergarten.** During this developmental period, “A lack of external guidelines or the use of coercive control undermines the development of self-control”
(Bronson, 2000, p. 83). A chaotic, unstructured environment also damages self-regulatory capacity in children. Adults with unrealistic developmental expectations also harm developing self-regulation in children from three to five. Negative adult and peer models of self-regulatory processes can also impede its growth. Gearth (2009) reports, “Risks include predisposing vulnerability (from genetic effects), exposure to harmful experiences (such as physical or sexual abuse), and the absence of positive experiences needed for normal development (as is the case with neglect)” (p. 17).

Language development can influence self-regulatory ability in preschool and kindergarten children. Qi and Kaiser (2004) found language delays as an indicator of more self-regulatory difficulties. Children with preschool language delays displayed more aggression and disruptive behaviors, and were less likely to engage in pro-social behaviors. Private speech, as previously mentioned, is particularly important in this stage in the progress toward self-regulation. It is developed as children internalize caregiver speech (Vygotsky, 1934/1986). Vallotton and Ayoub (2011) suggest, “The broader one’s symbolic repertoire, the more tools for self-regulation one has” (p.170). Therefore when caregivers do not engage young children in conversation, they delay the children’s development of self-regulation.

**Support and Interventions**

Self-regulation is a skill that can be taught and repaired. Posner and Rothbart (2000) report, “Changes in the external or internal environment may lead to improvements in an individual’s ability to master developmental changes and thus to redirect a developmental trajectory” (p. 436). Caregivers, teachers and mental health professionals are able to engage in repair of absent or limited self-regulation in the lives of young children in a number of ways.
Co-Regulation

For mastery to occur, a number of developmental domains need to be addressed that contribute to self-regulatory repair: relating, thinking, feeling, and acting (Gearity, 2009). The relating domain is addressed by helping children learn to seek and use adult help. This is the process in which children move from joint to individual regulation, also known as “co-regulation” (Vygotsky ([1934], 1986).

Because self-regulatory disruption has occurred within the context of relationship, it is therefore necessary that its repair must also be within the context of relationship (Gearity, 2009). Fonagy and Target (2002) report, “that all the key mechanisms underpinning the enduring effects of early relationship experiences interface with individuals’ capacity to control (a) their reaction to stress, (b) their capacity to maintain focused attention, and (c) their capacity to interpret mental states in themselves and others” (p.307).

The goal of the co-regulatory relationship is to meet children’s needs thereby increasing the likelihood they will need the co-regulator. The aim is relationship development, not a focus on behavioral control. An effective co-regulator externally models and reflects the words these children need to learn to internalize understanding of their thoughts, feelings, and actions. This reflective technique is meant to help children, “clarify and connect to their own thoughts and feelings” (Koplow, 2007, p. 80). Within this relationship the opportunity for the development of new patterns is established. Co-regulators move from, “doing for the child, to doing with the child, to watching and encouraging the child, and then expecting and eventually holding the child accountable for skills that are now possible” (Gearity, 2009, p. 46). This relationship is restructuring of “an unresolved developmental issue” (Koplow, 2007, p. 71).

**Developmental Domains**

Co-regulation paves the way for children to begin to an awareness of, “thoughts that reveal feelings and direct actions” (Gearity, 2009, p. 44). Co-regulators resist the assumption that children are cognitively aware of their behavioral choices. As children are understood they are then able to develop the capacity to begin insight into not only their emotions, but also into thoughts, feelings, and actions of others. Intervention in the feeling domain is based on the belief that, “As children know their emotions, they can better manage emotional distress and behavioral upset” (Gearity, 2009, p.44).

Finally, the acting domain is tackled by increasing children’s’ ability to adaptively utilize new behavioral strategies that, “increase internal behavioral control and improve social inclusion” (Gearity, 2009, p. 44). It is through this linear progression structured by a co-regulator that previously unregulated children can begin to, “flexibly and willfully select the behavioral response that best serves one’s goals” (Conway, 2009). This is the skill known as self-regulation.

**Alfred Adler and Self-Regulation in Children**

Alfred Adler (1870-1937) believed all behavior is a purposeful drive toward superiority compelled by deeply held, although mostly hidden mistaken beliefs (Ansbacher & Ansbacher, 1956). According to Adler in the work with children it is important to:

Understand that the disturbing behavior is related to and grows out of a particular conception or misconception of life and that the whole personality is a unity which shows
the same direction or movement at whatever point it is observed (Ansbacher &
Ansbacher, 1956, p. 395)

“Movement” is necessary to discern in order to discover the aim, or “goal” of children’s
behavior. Children misbehave because they are discouraged (Dreikurs & Soltz, 1964).

Dreikurs and Soltz (1964) sharpened Adler’s philosophy in continued work with children
by describing the four goals of misbehavior: undue attention, power, revenge, and show of
inadequacy. Misbehaviors then, are the socially maladaptive actions children choose to feel a
sense of belonging. Therapy is intended to move children toward socially adaptive or “useful”
behaviors to meet their needs, making the maladaptive behaviors unnecessary.

Similarly, the current understanding of self-regulation includes the belief that children’s
behaviors have purposive intent. It seems behaviors are chosen, unconsciously, as a result of
deep needs. As a result of the current advancement in the study of self-regulation in the lives of
children, it appears to point to a fifth goal of misbehavior; a desire to feel consistently safe. Due
to the current environmental and developmental risk factors associated with early childhood,
many children do not feel effectively protected and therefore are more vulnerable. The result is
less self-regulatory ability and more behaviors associated with this lack of feeling safe.

In many homes not exposed to a number of risk factors such as poverty, maternal
depression, witnessing domestic violence, neglect, and abuse, the “Four Goals” and the
subsequent interventions may be sufficient. But in light of the increase of these risks it may
behoove Adlerians to consider another reason for the goal-directed behaviors of these at-risk
children. Misinterpretation of children’s behavioral purposes without a thorough understanding
of their needs and drives could lead to misapplied interventions that may cause harm. This type
of misunderstanding could also contribute to further discouragement of these troubled children.
References


