

5-2017

Environmental Factors Among Young Children Contributing to the Onset of Behavior Disorders

Crystal L. Ibberson
cgent23@hotmail.com

Follow this and additional works at: http://repository.stcloudstate.edu/sped_etds



Part of the [Special Education and Teaching Commons](#)

Recommended Citation

Ibberson, Crystal L., "Environmental Factors Among Young Children Contributing to the Onset of Behavior Disorders" (2017).
Culminating Projects in Special Education. 46.
http://repository.stcloudstate.edu/sped_etds/46

This Starred Paper is brought to you for free and open access by the Department of Special Education at theRepository at St. Cloud State. It has been accepted for inclusion in Culminating Projects in Special Education by an authorized administrator of theRepository at St. Cloud State. For more information, please contact kewing@stcloudstate.edu.

**Environmental Factors Among Young Children Contributing
to the Onset of Behavior Disorders**

by

Crystal Ibberson

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Master of Science in

Special Education

June, 2017

Starred Paper Committee:
Bradley Kaffar, Chairperson
Jerry Wellik
Ming Chi Own

Table of Contents

	Page
List of Tables	4
Chapter	
1. Introduction.....	4
Importance of the Topic.....	4
Adverse Childhood Experiences (ACE).....	5
What is a Behavior Disorder?.....	7
Criteria	7
What Do Behavior Disorders Look Like?	8
What is the Goal for the Student?.....	9
What Environmental Factors Affect the Likelihood of Behavior Disorders?.....	9
Family Environment, Conduct Order, and Suicide.....	10
ADHD, ODD, and CD	11
Chaotic Home	12
Sexual Abuse	13
Research Question	14
2. Review of Literature	15
Prenatal Exposures to Environmental Chemicals and Birth Order as Risk Factors for Child Behavior Problems	15
Unraveling the Effect of Genes and Environment in the Transmission of Parental Antisocial Behavior To Children’s Conduct Disturbance, Depression, and Hyperactivity.....	16

Chapter	Page
Family-Environmental Factors Associated with Attention-Deficit Hyperactivity Disorder in Chinese Children: A Case-Control Study	18
Home Environment: Association with Hyperactivity/Impulsivity in Children with ADHD and their Non-ADHD Siblings	19
Family Emotional Climate and Sibling Relationship Quality: Influences on Behavioral Problems and Adaptation in Preschool-Aged Children	21
Gender and the Development of Oppositional Defiant Disorder: Contributions of Physical Abuse and Early Family Environment	22
Social-Emotional Behavior in Infants and Toddlers with Mild Traumatic Brain Injury	24
The Effect of Pediatric Traumatic Brain Injury on Behavioral Outcomes: A Systematic Review	25
Trauma Characteristics and Posttraumatic Stress Disorder among Adolescent Survivors of Childhood Sexual Abuse	26
Maternal Distress Influences Young Children's Family Representations through Maternal View of Child Behavior and Parent-Child Interactions	28
Stressful Childhood Experiences and Clinical Outcomes in People with Serious Mental Illness: A Gender Comparison in a Clinical Psychiatric Sample	30
Association between Family Environment and Attention-Deficit Hyperactivity Disorder in Children—Mothers' and Teachers' Views	31
Adverse Experiences in Early Childhood and Kindergarten Outcomes	33

Chapter	Page
	4
Common Problem Behaviors of Children and Adolescents in General Education Classrooms in the United States	35
Identifying Students with Mental Health Issues: A Guide for Classroom Teachers	36
Summary of Research	38
3. Conclusions and Recommendations	45
References	51

List of Tables

Table	List of Tables	Page
1.	ACE Score	6
2.	Summary of Chapter 2 Findings	39

Chapter 1: Introduction

Importance of the Topic

Behavior Disorders have been on the rise among children according to the Centers for Disease Control and Prevention (CDC; 2013). The CDC says mental disorders among children are an important topic and public health issue. The CDC defines mentally healthy children as those who “have a positive quality of life and can function well at home, in school, and in their communities.” Mental and behavior disorders are said to be “serious deviations from expected cognitive, social, and emotional development.” The most common disorders reported by parents of U.S. children aged 3 to 17 are attention-deficit hyperactivity disorder (ADHD), behavioral or conduct problems, anxiety, depression, autism spectrum disorder, and Tourette syndrome. Schools are struggling to maintain students’ focus and positive behavior. Many of these children are struggling with issues at home. Several environmental factors contribute to a child’s needs including separated or divorced parents, substance abuse in the home, depression, mental health, and physical and verbal abuse (CDC, 2013). Most people would agree the home environment is an important component to the well-being of a child, especially in his/her early years. Several of these environmental factors can alter a child’s perspective on life and how he/she deals with and works through difficulties encountered. Research shows environmental factors in children’s younger years play the largest role in negative outcomes (CDC, 2013). Early interventions are extremely important to assist families in getting their children off to a healthy emotional start. Discovering the root cause or reasons so many children are struggling at home, as well as in the school environment, is crucial to the future of our children. It is important to better understand

and help parents, teachers, and schools to develop strategies and interventions to reduce behavior disorders helping children to succeed (Taylor, Allan, Mikolajewski, & Hart, 2012).

From infancy onward, the development of family relationships occurs throughout children's daily interactions with parents, siblings, and other involved family members, reflecting a core principal for attachment theory (Soo You, Popp, & Robinson 2013). Consistent discipline is another factor as a natural consequence for poor behavior.

Adverse Childhood Experiences (ACE)

An Adverse Childhood Experiences (ACE) score is an assessment of 10 types of childhood trauma. Five are considered personal: 1) physical abuse, 2) verbal abuse, 3) sexual abuse, 4) physical neglect, and 5) emotional neglect. Five are related to other family members: 1) parent who is an alcoholic, 2) mother who's a victim of domestic violence, 3) family member in jail, 4) family member diagnosed with mental illness, and 5) the disappearance of a parent through divorce, death, or abandonment (CDC, 2013). According to the Adverse Childhood Experiences study, the more traumatic your childhood, the higher your ACE score is likely to be, which also heightens the risk for health problems later in life such as obesity, heart disease, and depression. ACE scores do not take into consideration positive experiences early in life, which can help build resilience and protect a child from the effects of trauma. Having a grandparent who loves you, a teacher who understands and believes in you, or a trusted friend to confide in may mitigate the long-term effects of early trauma according to psychologists. There are three types of ACE scores: abuse, neglect, and household dysfunction. Abuse focuses on physical, emotional and sexual abuse the child may suffer from. Neglect can also be physical or emotional. Household dysfunction can include mental illness, incarcerated relative, domestic

violence, substance abuse, or divorce. All of these factors greatly affect children’s mental states and can very easily contribute to struggles at home as well as their school environment. When children who have adverse childhood experiences are in a structured environment, such as school, they may not have the skills needed to adequately respond to negative situations tend to act out behaviorally such as coping skills when they do not understand something (CDC, 2013).

Table 1

ACE Score

<p>ABUSE</p> <ul style="list-style-type: none"> - Physical - Emotional - Sexual 	<p>NEGLECT</p> <ul style="list-style-type: none"> - Physical - Emotional 	<p>HOUSEHOLD DYSFUNCTION</p> <ul style="list-style-type: none"> - Mental Illness - Mother Treated Violently - Divorce - Incarcerated Relative - Substance Abuse
--	--	--

BEHAVIORS ASSOCIATED WITH THE ACE SCORE & PHYSICAL & MENTAL HEALTH POSSIBILITES LATER IN LIFE

Lack of Physical Activity	Smoking	Alcoholism	Drug Use	Milled Work
---------------------------	---------	------------	----------	-------------

PHYSICAL & MENTAL HEALTH POSSIBILITES LATER IN LIFE

Severe Obesity	Diabetes	Depression	Suicide Attempts	Sexually Transmitted Diseases
Heart Disease	Cancer	Stroke	COPD	Broken Bones

Early childhood experiences lay the foundation for well-being throughout the life course. Birth to age 5 is a critical time of opportunity and vulnerability. Several studies link adverse

childhood experiences (ACE's), such as household dysfunction and abuse to poor health outcomes. Often the focus is on kindergarten age academic skills and behavior as strong predictors of educational trajectory (Jimenez, Wade, Jr., Lin, Morrow, & Reichman, 2016). Stressful childhood experiences including child abuse and family context can have a high correlation of people diagnosed with serious mental illness, often with co-occurring neglect, physical, and sexual abuse (Muenzenmaier, Schneeberger, Castille, Battaglia, Seixas, & Link, 2014). When looking at the ACE score, studies indicate gender can play a role on how the child is affected long term. More females are subject to re-victimization and have longer lasting effects than males typically do.

