

The Role of Attachment and Self-Regulation in the Etiology of Residential Treatment of Childhood Sexual Behavior Problems and the Development of Public Policy on Early Childhood Literacy

Barbara E. Simpson, Department of Psychology, Gustavus Adolphus College

Abstract

As the title suggests, it will be suggest in this paper that attachment is a useful concept and that attachment disorders need to be addressed for infants and children to develop into responsible, caring, and mature adults for whom the everyday ability to learn from experience and adapt appropriately to an ever changing world. There will be no attempt to argue that sex offense and early literacy are tied in any way except through the concept of attachment disorder, because children, adolescents, and adults offend for so many different reasons that there is no one underlying pathology let alone one centered on attachment. However, it will be argued there is something about those adolescent sex offenders who remain attachment disordered at ages 12 to 18 that can inform the discussion of the role of attachment and attachment deficits in early literacy and that differentiate the disordered from the normal capacity to develop language and to learn how to read and write.

The Nature of the Problem

In this paper, attachment will be defined as the bonding of an adult caregiver and an infant, to the end that the infant develops trust in a caregiver and then progressively explores and masters the environment into which it has been born. Those who first articulated the concept of attachment, John Bowlby and Mary Ainsworth (Ainsworth & Bowlby, 1991), focused on its relationship to species adaptation. They argued that species survival depended on an infant being cared for and taught to make sense out of an otherwise unintelligible world and that the infant's doing so was predicated on its ability to form an attachment bond with what they called a preferred attachment figure. More specifically, they and others (Eisenberg, Sadovsky, & Spinrad, 2005; Posner & Rothbart, 2009; Rueda, Posner, & Rothbart, 2005) argued that attachment to a preferred caregiver was *the* mechanism, by which an infant, and later the child came to learn. To this point, each argued that any substantial disturbance of a child's attachment to a primary caregiver would damage both an infant's and a child's potential for social bonding and the development of a sense of self and for its earning how to learn. As a consequence, children, who were not securely attached to a primary caregiver, would fail to develop an adequate set of constructs with which to interact with things outside self and become progressively alienated from reality, fail to develop culturally relevant norms, values, and expectations, tax sorely those who would try to teach them, and, in extreme cases, even die.

As the literature on attachment has developed (Posner & Rothbart, 2009; Rueda, Posner, & Rothbart, 2005), attachment, whether secure or disorganized, has become a powerful lens through which to understand development broadly enough to speak to the matter of two areas of human concern as widely divergent as the early acquisition of literacy and the development of a subset of the most seriously disturbed of young adolescents, the attachment disordered adolescent male sex offender.

Although most adolescent sex offenders are normal, healthy teenagers, apart from the fact that they have made at least one very bad sexual choice, those who get sent to and treated in residential centers like the Hoffmann Center in St Peter Minnesota are attachment disordered and greatly at risk. Those who have come to and been treated at this center are, progressively, somewhere between four and nine years behind same aged peers in social development and educationally one to four grade levels below grade standard. Those who have come, in recent years, have been identified at admission to the program to have been toddlers and pre-school children who had demonstrated pervasive learning disorders. It is these young men to whom the literature of this paper is addressed.

The Literature Of Attachment And Of Attachment Disorders

Attachment

Although Bowlby and Ainsworth had focused their early work on the evolutionary advantage attachment provided, they soon began to differentiate the adaptive value of different forms of attachment. Identifying a successful, e.g., a secure attachment as a capacity for selective relationship that emerged in the first year of life, laid the cognitive and emotional foundation on which a child built a sense of self and came to construe meaning more broadly defined (Kinniburgh, Blaustein, Spinazzola, & Van der Kolk, 2005).

This literature of attachment suggested that, for the first several months of life, an infant will focus attention on anyone who smiles or provides comfort, but that, at approximately seven to nine months, will begin to identify a caregiver, or caregiver dyad, as a preferred attachment figure (Ainsworth, Bell & Stanton, 1974). At this point, the infant will begin to become shy around unfamiliar adults (stranger wariness) and protest separations (demonstrate separation protest) from the preferred attachment figure (Ainsworth, Blehar, Walters, & Wall, 1978). Once this shyness is established, an infant is to have become *attached*. Attachment is focused, it is directed toward establishing trust and becomes the base from which the infant begins to explore its environs and make sense out of his or her experience. That is, a very personal relationship becomes the ground out of which the infant makes meaning.

By definition, then, attachment exchanges are, reciprocal. Marvin et al., (Marvin, Cooper, Hoffman, & Powell, 2002), using Bowlby's and Ainsworth's categories of attachment, identified the behaviors under which a secure attachment was developed. The first was that the preferred attachment figure had to be securely enough established to understand both self and other and to respond appropriately to the needs articulated by the infant. The second was that the preferred attachment figure had to decode and appropriately attend to needs expressed by the infant. These needs are both physical, related to bodily functioning, and social, infant and social, encompassing the infant's early attempts to babble, smile, demonstrate delight and otherwise engage in social interaction. The third was that the preferred attachment figure had to correctly mirror back to the infant the various messages that the infant sends as the infant sends them.