What is a Behavior Disorder?

A behavior disorder is the observable responses, actions, or activities of someone; it is a general concept referring to any type of behavioral abnormality that is functional in origin. Two types of behavior include adaptive behavior and contingent behavior. Adaptive behavior is behavior that fosters effective or successful individual interaction with the environment. Contingent behavior is an action dependent upon a specific stimulus. Behavior Disorders can include Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorder (CD), Oppositional Defiant Disorder (ODD), Emotional Behavioral Disorder (EBD), and Mental Health Illnesses.

Criteria

When children are diagnosed with a behavior disorder in an educational setting, several factors are considered. First, when a student displays negative behaviors in school, interventions are put in place to monitor if the behaviors elevate, stay the same, or decrease. If the intervention is working, the child will continue his/her daily routine with the intervention in

place. Interventions can include a behavior intervention plan specific to the behavior, behavior charts, check in/check out with a teacher, point sheet, rewards, and many other intervention strategies. If the intervention is not working and the student's education is suffering, an interdisciplinary team of regular education teachers, special education teachers, a school psychologist, administration, and parents will sit down to determine if further measures should be taken. If the team decides it is appropriate, the student will go through a special education assessment. The assessment typically includes intellectual testing, adaptive behavior questions, academic testing, documentation from parents and classroom teachers, a Functional Behavioral Assessment (FBA), and any other necessary information such as medical information and a file review. Once the testing has concluded, the team will analyze the data to determine if the student meets state criteria to receive special education services.

What Do Behavior Disorders Look Like?

Children with behavior disorders display a wide range of behaviors. Externalizing behaviors can include kicking, screaming, throwing objects, spitting, self-harm, aggression toward others, fighting, and crying. Often, children displaying these behaviors will continue to escalate until they are tired. During the escalation, it may be difficult to rationalize the situation with him/her. Once he/she is calm, it is important to step in to discuss the situation with him/her. Processing with the child is important to gain trust and discuss how they could have handled the situation better.

What is the Goal for the Student?

The goal in an educational setting is to keep children in the Least Restrictive Environment (LRE), with the ultimate goal being the general education classroom for every

child. If the student is not being successful in their current setting and other students are also being affected, teachers will report to the emotional behavioral disorder teacher to allow the child a break or process through what they are struggling with. If those strategies are not successful and behaviors continue to escalate, the school may look into an alternative placement, such as a Level-IV behavior program or residential program. In most situations, the child can be successful in the classroom with an appropriate behavior plan. If he/she qualifies for special education services, he/she may receive direct instruction with a special education teacher to work on social skills or work through situations. The special education teacher will work with children to develop the skills necessary to remain calm and navigate through difficult situations he/she may encounter. In more severe cases, a student may need to seek alternative placements such as area learning centers, alternative programs, or residential facilities.

What Environmental Factors Affect the Likelihood of Behavior Disorders?

Traumatic Brain Injury. Research shows a traumatic brain injury can contribute to a student's risk for a behavior disorder. There is growing evidence indicating childhood traumatic brain injury (TBI) is the most common cause of disability and death in young people (Kolk, Ennok, Lougesaar, Kaldoja, & Talvik, 2011). Long-term effects of a TBI can include epilepsy, headache, movement disorder, as well as behavioral, emotional, and cognitive problems. It is common for children who have sustained a TBI to develop behavioral and emotional disorders. It is also likely pre-existing emotional and behavioral problems such as impulsivity, anxiety, aggression, and disobedience may increase the risk for a TBI. Often these issues first arise due to the children's environment. An average of 634,000 incidents of traumatic brain injury (TBI) occurs among children each year in the United States, with the highest TBI-related emergency

room visits occurring in children under the age of 4 years and adolescence 15 years or older. (Jianghong & Li, 2012). These TBI's are caused largely by falls, child abuse in younger children, and motor vehicle accidents in older children. Inflicted injuries acquired secondary to child abuse such as shaken baby syndrome may account for 20-70% of hospitalizations in young children (Li & Liu, 2013). If a traumatic brain injury is left untreated, issues may persist into childhood, adolescence, and adulthood predisposing individuals to violent crimes, or mental health disorders, or other consequences later in life (Li & Liu, 2013).

Family Environment, Conduct Disorder, and Suicide

Suicide is currently the third leading cause of death among preadolescents, adolescents, and young adults ages 10-24 (CDC, 2010). Conduct disorder and suicide rates are directly linked. Many children suffer from failures in the family environment such as conflict, little family support, negative parenting style, poor parent and sibling relationships, uninvolved parents, or parents who show little interest in their child. Often, parents use negative consequences and stress levels are elevated, which leads to more issues occurring. Sometimes when parents are present, they do not use the best form of discipline or have negative consequences that do not address the issue at hand (Rallis, Esposito-Smythers & Mehlenbeck,, 2015).

ADHD, ODD, and CD

Attention-Deficit/Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), and Conduct Disorder (CD) account for over half of childhood mental health services referrals (Taylor et al., 2012). Factor analyses of childhood behavior disorders find a higher order externalizing factor consisting of lower order inattention, hyperactive/impulsive, ODD, and

CD factors, suggesting these disorders are part of a latent externalizing factor (Bezdjian, Baker, & Tuvblad, 2011; Lahey et al., 2000). Genetically, informative studies can be used to estimate the extent to which individual differences in a behavior are associated with differences in genetic factors, shared environmental factors, and non-shared environmental factors. Other studies using different measures, methods, and raters consistently support the idea that substantial genetic and small non-shared environmental influences contribute to the overlap among ADHD, ODD, and CD (Taylor et al., 2012).

The first systematic explanation of Attention Deficit Hyperactivity Disorder appeared in 1902 in a description of the history of 20 children whose symptoms were similar to those that today we call hyperactivity. It is characterized as a consistent pattern of lack of attention and/or hyperactivity, which is more frequent and severe than typically observed in individuals at an equivalent level of development (Oliveria Pires, Silva, & Goncalves de Assis, 2013). Interaction between hereditary factors, environmental factors, or psychosocial agents is considered relevant to the causality of ADHD. Genetics is considered to influence the likelihood parents will construct environments favorable to the disorder's manifesting in children. Other factors to take into consideration include behavior and problems experienced by the mother during pregnancy. Tobacco and alcohol use as well as psychological stress during pregnancy increase the risk of a child developing ADHD (Oliveria Pires et al., 2013). Teachers tend to suspect the disorder more often than parents. Classroom structure and organization make greater demands on the child's ability to pay attention, as well as greater control being exerted over the children in the classroom. Teachers tend to have a better grasp of appropriate behavioral development and tend to perceive ADHD symptoms better in boys rather than girls. Teachers also take into

consideration factors such as class size and cultural backgrounds. Postnatal parental smoking has also been associated with ADHD according to both parent and teacher ratings.