While what the preferred caregiver focuses on is important, it is the mirroring back to the infant the reciprocal of the infant's experience that forges attachment (Kochanska, Aksan, Prisco,

& Adams, 2008). In this process of mirroring, the infant codes experience and develops concepts for understanding what has happened, and by extension, what will happen in the future (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003) according to the formula “the preferred caregiver responds ‘X’: therefore I am ‘Y’.

Repeated pairings of the infant’s experience and the caregiver’s response, the infant to develop an internal representation (Claussen & Crittenden, 2000; Ham, & Tronick, 2009), that allows it to act (Carver, 2005), self-regulate and develop emotional balance (Eisenberg, Sadovsky & Spinrad, 2005), and form a secure attachment (Eisenberg, 2010). A secure attachment, thus, develops social competence and provides the circumstance necessary for a growing child to develop the capacity to understand emotion, self-reflect, and self-regulate.

Reality, from this perspective, is socially construed. To be sure, the physical world has its own logic and rhythm, but infants, children, and later adults establish understanding by having their perceptions validated in interaction with others. When people make mistakes in construing reality, they do so at least partly because there has been some disjunct, for them, between their seeing, doing, and responding and someone else’s verifying their experience with them.

To this point, both recent and early literature in the development of literacy (Sokol, Muller, Carpendale, & Young, 2010), has suggested that being appropriately situated in social context, e.g., being located in social and relational space as well as in physical space is important for effective learning. When one is not appropriately situated in social space, one can say that one has an attachment disorder.

Attachment Disorders

An insecure attachment leads the infant, and later, the emerging child to make mistakes in construing reality. Marvin et al. (Marvin, Cooper, Hoffmann, & Powell, 2002) demonstrated that Ainsworth’s three patterns of failed attachment could be translated into a cognitive behavioral formulation. In the first pattern, the insecure, avoidant-dismissing one, both the attachment figure and the child subordinated the more intimate attachment, e.g., care-giving interactions through a defensive focus on exploration. In the second, the insecure, ambivalent-preoccupied type, both the attachment figure and the child restricted the child’s independent exploration, focusing instead on (often ambivalent) attachment care-giving interactions to the end that the child becomes too dependent on the caregiver. In the third, the insecure, disorganized or insecure other pattern, the caregiver’s heightened fear of and/or anger toward the child’s attachment behavior leads to disorganization and/or abdication of the executive, care-giving role.

Infants, children, and adolescents with attachment disorders neither develop reciprocal relationships with others nor thrive nor meet developmental milestones in a timely manner (Eisenberg, Spinrad, & Eggum, 2010). Indeed, attachment disorders appear to play a formative role in the experience and development of loneliness and in the regulation of affect in many populations. They also foster the development of peer problems, low self-esteem, delinquent and

aggressive behaviors, abusive relationships, antisocial behavior and other adult psychopathologies (Filetti, 2009). That is, their effects are pervasive.

Reactive Attachment Disorder

When attachment fails, the infant, and later the child, develops what the American Psychiatric Association Diagnostic and statistical manual of mental disorders (4th ed., text revision, 2000) calls a *Reactive Attachment Disorder*. Reactive Attachment Disorder presents in the first or second year of life, and is characteristically precipitated by grossly inadequate care. Its symptoms, however, can be caused by any form of caregiver neglect, parental illness, abuse, mistreatment or abandonment (Becker-Weidman, 2009). Etiological risk factors for this disorder include parental loss or trauma, maternal mood disorder or substance abuse disorder poverty, institutional care, and maltreatment or witness of domestic abuse.

In Reactive Attachment Disorder, children display contradictory behavior, stereotypic movements, frozen watchfulness, and disorientation and apprehension in relations with the preferred attachment figure. This style can have devastating life-long consequences, including the development of problems in peer relations, anger management, delinquent and aggressive behaviors, antisocial behavior and other adult psychopathologies including Post Traumatic Stress Disorder and Borderline Personality Disorder.

The Effects of Attachment on Literacy

It should now be clear that the effects of attachment on the development of literacy itself are pervasive. Becker Weidman (2009) found developmental lags of 4.4 years, on average, in children ages, two to 18 years, who had histories of chronic early neglect and who met three criteria for diagnoses of Reactive Attachment Disorder. Nelson, Zeanah, Fox, Marshall, Smyke, & Guthrie (2007) found that children who were reared in orphanages displayed a generic cognitive delay of as much as eight IQ points. Children who have either disorder fail to detect and/or respond appropriately to cues signaling danger, and as a consequence are at increased risk of misconstruing the social context around which increasing voices are suggesting a child develops vocabulary, reading, and writing. Maltreatment during early childhood can cause vital regions of the brain to develop improperly, leading to a variety of physical, emotional, cognitive, and mental health problems (National Clearinghouse on Child Abuse and Neglect Information, 2001).