Chaotic Home

The role of family and home plays a crucial part in children's well-being. Parent's temperament and family environment are linked to parenting practices that might promote (or inhibit) children's effort control. The parent's style of parenting is a large component of how children display positive or negative behaviors. Examples of this include authoritarian or authoritative approach, how they handle and manage their own personal stress from day to day, and warmth toward their child, negativity, the need to control or be passive, and overall personality style. How a parent reacts to their children and their emotions, their discussion of emotion, expression of emotion, and selection or modification of the child's situation, are four ways parents socialize their children's emotions. Parent's tendency to become angry has been related to their negative reactions to children's emotions (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Family chaos in the home can include high levels of background noise, crowding, and lack of routine, which can also contribute to high levels of stress. Family chaos is increasingly identified as a correlate of both parenting and children's social functioning (Evans, Maxwell, & Hart, 1999; Wachs, 2000). Children in chaotic homes tend to be more difficult, low in cognitive competence, low in language development, low in mastery motivation, and more likely to engage in risky behaviors (Wachs, 2000). Parents who are rejecting, hostile, or become angry, tend to model deregulated approaches to managing emotions. Negative and non-supportive interactions undermine children, their abilities, and socially appropriate behavior. Parents who express high levels of positive emotion likely develop a strong parent-child

relationship, promoting adaptive interaction and regulated behaviors because high levels of effort control are fostered. The family environment is clearly a factor to consider when working with children who have behavior disorders.

Distress of a parent is also a key component affecting children's experiences.

Implications of maternal distress can permeate the entire family system directly or indirectly through potential amplification of the mother's experience of child behavior problems and her interactions with her child (Soo Yoo et al., 2013). Other factors can contribute to distress such as fear, worry, sadness, guilt, and irritability. These factors include quality of marital relationships, marital satisfaction, and psychological distress, which can all contribute to how a child is treated and how children perceive their parent as well as his/her home environment. Sibling relationships are also critical for understanding the social and emotional development of children. The quality of the relationship and interactions between siblings are associated with externalizing and internalizing behaviors. Anger and conflict among parents, as well as between children, can affect children as young as 12 months of age.

Sexual Abuse

Child Sexual Abuse (CSA) is another factor contributing to the onset of behavioral disorders and struggles children encounter later in life. CSA has been identified as a risk factor for several mental health problems during adolescence including depression, suicide, low self-esteem, and risky behavior such as substance abuse. One disorder most commonly associated with CSA is post-traumatic stress disorder. The severity of abuse including type, duration, and frequency all play a factor in how extreme the outcome may be later in life (McLean, Morris, & Conklin, 2014).

Research Question

How does a child's environment affect his/her well-being and contribute to the future onset of a behavior?

Chapter 2: Review of Literature

The purpose of this chapter was to review studies examining environmental factors contributing to behavior disorders. Studies are divided into three areas contributing to the onset of behavioral disorders in children. Home environment and prenatal exposure, childhood trauma, and common problems and identifying behavior disorders in the classroom.

Prenatal Exposures to Environmental Chemicals and Birth Order as Risk Factors for Child Behavior Problems

Nakai, Hamatake, and Nakao (2004) conducted a study to determine whether polychlorinated biphenyls (PCB's), methylmercury, lead, or parental child-rearing attitudes was most crucial for maladaptive behavior problems in 30-month-old Japanese children, followed-up from pregnancy. Polychlorinated biphenyls (PCB's), methylmercury (MeHg), lead, and parental child-rearing attitudes have been identified and possible causes for behavior problems such as ADHD. The study enrolled 687 pregnant women to participate in the study in which 599 mother-child pairs were registered according to the eligibility criteria. The Child Behavior Checklist (CBCL) was sent to the mothers when their children reached 30 months old. Of the 506 CBCL sheets sent back, 455 had the data completed. Finally, 306 complete data sets on PCB, total mercury, and lead concentrations in cord blood, maternal seafood intake, and possible confounders such as the home environment and maternal intelligence test in addition to the CBCL were available. The CBCL was used to track the behavior problems for the 306 children. The significant correlation disappeared when conducting multiple regression analysis with possible confounders; at the same time, the birth order, home environment, and maternal intelligence quotient were significantly related to the internalizing score. Levels were higher in

the first-born children than the second-born or following children. From the total score of the 306 children, 263 had normal scores, 26 were thought to be in the borderline range, and 17 were within the clinical range. Internalizing behavior appears to be affected by prenatal exposure to PCB's at low levels. Under lower-level exposures, however, behavior problems may be more strongly associated with parental child-rearing attitudes involved in birth order than with such hazardous chemicals. In the environment, there are several hazardous chemicals affecting children. The children in this study, PCB's at birth with internalizing behavior was suggested by correlation analyses, though the significant effect of PCB's disappeared when considering birth order. Still a significant relation was found in the second-born or following children using the partial correlation coefficient. This study failed to find a significant correlation between cord-blood lead and any CBCL score.

**Unraveling the Effect of Genes and Environment
in the Transmission of Parental Antisocial
Behavior to Children's Conduct
Disturbance, Depression, and
Hyperactivity**

A critical issue in figuring out what interventions to use with children is identifying family environmental factors that place children at risk. Silberg, Maes, and Eaves (2012) did a study to determine whether parental psychopathology, specifically parental antisocial behavior (ASP), is a genuine environmental risk factor for juvenile conduct disturbance, depression, and hyperactivity, or whether the association between parental ASP and children's behavioral and emotional problems can be explained as a secondary consequence of the intergenerational transmission of genetic factors. Mental health problems may cause significant hardships on not only the children but also the families and communities in which they live. If children are left

untreated, it can seriously impact their lives later as adults, so early treatment can significantly reduce the risk. Parents with a history of antisocial behavior show impairments in supervision of their children, give lack of parental support, display inconsistent and hostile parenting, and often will abuse or neglect their children (Silberg et al., 2012). Several studies show a direct effect of depression on how their environment was when growing up. This study was done to identify genetic and family environmental factors that increase the risk to children.

Of nearly 14,000 twins from the Mid-Atlantic Twin Registry that were located and contacted, 3,343 met the eligibility criteria of having at least one child that was between the ages of 9 and 17. Of these 2,774 or 83% of twin families agreed to participate in the study. Eighty-two percent were Caucasian, 16% African American and 2% Hispanic. Because of the relatively small sample for minorities, the analysis was confined to Caucasian families. An extended children of twins design comprised of data collected on 2,674 adult female and male twins, their spouses, and 2,454 of their children was used to test whether genetic and/or family environmental factors best accounted for the association between parental antisocial behavior and children's behavioral problems. The study used questions about physical violence, serious police contact or arrest, financial irresponsibility, and erratic employment. The subjects were asked to indicate the past presence of behaviors if they certainly applied, somewhat applied, or did not apply to each child. The study determined the greater similarity between children's conduct disorder (CD) and depression and ASP in their parents compared to their parent's siblings aligns with environmental effects of parental ASP. There are distinct patterns of transmission between parental antisocial behavior and juvenile conduct, depression, and

hyperactivity. Genetic and family environment have a resemblance between parents' ASP and children's conduct disturbance and childhood depression.

**Family-Environmental Factors Associated
with Attention Deficit Hyperactivity
Disorder in Chinese Children:
A Case-Control Study**

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common psychiatric disorders, affecting an estimated 5-12% of school-aged children worldwide (Carroll et al., 2012). Those children may suffer from cognitive and social deficits as well as behavioral problems. The end result may consist of disturbances in peer and family relationships, as well as poor academic achievement. Family structure may play a role in child psychiatric disorders, such as being a single child. Children who have also experienced abuse are associated with higher rates of ADHD. Understanding risk and factors in the environment, along with influences of family, school, community, and interactions with child characteristics can also greatly affect children with ADHD.

The aim of this study was to look at the correlation between family-environmental factors and ADHD in a sample of Chinese children. This study was designed as a pair matching case-control study and conducted from July, 2009, to May, 2010. The subjects were recruited from the Beijing Children and Adolescents Mental Health Center and Beijing An Ding Hospital of Capital Medical University in Beijing, China. Subjects were children of Chinese Han nationality between the ages of 5 to 18 years. Carroll et al. (2012) pair-matched a case control study with 161 children with ADHD and 161 children without ADHD of matching age and sex, all from 5-18 years of age. Measures included in the study consisted of biological reactions, family-environmental, and lifestyle. Biological included maternal stress during pregnancy, which was

asked to both groups of subjects, and whether the mother had experienced any of 10 major life stress events such as pregnancy problems, death of a close friend or relative, separation or divorce, marital problems, problems with children, job loss, partners job loss, monetary problems, residential relocation, or any other stressful events. Family environmental factors included maternal and paternal education, number of siblings, and whom the child resided with. Emotional abuse was also a component as the subjects were asked how often a parent, step-parent, or adult living in the home would swear, insult, or put the individual down. Also asked was how often a parent, step-parent, or adult living in the home would act in a way that the child afraid they might be hurt physically as well as their lifestyle factors.

There were 113 boys and 48 girls included in the study. The study found ADHD subjects were significantly associated with single-child, family conflicts, presence of emotional abuse, and paternal education when the 9-12 year's education group was compared with the under 12 year's education group. Having experienced emotional abuse and being a single child were both significant factors associated with children diagnosed with ADHD. Subjects with ADHD were more likely to have suffered from emotional abuse and have been a single child in the family when compared to normal controls. Findings concluded evidence that family-environmental factors are associated with ADHD among children in China.

**Home Environment: Association with
Hyperactivity/Impulsivity in
Children with ADHD and
Their Non-ADHD
Siblings**

Is there an association between ADHD and home environment in children with ADHD and non-ADHD siblings? Childhood psychiatric disorders are associated with poor marital

discord, paternal psychopathology, maternal psychiatric disorder, large family size, fostered children and low social status (Rutter, 2001). This study examined 96 children with ADHD combined type (ADHD-CT) and their siblings. Parent and teacher Conner's' rating scales were completed, and their home environment, were assessed using the middle childhood and early adolescent Home Observation for Measurement of the Environment (HOME). [ADHD symptoms were assessed for correlation with HOME in children with ADHD-CT and non-ADHD siblings, and multiple regression analysis was used to control for gender, socio-economic status, exposure to nicotine, exposure to alcohol in utero, birth weight, gestational age, pregnancy and prenatal risk factors.] The presence of oppositional disorders was assessed for association with the HOME score in those with ADHD-CT. The multiple regression analysis was repeated controlling for environmental factors and for oppositional disorders in those with ADHD-CT. Oppositional symptoms were assessed for correlation with HOME score in non-ADHD siblings (Mulligan et al., 2011).

The results indicate the higher total HOME scores were correlated with lower teacher-rated hyperactivity and impulsivity. Thirty-four children had ADHD-CT without ODD and had a significantly high mean percentage HOME score than the 62 children with ADHD-CT and ODD. Seventy-four children had ADHD-CT without CD and had a significantly higher mean percentage HOME score than the 22 children with ADHD-CT and CD. The group with ODD and the group with CD had a less supportive home environment compared to those without these disorders. In total, 709 families had a non-ADHD sibling or siblings who contributed data to this analysis; 94 siblings were included in the analysis; 23 were excluded due to a diagnosis or suspected diagnosis of ADHD.

The study showed a less supportive home environment significantly correlated with more teacher-rated hyperactivity/impulsivity and a greater risk of oppositional disorders in those with ADHD-CT, and was associated with more parent-rated hyperactivity/impulsivity in non-ADHD siblings. Family adversity is also associated with ADHD. According to the study a supportive home environment is associated with less hyperactive, impulsive, and oppositional symptoms in children with ADHD and their siblings,

Family Emotional Climate and Sibling Relationship Quality: Influences on Behavioral Problems and Adaptation in Preschool-Aged Children

According to the study, sibling relationships have been shown to be significant for understanding cognitive, social, and emotional development. There is evidence sibling relationship quality and interactions are associated with externalizing and internalizing behaviors. Both externalizing and internalizing problems in middle childhood and adolescence were more common in children whose siblings had behaved in negative and hostile ways toward them in preschool. Anger and conflict between parents is a salient feature of the emotional climate of the home from the perspective of the children, even children as young as 12 months. Modry-Mandell, Gamble, and Taylor (2006) examined the impact of family emotional climate and sibling relationship quality on behavioral problems and adaptation in preschool-aged children. Sixty-three mothers with a preschool-aged child enrolled in a Southern Arizona Head Start Program participated in the study. The sample size dropped to 55 families when measured with child behavioral problems, and 47 families when measure with child adaptation. The majority of preschoolers were identified by their mothers as Hispanic and of Mexican descent,

3% Caucasian, 2% African American, and 52% were reported as male. The children's mean was approximately 4.79 years. Trained research assistants interviewed in their home and in their language of choice subjects in this study. Family emotional climate was assessed using a 12-item family emotional expressiveness scale from the Family Expressiveness Questionnaire (FEQ) measuring the extent a family displays positive and negative emotions and the frequency they are expressed. The study also examined Conflict over Child Rearing, Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire, Child Behavior Checklist for ages 1.5-5, Social Competence and Behavior Evaluation: Pre-school Edition, and Temperament Assessment Battery for Children.

Results: After controlling for child characteristics (temperament, child gender, birth order), and after accounting for family characteristics (family emotional expressiveness, child exposure to inter-parental conflict, and parental agreement on childrearing), sibling warmth made a significant and unique contribution to child adjustment as reported by mothers and teachers 6 months later. Findings indicate sibling relationships impact children's adjustment and shape young children's lives in meaningful and marked ways.

Gender and the Development of Oppositional Defiant Disorder: Contributions of Physical Abuse and Early Family Environment

Antisocial behavior (ASB) has great consequences later in life, and precursors to ASB are often established in childhood, and ASB can continue into adulthood (Cunningham & Boyle, 2002; Munkvold, 2011; Nagin & Tremblay, 2001). Gender differences are also a factor of early ASB. Oppositional Defiant Disorder (ODD) is defined as a pattern of defiant, disruptive, and

hostile behavior, and is typically diagnosed before the age of 8. Several behaviors are more common in boys than girls when looking at clinical samples.

Burnette (2013) examined the role of parental acceptance and emotional responsiveness as assessed using the HOME, caregiver report of intimate partner violence, and levels of physical abuse as assessed using the Conflict Tactics Scales, on subsequent symptoms of Oppositional Defiant Disorder (ODD), a childhood disorder characterized by antisocial behavior. [Data were drawn from 3 Waves 1-3, cohorts 3 and 6 of the Project for Human Development in Chicago Neighborhoods.] Results suggest minor gender differences in levels of ODD symptoms, with equal rates of stability from Wave 2 to 3 in symptom levels. Measures used include harsh parenting in the form of moderate to severe physical discipline strategies. Acceptance and responsiveness assessed other parenting practices such as parental avoidance of expressing annoyance, scolding, or use of physical punishment. IPV exposure was addressed in wave 1 where caregivers reported on the degree of physical aggression by and toward partners using the Conflict Tactics score for partner and Spouse (CTS-PS, Straus, 1979). ODD symptoms from the Child Behavior Checklist were also assessed.

Results: Boys and girls were similar to observed variables, with only slight differences in the level of ODD symptoms at Waves 2 and 3. Harsh parenting was strongly associated with ODD symptoms at Waves 2 and 3 in girls but not boys, lower parental responsiveness was associated with ODD at Waves 2 and 3 in boys but not girls, lower parental acceptance as associated with ODD symptoms in boys and girls in both waves, and ODD symptoms were higher among both males and females who had experienced IPV in the home compared to those who had not.