Effortful Control as a Mediating Concept and a Further Delineation of the Importance, to Learning, of Secure Attachment

Attachment, or lack thereof, excepting the effects of IQ, explains much of what we call learning problems, but Nancy Rothbart and co-workers (Rothbart & Bates, 2006; Rothbart & Posner, 2005), as early as the 1990s, had begun to establish a second and related developmental principle, one that had an easily identified marker and one that, like attachment, could be identified early.

This principle, they called *effortful control*. Effortful control potentiates the effect of secure attachment and mitigates effects of a failed one.

Effortful control emerges, in the second half of the third year of life. With it, the child begins to inhibit what has previously been a reflex tendency to explore, to reach out and grasp interesting objects. In effortful control, the infant/emerging child reaches out for a desired object, but then pauses. What is observed directly is a hesitation, but that hesitation marks the beginning of choice making, a movement toward attractive objects and away from others. Through time, the choices made will set temperament and will establish the processes by which a growing child will make good choices and ultimately develop moral judgment (Eisenberg, 2010).

As does attachment, effortful control plays a central role in the regulation of emotions. Like attachment, it contributes to the focus of attention, task relevant concentration, facilitates memory by lowering cortisol (high levels of which can cause permanent damage to the hippocampus which is critical for memory) and facilitates learning both in and out of school. Effortful control facilitates the development of social functioning, increases self-confidence, decreases impulsivity, and externalizing (predatory) behaviors, and facilitates the regulation of anger. On the other side of the equation deficits in self-regulation are associated with maladjustment.

The Role of Effortful Control in the Delineation of the Self

As early as the 1990s, Rothbart and associates (Rothbart & Posner, 2005) had argued that the neural connections people made e.g., how they encode their experience, determines who they will become. From this perspective, effortful control is a structural principle: The choice(s) one makes determines who one becomes. Whether or not one gets it right makes a difference in the development of conscience in a young sex offender, but it also affects everything one learns.

Early in the process of development, a person is vulnerable, and responds to threat by becoming afraid. Through time, experience is coded into increasingly complex structures called habits, traits, and personality. Those structures increasingly include coping strategies (Rueda, Posner, & Rothbart, 2005). By the time one is an adult, one has learned, more or less, what to do to avoid being afraid, but all people continue to experience fear. Those who continue to experience more fear are more susceptible to developing (to having developed) personality problems.

Most of what will ultimately be adult differences in fear can be observed in the last quarter of the first year of life (Caspi & Silva, 1995). Those who experience the more extreme fear reactions (are temperamentally more reactive) are more easily prompted to express rage and/or exhibit extreme withdrawal. They require more soothing when upset and are more prone to becoming either excessively aggressive or inhibited and withdrawn.

Effortful Control as a Mediator of Successful Development

Eisenberg & Fabes (1992) suggested that children who developed effortful control exhibited many of the properties of the securely attached child, including its ability to ameliorate any one

or more of a number of temperament and behavioral deficits. To this end, Eisenberg, Cumberland, & Spinrad (1998) identified three conditions under which effortful control could be enhanced. The general idea is that a sensitive and responsive caregiver can decrease the negative attitudes, values, and behaviors of disturbed children and increase behavioral regulation. Combined with caregiver limit-setting, caregiver responsiveness has been demonstrated to lower disregulation and to increase the exercise of effortful control.

These three behaviors sound very much like those that establish a secure attachment. The first is that the child has to be brought to a state of calm, be focused, and attentive. The second is that a caregiver, parent or other adult, through time, sensitively reflect back to the child the emotions the child experiences. The third is to help the child to label the emotions expressed.

When looking at the relative abilities of children to exert effortful control, care-giving style itself seems to matter. Authoritarian, negative, and punitive care-giving, as well as a tendency to use negative, discounting language, has been associated with lower levels of effortful control and coping efficacy. On the other hand, authoritative care-giving has been associated with the development of higher levels of effortful control. Maternal depression, characterized by relatively high levels of negative affect expressed in the home can disrupt emotional regulation and ability to exercise effortful control. There is also evidence to suggest that children of depressed mothers have increased problems regulating behavior.

A Biological Perspective on Attachment and Effortful Control

Attachment and effortful control are concepts that matter. Early attachment experiences are critical for brain development and the development of constitutional traits that frame experience throughout life (Posner and Rothbart, 2009). Animal research and infant studies confirm that neuroanatomy, neurochemical events, and observable behaviors are modified by early interactions with caregivers and that those brain pathways responsible for social perception are the same pathways that create meaning, regulate body states, regulate emotion, and organize memory, and create the capacity for interpersonal communication and empathy

The right hemisphere and its connected structures appear to be dominant in early infant and caregiver interactions. Facial mirroring and mutual gaze, attunement between the infant and caregiver, lead to shared states of arousal and positive affect. Stressful experiences that are overtly traumatizing, then, cause chronic elevated levels of neuroendocrine hormones like cortisol which can inflict permanent damage to the hippocampus, a region of the brain critical for development and storage of memory.

In the absence of appropriate attachment during infancy, children grow into adulthood exhibiting difficulties in their ability to self-soothe, self-organize), regulate affect, engage in healthy relationships and learn.

The Biological Grounding of Attachment and Self-Regulation Neurobiology, Memory, and Learning

A structure that is key to the formation and storage of both emotional and verbal memories is the hippocampus (Posner & Rothbart, 2009); and it is in the region of the brain called the amygdala that both the “emotional content” of memory and the feeling responses related to it are generated. The brain’s limbic system, with its connections to various brain nuclei, also plays a key role in the formation and regulation of memory and the association of emotions with concepts.

Hippocampal function (size) also affects learning. Research using Magnetic Resonance Imaging (MRI) has shown that adults who have experienced early maltreatment have a decreased hippocampal and amygdala development. A major result of early developmental stress is the alteration of the protein subunit structure of Gamma-Aminobutyric Acid (GABA) receptors in the amygdala. Alterations of these neuroreceptors affect the ability of GABA, a primary inhibitory neurotransmitter, to self-soothe. Some, but not all of these changes to the hippocampus and its connections appear to be reversible.

A Specifically Genetic Explanation for the Connection Between Attachment, Effortful Control, and Learning

It appears that self-regulatory capacities are genetically influenced, if not genetically driven (Kochanska, Philibert, & Barry, 2009) and that some specific genes predict individual differences in self-regulation. On the basis of this, environmental factors can moderate, but will not prevent the implied dysregulation (Schoore, 2010). Although the effects are small, there is evidence that heredity plays a significant role in the development of self-regulation. Some specific genes, the monoamine oxidase A (MAOA), the dopamine receptor genes DRD2 and DRD4, and catechol-o-methyltransferase (COMT) have been identified as affecting the synaptic availability of the neurotransmitters serotonin and dopamine. It is possible that a dopamine transporter, DAT1, and a dopamine receptor, DRD4 contribute to Attention Disorder Hyperactivity Disorder. Finally, the gene, 5-HT, involved in serotonergic activity, has been linked with the ability to focus attention and self regulate.

Some gene-environmental interactions have also been found to be relevant. Of specific interest, the serotonin (5-HT) transporter gene-regulatory region (5-HTTLPR). What has been found is that children who have one or two short (*s*) rather than long (*l*) alleles develop attention and self-regulation problems when they are raised in stressful environments. Finally, among children who had a short 5-HTTLPR allele (*ss/sl*), those who were insecurely attached developed poor regulatory capacities at 25, 38, and 52 months and genetic-environmental interactions predict gene-caregiver interactions at 18–21 months of age. Children who had the 7-repeat DRD4 allele were more vulnerable to developing an interest in mood altering substances and thrill seeking behaviors.

A new wrinkle on an old concept—the Substitution of the concept of Complex Trauma for the Concept of Reactive Attachment Disorder

While Reactive Attachment Disorder and disorganized attachment have similar etiologies and symptoms, and while children who have disturbed attachments are at greater risk for a diagnosis of Reactive Attachment Disorder, there is one specific difference between Ainsworth's disorganized attachments and the American Psychiatric Association's diagnostic category, Reactive Attachment Disorder, that have caused some to argue that the psychiatric category needs to be broadened and adds credence to the argument that attachment is a central construct in understanding learning.

Balbernie (2010, and people like him have proposed to substitute for Reactive Attachment Disorder, they call "*complex trauma*:. Complex trauma does not so much change the symptoms by which the disorder is marked as the condition (Boris & Zeanah, 1999) for its diagnosis. That condition is that it has to be established that the child was abused or directly harmed by the preferred care-giver.

The problem with this condition is that the child-primary caregiver bond can be broken even when the caregiver is simply unable to protect the child. Who perpetrates the assault does not matter. What matters is that the primary care-giver is not able keep the child safe. Many children look like they are attachment disordered with they simply have not been kept safe. Zeanah & Fox (2004), for example, have estimated that as many as 40% of the pre-school children at risk in foster care express some form of disordered attachment. This proposed diagnostic category side-steps the necessity of identifying the caregiver as perpetrator and substitutes for it seven diagnostic criteria (Cook et al., 2005) that emphasize conditions (without specifying who perpetrated them) under which it can be established that a child has been abused.