Social-Emotional Behavior in Infants and Toddlers with Mild Traumatic Brain Injury

Pediatric head trauma is a serious health concern often leading to neurological, behavioral and cognitive impairments, and is the most common cause of disability and death in young people. Those who survive a Traumatic Brain Injury (TBI) may have serious health related issues later such as epilepsy, headache, movement disorder, behavioral, emotional, and cognitive problems. Children who have had a TBI often have a history of emotional or behavioral problems. It is likely pre-existing emotional and behavioral problems may increase the risk for a TBI.

Kolk et al. (2011) used a parental assessment to ascertain pre-injury and post-injury social-emotional behavior in infants and toddlers with Mild Traumatic Brain Injury (MTBI). Patients in the criteria were between the ages of 3-65 months, hospitalized in Tartu University Hospital Children's Clinic. MTBI classified in the criteria included loss of consciousness of 5 minutes or less, vomited up to three times, and no abnormal or focal neurological findings. The study was carried out from December 1, 2005, to May 31, 2009. Thirty-five patients with MTBI and 70 matching controls were enrolled in the baseline study. Reasons included falls from on and from stairs and steps, fall from the same level due to collision or pushing by another person, fall from the bed, fall involving other furniture, fall from one level to another, fall involving roller skates, fall at same level from slipping, tripping, and stumbling, fall from a chair, fall involving play equipment, and unspecified fall occurred at sports/athletic area.

Results: Overall, children with MTBI demonstrated more general pre-injury social-emotional difficulties than control group children. Children in the MTBI group have

significantly more problems in self-regulation and autonomy. The study found children with early childhood MTBI show difficulties in social-emotional behaviors already before the brain trauma. Self-regulation not only increases a person's capacity for success, it also reduces self-destructive behaviors, suggesting a deficit in self-regulation could be an important risk factor for traumatic injuries in young children. Ganesalingam (2006) has shown that, 2-5 years after brain trauma, school-aged children with moderate and severe TBI display deficits in self-regulation and social and behavioral functioning. Follow-up of social-emotional development of all children with MTBI is particularly important as difficulties may occur later in life.

**The Effect of Pediatric Traumatic Brain
Injury on Behavioral Outcomes:
A Systematic Review**

According to Li and Liu (2013) an average of 634,000 incidents of TBI occurs among children each year in the United States, with the highest TBI-related emergency room visits occurring in children under the age of 4 years and adolescents 15 years or older. Left untreated, childhood brain injury may persist into adulthood, predisposing individuals to violent crime or mental health disorders. This study's eligibility criteria included: 1) English language; 2) original research published in peer-reviewed journals; 3) study populations of human participants who sustained injury between the ages of 0-18 years; 4) identification and confirmation of TBI status through objective sources; and 5) behavior measured as a main outcome. For this review, brain injury was limited to incidents of TBI and excluded injuries such as lesions, stroke, meningitis, cerebral palsy, and intraventricular hemorrhage.

The study looked at specific behaviors children display after suffering a MTBI. Literature strongly suggests after a TBI children are at increased risk of adverse behavioral

outcomes. Attention problems are among the most commonly reported disorders after a brain injury. In children injured from ages 6 to 14 years, there is an increase in oppositional defiant disorder at various points during the first 2 years after injury. Internalizing behavior such as depression emerged up to 2 years after TBI in 10-25% of school-aged children. Anxiety and personality change were also symptoms occurring after a TBI. Factors influencing brain injury and the behavioral outcome of relationships included pre-injury status, age at injury, sex and biological factors, and type of injury, injury severity, and family environment. Behavior problems after a brain injury may persist and get worse over time. Follow-up should be of utmost importance if a child suffers a TBI.

**Trauma Characteristics and Posttraumatic
Stress Disorder among Adolescent
Survivors of Childhood Sexual
Abuse**

This study examined characteristics of childhood sexual abuse (CSA) and posttraumatic stress disorder (PTSD), depression, suicidal ideation, and substance use in 83 female adolescents ages 13-18 years seeking treatment for PTSD. Child sexual abuse is defined as any forced or coerced sexual activity with a minor including noncontact abuse, sexual molestation, and rape (American Psychological Association, 2012). Fourth National Incidence Study of Child Abuse and Neglect, it was estimated 135,300 children are sexually abused each year (Sedlak et al., 2010/2012). CSA is identified as a risk factor for mental health problems in adolescents including depression, suicide, low self-esteem, and risky behavior such as substance abuse. PTSD is estimated to be 38.5% in non-clinical samples and as high as 88% in clinical samples. More severe types of CSA are associated with a higher risk for PTSD. PTSD symptoms were

also higher among CSA survivors who were abused by a family member compared to those abused by a stranger.

Measures used in this study include: Schedule of Affective Disorders and Schizophrenia for School-Aged Children-Epidemiological Version, Child PTSD Symptom Scale, Trauma History Interview, Beck Depression Inventory, Suicidal Ideation Questionnaire-Junior, and Personal Experience Screening Questionnaire. Adolescents who had prolonged exposure with PTSD enrolled in this study from 200 to 2012 and completed a follow-up assessment in 2013. Participants were recruited from direct referrals to WOAR, referrals to WOAR from their outreach efforts within the Philadelphia School District, referrals from mental health providers and pediatricians or other physicians in the Philadelphia area, referrals from the adolescent sexual abuse evaluation unit of the Children's Hospital of Philadelphia, and referrals to WOAR from local community organizations. Three categories of CSA trauma were recorded including rape, sexual assault, and sexual abuse. The perpetrator of the abuse was identified as a non-relative, blood-relative, and non-blood-relative. A large portion of the sample reported being victimized once while almost a quarter of the sample reported chronic victimization that was difficult to quantify. The study found CSA is more likely to be perpetrated by a family member than a non-family member. Participants reported minimal suicidal ideation, but the victims who suffered from chronic abuse were at a particularly high risk for suicide. Rates of substance abuse fell within the non-clinical range. Contrary to the hypothesis, none of the CSA characteristics were significantly related to the severity of PTSD, depression, or substance abuse.

**Maternal Distress Influences Young Children's
Family Representations through
Maternal View of Child
Behavior and Parent-
Child Interactions**

According to Soo Yoo et al. (2013), distress of a parent directly relates to the quality of the child's experience in the family. Mothers of young twin children reported their distress on three occasions in relation to: self, the marital relationship, and the family climate. Exposure to repeat distress may contribute to the distress of a child, who then may have a negative bias of their own regarding their view of family relationships in the future. Negative emotional bias can include negative emotionality such as fear, worry, sadness, guilt, or irritability. Interpersonal experiences influence and individuals with increased negative emotionality may expose themselves to stressful situations and have poor coping skills contributing to ongoing distress. Quality of marital relationships and psychological distress are also factors that contribute to maternal distress.

Parents with same sex twin pairs were recruited between 1986 and 1990 for the MacArthur Longitudinal Twin Study. Four hundred twenty-one families were selected preferentially for twin births having a birth weight of 1,700 grams or more; those with medical complications were excluded. The children were ages 14 and 36 months, and 5 years with ethnicity of 86.6% Caucasian, 8.5% Hispanic, .7% African-American, 1.2% Asian, and 2.9% other. Data were collected during a home visit and via parent questionnaires at child ages 14 and 36 months and 5 years. Measures used include maternal distress regarding psychological, marital, and family relations. A self-report personality inventory describing an individual's personality on three dimensions: 1) Extraversion Scale; 2) Neuroticism Scale; and 3) Lie Scale.

Mothers Ratings of Children's Behavior Problems form the Achenbach Child Behavior Checklist (CBCL), which is a 133-item parent-report questionnaire. Mother-Child Interaction Quality included an observation of the unstructured play interaction using the Emotional Availability Scales (EAS). The MacArthur Narrative Coding System measured children's Representations. Either stories from the larger battery were coded for the entire twin sample using a scoring system that covers interpersonal conflict, aggressive behaviors, pro-social and moral themes, emotions portrayed, and representations of parents as positive, negative, or disciplinary. Results indicate the mean levels of maternal distress indicators showed stable mid-level scores on psychological distress with good distribution. However, over time relatively high marital satisfaction, increasing levels of family conflict, and decreasing reports of neuroticism were found. Maternal sensitivity and child responsiveness are normally distributed, with the mean within on point of the midpoints of the scales and good variability. The mean levels of mothers' ratings of children's externalizing behavior problems and children's family conflict themes are relatively low, and family cohesion themes are moderate. The hypothesis that maternal distress would be reflected in diverse sources of the mother's experience was supported by the results. Distress reflected in self-reported personality was in the report of marital satisfaction and conflict and control in the family climate. Levels of stress experienced in late infancy persisted into early childhood. Mothers of twins who are prone to negative affect may be particularly susceptible to stressors from a less satisfying marital relationship and a family climate of higher conflict. Specifically, mothers of twins might experience lack of time to care for other children, mood fluctuations, disturbance in the marital relationship, and financial strain that may contribute to elevated distress during the earliest years of care giving.

Stressful Childhood Experiences and Clinical Outcomes in People with Serious Mental Illness: A Gender Comparison in a Clinical Psychiatric Sample

This study examined stressful childhood experiences (SCE) including abuse and family context in a cohort of 183 people diagnosed with serious mental illness (SMI) and also compared gender rates of SCE and clinical outcome variables. There is a high prevalence of childhood abuse in people diagnosed with serious mental illness, often related to neglect, physical and sexual abuse. In this study, 111 men and 72 women with SMI were interviewed regarding SCE and posttraumatic stress disorder (PTSD) symptoms, dissociative symptoms, risk for self-harm, and adult re-victimization. The study was commissioned by the New York State Office of Mental Health and conducted between 2001 and 2007 to evaluate the effectiveness of court ordered outpatient treatment. The participants were between the ages of 18 and 65 who attended seven psychiatric outpatient clinics in the boroughs of the Bronx and Queens in New York City. Measures used include stressful childhood experiences which were divided into two major types: individual and family, which included stressful experiences assessed based on 12 questions with three domains, childhood sexual abuse, childhood physical abuse, and emotional abuse/emotional rejection. Questions were taken from the History of Physical and Sexual Abuse Questionnaire. Clinical outcome variable was used to assess PTSD symptoms employing 17 items in the Posttraumatic Stress Disorder Checklist.

The results indicate some specific categories of experience were more common in men, others more common in women, and still others showed to gender differences. Childhood sexual abuse experience, were reported by 19 men and 29 women, and childhood physical abuse was reported by 91 males and 47 females, indicating a significant gender difference. Males and

females reported equal amounts of PTSD symptoms, in total and across three subscales. Males and females reported no significant differences in the percentage of time they experienced dissociative symptoms. Of the total sample of 183, two respondents chose not to answer the questions. Sixty reported high risk for self-harm, 33 men and 27 women, with no significant gender differences. There were no significant differences detected out of the total sample where 109 men and women reported they experienced victimization in adulthood. This study highlights a high prevalence of SCE as well as the importance of cumulative exposure and the deleterious impact on someone's symptoms and behaviors, such as PTSD and dissociative symptoms, risk for self-harm, and adult re-victimization.

Association between Family Environment and Attention Deficit Hyperactivity Disorder in Children—Mothers' and Teachers' Views

This study by Oliveria Pires et al. (2013) presented baseline results from a 2005 longitudinal study measuring exposure factors and Attention Deficit Hyperactivity Disorder. The sample was based on a record of public schools, classes and mean number of pupils per class provided by the Sao Goncalo municipal education department for 2005. The study pointed out that often there is a discrepancy between parents' and teachers' assessments of behavior of children with ADHD. Teachers tend to identify the disorder more often than parents. Teachers recognize issues largely due to classroom organization, which the child will have greater demands on paying attention. Teachers also tend to have a better grasp of appropriate behavioral development, and they also tend to see ADHD symptoms more in boys than girls. The sample was a three-stage cluster selection type including schools, first-year classes, and pupils. Random selection of the 25 schools was by systematic probability proportional to size. Two classes were

drawn at random from each school, and 10 pupils from each class, totaling 500 pupils in the sample. One percent of the participants refused to take part in the study, and approximately 35% originally selected were replaced by the next candidates on the list for their class, mainly due to faulty record keeping. In this study 370 children were assessed and 130 exclusions responded to criteria. ADHD symptoms were assessed using the CBCL and the TRF. Variables used to gage the profiles of child and mother were sex, age, mothers' schooling education versus that used to correspond to an incomplete primary grade of education in Brazil and whether or not the mother was a restless child/teenager, and the child's intelligence quotient. Variables used to evaluate the child's and mother's present family environment include social support, if there are people the mother feels comfortable and can talk to about almost anything, whether the mother had got drunk in the prior year, and the family's overall functioning, as evaluated by the General Functioning Scale of the McMaster Family Assessment Device which includes 12 questions regarding family life. The last variable reflects the mothers' condition during pregnancy and childbirth. It addressed if the pregnancy was peaceful or marked by discord and arguments, if she used drugs, alcohol, or any other drug, and if the child had any congenital or neurological problem at birth.

Results indicate the 370 children studied were profiled 6 to 13 years old. Boys were identified 50.8%, 32.4% identified by guardians as white, 63.3% black/brown, .3% yellow/indigenous; 56.8% living with both parents, 25% with only one of them, 17.4% with a father and step-mother or mother and step-father, and .8% living with other relatives. The results show a difference between the percentage of ADHD as reported by parents and by teachers. Mothers

reported more in their children than teachers did, and that trend persists even when comparing only the prevalence of clinical cases in the two samples.

Adverse Experiences in Early Childhood and Kindergarten Outcomes

This study examined associations between adverse childhood experiences (ACE's) in early childhood and teacher-reported academic and behavioral problems in kindergarten. Early childhood experiences lay the foundation for well-being throughout the life course (Jimenez et al., 2016). Birth to age 5 is a critical time of opportunity and vulnerability. Recent studies have linked ACE's with lower levels of school engagement as well as in middle childhood and adolescence. This study focused on outcomes in kindergarten because academic skills and behaviors at that time point are strong predictors of educational trajectory. The method used in this study was a secondary analysis of data from the Fragile Families and Child Well-Being Study (FFCWS). The cohort consists of nearly 5000 children born between 1998 and 2000 in 20 large U.S. cities to unmarried parents. They did follow up interviews at ages 1, 3, 5, and 9 years after birth using data on ACE scored reported, as well as data on teacher-reported school performance in the last month of the child's kindergarten year. The study limited its participants to children from teacher-reported outcomes as well as primary caregiver-report information on eight ACE exposures on the basis of the Centers for Disease Control and Prevention Kaiser ACE study.

Teacher-Reported Academic Outcomes included the teachers rating the child's kindergarten year on a 5-point Likert scale including literacy, science and social studies, and math. Teacher-Reported Behavior Problems were described from the child's classroom behavior during the last month of kindergarten using questions from the Child Behavior Checklist. ACE

measures were created from maternal reports at 5 years. They included nine out of the 10 ACE's in the CDC and Prevention Kaiser ACE study. Emotional and physical neglect were characterized by using a single measure because the available information did not allow them to distinguish the two. Child maltreatment was also included in two forms; the mother was directly asked whether Child Protective Services has been contacted for the child regarding physical, sexual abuse, and/or neglect and mothers completed the Parent-Child Conflict Tactics Scale in reference to their own behavior and the child's secondary caregiver's behavior. Household dysfunction consisted of mental illness, substance abuse, and incarceration, caregiver treated violently.