These criteria effectively describe both how attachment fails to develop and effortful control fails to evolve. The first criterion addresses the child's dislocation in personal space: the child experiences uncertainty about the reliability and predictability of his world; becomes socially isolated, distrustful and suspicious; and experiences interpersonal difficulties such as conflict with caregivers, siblings, peers, and teachers; has difficulty attuning to the emotional state of others; and comes to misunderstand and misinterpret social cues. The second describes the relevant biological factors: the child becomes hypersensitive to physical contact; becomes analgesic (experiences a deficit in the ability to experience pain); experiences upper body weakness, sensitivity to sounds, tastes and smells; exhibits various somatic illnesses manifested as headaches, stomachaches, and limb pain; and has increased medical problems. The third addresses problems the child's affect or emotional regulation: difficulty de-escalating; chronic and pervasive depressed mood or sense of emptiness; chronic preoccupation with suicide; difficulty describing feelings and internal experience; and explosive anger or inhibited anger. The fourth addresses dissociation: distinct alterations in states of consciousness, amnesia, depersonalization and de-realization. The fifth defines behavioral control: poor modulation of impulses, self-destructive behaviors (self injury),

aggressive behavior, sleep disturbances, eating disorders, substance abuse, and oppositional behaviors or excessive compliance. The sixth addresses cognition: difficulty in attention regulation and executive functioning, problems focusing on and completing tasks, difficulty planning and anticipating events, learning difficulties, and problems with language development. The seventh describes predictable shifts in self-concept: a failure to establish a stable sense of self, the development of low self-esteem, a heightened sense of shame and guilt, an ineffectual ground from which to deal with the environment and a presentiment that one has been permanently damaged by the trauma.

These symptoms translate into specific patterns (Creedon, 2009). Children exposed to complex trauma, like those diagnosed with an attachment disorder, fail to develop effortful control, do not later develop age-appropriate emotional and other executive regulation at age three to four, and cannot, thereby, become self-regulating adolescents and adults. Instead, they court continued physical, emotional, and sexual abuse and find themselves precipitating or at least getting caught up in continued violence.

So also profound effects have been found on physical health (Filetti, 2009), psychological development, and on a variety of other domains (Nelson, Zeanah, Fox, Marshall, Smyke, & Guthrie, 2007). Neglected children are at increased risk of cognitive delays, are socially withdrawn, rejected, and have pervasive feelings of incompetence. They also seem to be at risk of developing severe psychiatric problems and personality disorders, including Antisocial Personality Disorder and Post-traumatic Stress Disorder. This new concept, complex trauma, strengthens the case that adolescent sex offenders and children at risk for developing literacy by accounting for more children in each group. That is, it appears that both deficiencies are accounted for more by the fact that abuse happens than who causes the abuse.

Childhood Sexual Problems and Residential Treatment

Many adolescents have sexual problems. It has been estimated that about 20% of all rapes and 20–50% of cases of child abuse are perpetrated by slightly older children. Those who have studied the psychological and behavioral characteristics of juvenile and adolescent sex offenders (Veneziano & Veneziano, 2002) have argued that the characteristics of the sex offense *per se* matter much less than they do for adult sex offenders; and that the sex offense specific behaviors matter less than the non-sex offender specific traits that beg treating. What is generally agreed now is that the most severely disabled adolescent sex offenders have in common is something that looks much like an attachment disorder.

Compared with community controls, adolescent sex offenders have experienced either a higher level of maternal and paternal overprotection in early childhood or a chaotic discipline pattern. They report feeling more isolated and alone and tended to see their behavior controlled by outside forces. It is entirely likely that sex offenders' failure to form early secure attachments with their caregivers leads them to develop insecure adult attachment styles and argued that sexual offending is a distorted attempt to seek interpersonal closeness in the absence of the ability to form appropriate relationships.

While children and adolescents who have sexual behavior problems are not the only ones who have attachment and executive control disorders, they are a group that seems to be especially troubled by them. A larger number of them (MacMillan, et. al., 2001) are at risk of developing anxiety disorders (the number is 2 times the average), major depressive disorders (the number is 3.4 times the average), alcohol abuse (the number is 2.5 times the average), drug abuse (the number is 3.8 times the average), and antisocial behavior (the number is 4.3 times the average). They are also significantly at risk for a variety of other behavioral, neuropsychological, cognitive, emotional, interpersonal, and psychobiological disorders (Cook et. al., 2005) that are largely treatable in the same way one would treat an attachment disorder. They carry the symptoms of an attachment disordered child who is not prepared to benefit from strategies developed to facilitate the early development of literacy.