Results indicate 85% of mothers in the original FFCWS sample completed the 5-year follow-up. Of those, 1007 had available data from their children's kindergarten teachers and mother-reported information on ACE's. At 5 years, 97% of mothers reported living with their child most of the time, 26% reported a romantic relationship with a new partner, and 56% of mothers with new partners reported living with their current partner most of the time. A general pattern of worse academic, literacy, and behavior outcomes with increased number of ACE's is apparent. The average number of ACE's for children with poor academic and behavioral outcomes was higher for all outcomes compared to those without. Experiencing ACE's in early childhood was associated with poor teacher-reported academic and behavioral outcomes in kindergarten. Children who experienced ACE's had increased odds of having below-average academic skills including poor literacy skills, as well as attention problems, social problems, and aggression, placing them at significant risk for poor school achievement, which is associated with poor health.

**Common Problem Behaviors of Children
and Adolescents in General
Education Classrooms in
the United States**

The purpose of this study by Harrison, Vannest, Davis and Reynolds (2012) was to identify the most common problem behaviors in classrooms in the United States as reported by teachers. The study had a sample of 3,600 school-age children in public and private schools, mental health clinics, and hospitals from 375 sites across 257 cities in 40 states between the years 2002 and 2004. The BASC-2 is a comprehensive multi-method behavioral rating measure that assesses a range of adaptive skills and problem behaviors in school and home settings with five components, two rating scales, a self-report scale, a developmental history, and a system for direct observation of student behavior. Teacher rating scale for children (TRS-C) and the teacher rating scale for adolescents (TRS-A) were also used in this study. Data from the completed BASC-2 TRS were used to examine the prevalence of the most common behavior problems in classrooms. Strength items were eliminated from the sample resulting in the inclusion of 170 items in the TRS-C and TRS-A across 12 behavioral domains. The most common problem behaviors in classrooms were identified through a 3-step process including the BASC-2, frequency counts, and the items rank ordered by mean with a comparison to the percentage of children.

The results indicated the most common teacher-rated problem behaviors were identified include: makes careless errors, is distracted from tasks, has spelling deficits, demonstrates excessive movement, rushes and hurries through assignments, is distracted during lectures, misunderstands directions, worries about mistakes, demonstrates a short attention span, lacks concentration, and has a mathematics deficit. Unique to children and not adolescents include

generally distracted, does not follow directions, has a reading deficit, talks without permission, has a handwriting deficit, and demonstrates overall worry. The most common behaviors of adolescents but not children include demonstrating self-doubt, worries about what others think, worries about personal perfection, requires repeated directions, demonstrates overall worry, and acts in a silly or immature manner. The most common internalizing behaviors of children were associated with anxiety; externalizing behaviors include distractibility, hyperactivity, and disruptive behaviors. Academic problems were not following directions and problems with the content areas of spelling, math, reading, and writing. Not following directions was also related as a common problem behavior of children. Most common behaviors of adolescents include internalizing behaviors related to anxiety and self-doubt, externalizing behaviors were distractibility, hyperactivity, and immature behavior, as well as learning problems such as following directions with task accuracy.

Identifying Students with Mental Health Issues: A Guide for Classroom Teachers

According to the Marsh's (2016) study, 20% of children experience severely debilitating mental health issues at some point within their lifetime. Thirteen percent of children between ages 8 to 15 have issues related to mental health with the most common being attention-deficit hyperactivity disorder, followed by mood disorder and major depressive disorder (Centers for Disease Control and Prevention, 2013). Schools are becoming more of a service provider for mental health treatment including assessment, behavior management, and specialized programs. Educators may be required to act as the first prevention so they need to understand externalizing versus internalizing behaviors children display. The study describes externalizing behaviors as

aggression, difficult temperament, and behavior impulsivity. Behaviors typically associated include conduct disorder, oppositional defiant disorder, and ADHD. Aggression can include verbal threats, physical actions that cause physical harm, and severely damaging the property of others. This can result from traumatic experiences, witnessing verbal or physical aggression, poor academic skills, poor self-concept, and reinforcement of aggressive or violent behaviors. Difficult temperament is typically someone who defies the rules such as classroom rules, assigned seats, asking permission for something, or rules at home or in the school environment. Children may act out by throwing tantrums, screaming, crying, throwing items, kicking, biting, or spitting. Causes can relate to neuro-developmental difficulties related to malnutrition or other health issues, witnessing parental arguments, or poor interactions with parents at an early age. Behavior impulsivity is identified as sudden aggressive outbursts or inattention and disorganization. The cause of impulsive behavior may stem from early childhood trauma, hyperactivity, or stress. Internalizing behaviors this study identified include anxiety related disorders such as fight or flight behavioral and psychological responses in which the child can experience increased heart rate, respiratory rate, and muscle tension. Observable behaviors associated can include skipping class, truancy, or leaving class for long periods of time. Mood disorders can also greatly affect a child such as their sleeping patterns, eating patterns, and the ability to perform day-to-day tasks. Internal behaviors can include disruptive thinking, decreased energy, and suicidal thoughts. They could have difficulty completing homework, have an increase or decrease in weight, or become disinterested in activities they once enjoyed. These children can be at risk for suicide or further mental health issues, and teachers need to be aware of these behaviors to intervene if needed or identify so they can get help. Teacher awareness is

essential as they see the child every day and observe their behavior. The first step is awareness and the next step is to bringing concerns to the attention to the appropriate school staff to provide assistance. Currently, there is no comprehensive report outlining the extent of services available for students with mental health issues in schools. Schools are becoming more of a resource for mental health services for children so this issue needs to be addressed and educators need to be aware.

Summary of Research

The research indicated there is a definite correlation between a child's environment and how it affects their future and the possibility of a behavior disorder. Several studies stated how important it is to recognize the internalizing and externalizing factors with children to be able to help them. Adverse childhood experiences and childhood trauma are significant experiences in a child's life and can largely impact how they self-regulate their emotions and behaviors. The studies found these children often were at high risk for conduct disorder, ADHD, ODD, anxiety, suicide, depression, and behavior disorders. It is important to be aware of symptoms resulting from childhood trauma in order to better understand the children we work with on a day-to-day basis.

Table 2**Summary of Chapter 2 Findings**

AUTHORS	STUDY/DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Silberg et al. (2012)	Quantitative	2,674 twins and 2,454 of their children were tested whether genetic and or family environmental factors best accounted for the association between parental antisocial behavior and children's behavioral problems	Age matched sample of 2,826 juvenile twin pairs from the Virginia twins study of adolescent behavioral development.	Antisocial behavior in parents is associated with a wide range of child problems between parental antisocial behavior and juvenile conduct depression and hyperactivity.
Carroll et al. (2012)	Quantitative	161 ADHD children and 161 non-ADHD children of matching age and sex, all from 5-18 years of age.	Structured diagnostic interviews took place, examining the association between family-environmental factors and ADHD using the conditional multiple logistic regression with backward stepwise selection to predict the associated factors of ADHD.	Having experienced emotional abuse and being a single child were both significant factors associated with children diagnosed with ADHD. ADHD subjects were more likely to have suffered from emotional abuse and have been a single child in the family when compared to normal controls.
Mulligan et al. (2011)	Quantitative			
Modry-Mandell et al. (2006)	Quantitative	63 mothers with preschool-aged children enrolled in a southern Arizona Head Start Program.	Siblings were identified as children closest to age to target child. Mothers predominately of Mexican descent; home interviews during the fall and spring of the year	After controlling for child characteristics and after accounting for family characteristics, sibling warmth made a significant and unique contribution to