The Connection between Attachment, Complex Trauma, Effortful Control, Childhood Sexual Problems, and Literacy

Of those children and adolescents who are sex offenders, the majority are not greatly at risk for re-offense. Those not greatly at risk for re-offense are rarely referred for residential treatment. They are treated by sex offender specialists in their communities. Those who are less likely to re-offend are also less likely to be attachment disordered. Those who are attachment disordered exercise less self-control, are more easily overwhelmed by anger, and are more likely to use violence instrumentally to achieve various ends. For very understandable reasons, these latter children and adolescent are sent to a place where they are carefully watched, a corrections facility or a residential treatment center. Those who are most dangerous, and those 18 or older, get sent to a corrections facility. The others go into residential treatment. As a consequence, those who are referred to residential programs are highly selected. They have, in exaggerated form, all of the problems identified in various literatures of the attachment disordered or otherwise traumatized child who has failed to develop appropriate executive function.

For purposes of illustration, let us look at the experience of some more than 1100 sex offenders: young men, ages 12 to 18, who, since 1983 have been treated at the Hoffmann Center. Most all have been successfully discharged and sent back to their home communities. Though it is a population very different from that of pre-school children who are having difficulties learning to use language, the two populations face many of the same developmental issues.

To be specific, more than 80% of the young men have been diagnosed pre-admission with Attention Deficit Disorder, Attention Deficit Hyperactivity Disorder, Bipolar I, and/or fall one place or another on the spectrum, of Autism Disorders. They function, on the average, at one to five years behind the grade-level of age peers in school; and they function with the social emotional maturity of a 10ten to 12 year old on one unit and of a four or five year old on the other. They all have been emotionally volatile, verbally aggressive, and have dealt with stress either by becoming antagonistic and exploding or by withdrawing to isolate in private. They have found it difficult to form a social bond with others and have a history of failed relationships. They have had difficulty planning for and using free time. They demand almost constant

attention from their residential caregivers. They have demonstrated age-inappropriate behaviors in most all developmental areas and cannot venture out into the community without being closely supervised. Some would draw unwanted attention to themselves and others would have created situations that would have placed both themselves and children younger than them in danger. In the language developed in this paper, they all have been attachment disordered, emotionally dysregulated, and have had problems exercising executive control – e.g., making socially appropriate choices.

Additional Evidence Supporting the Concept of Attachment Disorder

Those who work at the Hoffmann Center are not alone in noting that a sizeable number of young children and adolescents who have sexual behavior problems severe enough to merit residential treatment or incarceration appear attachment disordered. Their disorders are consistent with and support a literature which associates the symptoms of an attachment disorder with sex offense (Marshall, 2010; Marshall & Marshall, 2010). These disorders include a connection between attachment disorder and a tendency to blame others, to be lonely, to have fewer and more impoverished coping strategies, to show greater emotional dysregulation, and to use increased levels of violence in sexually acting out. That said, there is also some evidence that repairing a damaged attachment helps fix the sexual problem. Creating a capacity for intimacy relieves loneliness, increases ability to form positive relationships and decreases the continued incidence of sexually problematic behavior.

Implications of Attachment Disorder for the Treatment of Juvenile and Adolescent Sex Offenders

In focusing more on attachment, Hoffman Center did not discontinue the conventional cognitive behavioral approaches which teach empathy, challenge the use of thinking errors that justify their problematic sexual behaviors, and give them better information about sex and how to be sexually responsible. Nor did they change the milieu based thinking within which the program was organized or stop addressing the socioeconomic challenges and family systems problems with which the young people have to deal on being released. That is, they continued to teach the psycho-educational groups addressing sex education, self-care and social skills that had always been taught. They continued to offer the conventional the recreation and leisure therapies that had always been scheduled. They continued to make the standard cognitive-behavioral strategies developed for treating adolescent sex offenders.

In deciding what to change, they consulted with those who had the most experience working at the developmental level at which the Hoffman Center residents operated: those who developed programs for and taught early childhood classes in school systems. They turned to early childhood learning specialists, people who were already developing strategies with which to deal with Attention Deficit Disorder, Attention Deficit-Hyperactivity Disorder, Autism Spectrum disorder, and Bi-Polar Disorder youth, those three to five year olds who were struggling to learn how to read and write.

What they did new was pay more attention to the developmental level at which the young men were functioning on admission, and made remediating attachment deficiencies a first concern. To that end they added strategies that would help the residents re-connect with the emotions they had buried and develop strategies to facilitate emotional and self-regulation. To address the first they added introduced guided imagery, and art, music, and movement therapies. To the second they offered yoga, bio-feedback, and meditation practice. As the living unit based youth counselors, those who monitored the progress of treatment on a 24-hour basis, participated in the administration of these therapies, they became better prepared to monitor the emotional and behavioral self-regulation progress of the program residents and more intentionally tailored their work with them to bridge the difference between where they had been functioning on admission and where they needed to be functioning at discharge.

The result is that the residents found a psychologically safe place to focus attention, increase attention span, and self-regulate and the staff found themselves becoming more confident that the young men they were treating would, when they left the program, be able to use the good advice that sex offender treatment programs have been developed to provide them.

While there has not yet been time to know whether the intervention reduces recidivism, it can be reported that, in the last year, those who have come into the program more than four years behind grade level, have made up two years of the deficit, and those who have come in about one year behind, have made up that year to be on schedule. It is also true that those who have made the greatest gains educationally also have made the most gains psychologically and are moving more quickly through the treatment for the sex offense. Those who gain the most, make up the educational deficit at the same time as they progress through the sex offender treatment. It looks like it might be possible that fixing one of the problems also fixes the other.

The Development of Public Policy on Early Childhood Literacy

If what we have seen in the residents of the Hoffmann Center holds, it is at least possible that fixing attachment disorders, where they are found in preschool children, will not only help them regulate emotions but will also help them learn. So it might be appropriate to attempt to determine how many of those children who are having difficulty handling the academic and personal challenges of pre-school might well be screened for the presence of an attachment disorder as a part of all programs for early literacy, be treated for it. If the numbers of children who will continue to present with attachment issues are as large as I estimate them to be, school districts will not be able to hire enough psychologists or other treatment specialists to fix the problem. What will need to happen is that the schools design curricula that will address attachment disorder in the classroom directly: bring into the classroom things like guided imagery, secular forms of meditation, and the use of music and movement. These strategies will be much like those presently used in therapy and in special education classrooms to deal with Attention Deficit Disorders (ADD) Attention Deficit and Hyperactivity Disorder (ADHD) and those other diagnoses on the autism spectrum. This means that those designing curricula will need to find a way to teach the children, in the classroom, how to focus and maintain attention,

exercise patience, handle frustration, and, as necessary, to self-soothe, e.g., to self-regulate, while learning.

References

- Ainsworth, M. D., & Bowlby, J. (1991). An ethological approach to personality development. *The American Psychologist*, *46*, 331-341.
- Ainsworth, M. D., Bell, S. M., & Stayton, D. F. (1974). Infant-mother attachment and social development: Socialization as a product of reciprocal responsiveness to signals. In M. P. Richards, (Ed.), *The integration of a child into a social world* (pp. 99-135). New York: Cambridge University Press. [Chapter]
- Ainsworth, M. D., Blehar, M. C, Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders (4th ed., text revision)*. Washington, DC: Author.
- Bakermans-Kranenburg, M. J., van IJzendoorn, M. H.; Juffer, F. (2003). Less is more: Meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin*, *129*, 195-215.
- Balbernie, R. (2010). Reactive attachment disorder as an evolutionary adaptation. *Attachment & Human Development*, *12*, 265-281. doi: 10.1080/14616734.2010.482223
- Becker-Weidman, A. (2009). Effects of early maltreatment on development: A descriptive study using the Vineland Adaptive Behavior Scales-II. *Child Welfare*, *88*, 137-161.
- Boris, N. W., & Zeanah, C. H. (1999). *Disturbances and disorders of attachment in infancy: An overview*. *Infant Mental Health Journal*, *20*, 1-9.
- Carver, C. S. (2005). Impulse and constraint: Perspectives from personality psychology, convergence with theory in other areas, and potential for integration. *Personality and Social Psychology Review*, *9*, 312–333.
- Caspi, A., & Silva, P. A. (1995). Temperamental qualities at age three predict personality traits in young adulthood: Longitudinal evidence from a birth cohort. *Child Development*, *66*, 486-498.
- Claussen, A. H., & Crittenden, P. M. (2000). Maternal Sensitivity. In: P. K. Crittenden, A. H. Claussen, & A. Hartl (Eds.), *The organization of attachment relationships: Maturation, culture, and context* (pp. 115-122). New York: Cambridge University Press. [Chapter]
- Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., De Rosa, R., . . . Van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals*, *35*, 390-398.
- Creeden, K. (2009). How trauma and attachment can impact neurodevelopment: Informing our understanding and treatment of sexual behaviour problems. *Journal of Sexual Aggression*, *15*, 261-273. doi: 10.1080/13552600903335844
- Eisenberg, N. (2010). Empathy-related responding: Links with self-regulation, moral judgment, and moral behavior. In M. Mikulincer, & P. R. Shaver, (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (pp. 129-148). Washington, DC, US: American Psychological Association, 2010. [Chapter]
- Eisenberg, N., & Fabes, R. A. (1992). Emotion, regulation, and the development of social competence. In M. S. Clark (Ed.), *Review of personality and social psychology: Vol. 14. Emotion and social behavior* (pp. 119-150). Newbury Park, CA: Sage.
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, *9*, 241–73.
- Eisenberg, N., Sadovsky, A., & Spinrad, T. L. (2005). Associations of emotion-related regulation, language skills, emotion knowledge, and academic outcomes. *New Directions in Child and Adolescent Development*, *109*, 103–118.
- Eisenberg, N., Spinrad, T. L., & Eggum, N. D. (2010). Emotion-related self-regulation and its relation to children’s maladjustment. *Annual Review of Clinical Psychology*, *6*, 495-525.

- Filetti, V. J. (2009). Adverse child experiences and adult health. *Academic Pediatrics*, 9, 131-132. doi: 10.1016/j.acap.2009.03.00
- Ham, J., & Tronick, E. (2009). Relational psychophysiology: Lessons from mother-infant research on dyadically expanded states of consciousness. *Psychotherapy Research*, 19, 619-32. doi: 10.1080/10503300802609672
- Kinniburgh, K. J., Blaustein, M., Spinazzola, J., & Van der Kolk, B. A. (2005). Attachment, self-regulation, and competency. *Psychiatric Annals*, 35, 424-430.
- Kochanska, G., Aksan, N., Prisco, T. R., & Adams, E. E. (2008). Mother-child and father-child mutually responsive orientation in the first two years and children's outcomes at preschool age: Mechanisms of influence. *Child Development*, 79, 30-44.
- Kochanska, G., Philibert, P. A., & Barry, R. A. (2009). Interplay of genes and early mother-child relationship in the development of self-regulation from toddler to preschool age. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 50, 1331-1338. doi: 10.1111/j.1469-7610.2008.02050.x
- Macmillan, H. L., Fleming, J. E., Streiner, D. L., Lin, E. B., Jamieson, E., Duku, E. K., . . . Beardslee, W. R. (2001). *American Journal of Psychiatry*, 158, 1878-84.
- Marshall, W. L. (2010). The role of attachment, intimacy, and loneliness in the aetiology and maintenance of sexual offending. *Sexual and Relationship Therapy*, 25, 73-85.
- Marshall, W. L., & Marshall, L. E. (2010). Attachment and intimacy in sexual offenders: An update. *Sexual and Relationship Therapy*, 25, 86-90. doi: 10.1080/14681991003589568
- Marvin, R. S., Cooper, G., Hoffman, K., & Powell, B. (2002). The Circle of Security project: Attachment-based intervention with caregiver-pre-school child dyads. *Attachment & Human Development*, 4, 107-124.
- National Clearinghouse on Child Abuse and Neglect Information. (2001). *In Focus: Understanding the effects of maltreatment on early brain development*. U.S. Department of Health and Human Services. Retrieved from <http://nccanch.acf.hhs.gov>
- Nelson III, C. A., Zeanah, C. H., Fox, N. A., Marshall, P. J., Smyke, A. T., & Guthrie, D. (2007). Cognitive recovery in socially deprived young children: The Bucharest early intervention project. *Science*, 318, 1937-1940.
- Posner, M. I., & Rothbart, M. K. (2009). Toward a physical basis of attention and self-regulation. *Physics of Life Reviews*, 6, 103-120.
- Rothbart, M. K., & Bates, J. E. (2006). Temperament. In N. Eisenberg, W. Damon, R. M. Lerner (Eds.), *Handbook of child psychology, vol. 3, Social, emotional, and personality development 6th ed.* (pp. 99-166). Hoboken, NJ, US: John Wiley & Sons Inc. [Chapter]
- Rothbart, M. K., & Posner, M. I. (2005). Genes and experience in the development of executive and effortful control. *New Directions for Child and Adolescent Development*, 109, 108-18.
- Rueda, M. R., Posner, M. I., & Rothbart, M. K., (2005). The development of executive attention: Contributions to the emergence of self-regulation. *Developmental Neuropsychology*, 28(2), 573-594.
- Schore, A. N. (2010). Relational trauma and the developing right brain: The neurobiology of broken attachment bonds. In T. Baradon (Ed.), *Relational trauma in infancy: Psychoanalytic, attachment and neuropsychological contributions to parent-infant psychotherapy* (pp. 19-47). New York: Routledge Taylor & Francis Group. [Chapter]
- Sokol, B. W., Muller, U., Carpendale, J. I., & Young, A. R. (Eds.). (2010). *Self and social regulation: Social interaction and the development of social understanding and executive functions*. New York: Oxford University Press.
- Veneziano, C., & Veneziano, L. (2002). Adolescent sex offenders: A review of the literature. *Trauma, Violence, & Abuse*, 3, 247-260.
- Zeanah, C. H., & Fox, N. A. (2004). Temperament and attachment disorders. *Clinical and Child Adolescent Psychology*, 33, 32-41.