			children entered the program. Sibling relationship quality was proposed to predict children's adjustment longitudinally.	child adjustment as reported by mothers and teachers 6 months later.
Burnette (2013)	Quantitative	Waves 1-3, Cohorts 3 and 6 of the Project for Human Development in Chicago neighborhoods	HOME, caregiver report of intimate partner violence, and Conflict Tactics Scales	IPV was associated with increased risk of ODD.
Kolk et al. (2011)	Quantitative	35 3-65-month-old children with mild TBI. During follow up 27, patients and 54 controls were re-assessed after 9 months.	70 matched controls were retrospectively assessed with child monitoring system Ages and Stages Questionnaires: Social-Emotional.	Children with mild traumatic brain injuries showed altered social-emotional development already before the injury.
Li & Liu (2013)	Quantitative	Research studies published between 1990 and 2012 focusing on behavioral outcomes of children sustaining TBI from ages 0-18 years were included.	50 studies, varying considerably in methodologies, were included in the review.	Up to 50% of brain-injured children are at risk for presenting with specific behavioral problems and disorders.
McLean et al. (2014)	Quantitative	83 female adolescents ages 13-18 years seeking treatment for PTSD	Schedule for Affective Disorders and Schizophrenia for School-Aged children-Epidemiological Version, Child PTSD Symptom Scale, Trauma History Interview	Reports were sexual abuse 52.4%, rape 28.6%, and sexual assault 15.5%. A relative perpetrated most. Participants in this study reported minimal suicidal ideation. Suicide was significantly associated with the frequency of victimizations.

Table 2 (continued)

AUTHORS	STUDY/DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Soo Yoo et al. (2013)	Quantitative	Parents of same-sex twin pairs between 1986 and 1990. 421 families with twin births having a weight of 1,700g or more, those with medical complications were excluded.	Data were collected during a home visit and via parent questionnaires at child of ages 14 and 36 months and 5 years.	Maternal distress indicators showed stable mid-level scores on psychological distress. The mean levels of mothers' ratings of children's externalizing behavior problems and children's family conflict themes are relatively low, and family cohesion themes are moderate.
Muenzenmaier et al. (2014)	Quantitative	183 people diagnosed with serious mental illness. 111 men and 72 women interviewed regarding SCE and PTSD symptoms, dissociative symptoms, risk for harm, and adult re-victimization	Stressful childhood experiences (SCE) including childhood abuse and family context.	Both genders endorse high rates of SCE. Cumulative SCE are linked to increased levels of all four outcome variables after adjusting for demographic factors.
Oliveria Pires et al. (2013)	Quantitative	3-stage cluster sampling assessed 370 school children in the public school system.		Precariously functioning families, lack of social support for mothers, adverse life events, and discord during pregnancy were the factors associated with mother-reported ADHD.

Table 2 (continued)

AUTHORS	STUDY/DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Jimenez et al. (2016)	Quantitative	1007 children Primary caregivers reported on ACE exposures ascertained at 5 years of age and teachers reported outcomes at the end of the child's kindergarten year	Outcomes included teacher ratings of academic skills, emergent literacy skills, and behavior.	Experiencing ACE in early childhood was associated with below-average, teacher-reported academic and literacy skills and behavior problems in kindergarten.
Harrison et al. (2012)	Quantitative	Common Problem Behaviors of Children	Broadband rating scale	Understanding behaviors and interventions for success
Marsh (2016)	Qualitative	Identifying students with mental health internalizing and externalizing behaviors	Classroom teachers	Teacher awareness is essential
Taylor et al. (2012)	Quantitative	686 same-sex twins ages 6-12 years old in the Florida State Twin Registry	Externalizing disorder symptoms, ADHD, CD, and ODD.	Socio-emotional dispositions and externalizing factors have genetic factors in common, but no single genetic factor associated with all of the constructs.

Table 2 (continued)

AUTHORS	STUDY/DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Rallis et al. (2015)	Quantitative	185 psychiatrically hospitalized adolescents, ages 13 to 18, and their parents.	Whether family support and conflict affect the relationship between conduct disorder (CD) and suicide attempts (SAs) Data were collected using the Schedule for Affective Disorders and Schizophrenia for School Aged Children (K-SADS-PL), the survey of Children's Social Support Scale-Short Version, and the Conflict Behavior Questionnaire.	Perceptions of family support, but not conflict, moderate the association between CS and SAs. Specifically, adolescents diagnosed with CD were found to be at higher risk if they reported lower family support.
Tatsuta et al. (2011)	Quantitative			
Valiente, Lemery-Chalfant, & Reiser (2007)	Quantitative	Parents and children completed packets of questionnaires consisting of measures that assessed parents EC, family chaos and reactions to children's negative emotions and problems behaviors.	Hypothesized paths from parent's effort control and family chaos to indices of parenting to children's EC, and children's externalizing problem behavior.	Children's externalizing problem behaviors were negatively related to their Effort Control. Results clarify possible family processes by which Children's Effort Control is enhanced and problem behaviors are reduced.

Table 2 (continued)

AUTHORS	STUDY/DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Carroll et al. (2012)	Quantitative	161 ADHD children and 161 non-ADHD children of matching age and sex, all from 5-18 years of age.	Structured diagnostic interviews took place, examining the association between family-environmental factors and ADHD using the conditional multiple logistic regression with backward stepwise selection to predict the associated factors of ADHD	Having experienced emotional abuse and being a single child were both significant factors associated with children diagnosed with ADHD. ADHD subjects were more likely to have suffered from emotional abuse and have been a single child in the family when compared to normal controls.
Silva et al. (2005)	Quantitative	84 consecutive school-aged referrals to an inner city and adolescent Psychiatry clinic between ages of 5-17 without severe intellectual deficit.	KID-SCID assessment was used. Parents and teachers rated the 41 DSM items on four-point scales, and completed the Conner's Rating Scales.	There was a significant correlation between parent and teacher ratings for each of the three subscales (ADHD, ODD and CD), the magnitude of these correlations is not large

Chapter 3: Conclusions and Recommendations

Children who have encountered childhood trauma, abuse, or poor environmental home environment conditions are at a higher risk for Behavior Disorders and other problems later in life. Emotional Behavioral Disorders are becoming more common among children. According to the Department of Education, Special Education Department, Teachers, and the Emotional Behavioral Disorder Manual, behavior is seen as an integral aspect of all areas of learning and cannot be separated or ignored when planning for a student's academic, physical, vocational, communication, and transition needs. The Special Education Task Force also thought the rule included much "how to" language that is more appropriately considered as "best practice" Therefore, the Special Education Task Force recommended putting them into a "promising practices manual."

The quote in the manual stating "Challenging behavior results from unmet needs" holds very true for the vast majority of children with behavioral disorders. Students will act out with behaviors to get what they need whether it is attention, social interactions or to avoid something such as academics, work, or activity that may make them uncomfortable. When a behavior occurs, it is because something preceded it such as environmental or ecological factors. Some behaviors are immediate, resulting from a direction given, negative peer interaction or task they are asked to complete. Lifestyle and home environment are very important factors for children who have behavioral disorders. Many children with behavioral disorders have a lack of support from parents, poor socioeconomic status, a lack of relationships with other adults or peers, or a history of childhood trauma and abuse, among many other factors. No matter what the child's situation, it is important to treat them fairly as an individual and not judge him/her. They are

looking for someone to help them and someone they can trust. Find the good qualities in each student and build on them to enhance your understanding of the student and earn the child's respect. This will also help the student to gain trust and confidence. Two of the many considerations to take into account when working with children who have behavioral disorders include building a relationship with them and finding out what is happening in their world to better understand them. It is important to listen, to communicate, to review their records, to conduct observations and evaluate their learning style [in all the settings the student is in as well as activities, their social interactions, independence, and assessments]. There are several factors to take into consideration and every student is different. Factors include obsession or compulsion, depression, seizures, bipolar disorder, migraines, traumatic brain injury, fears, sensory sensitivity, self-injurious behavior, post-traumatic stress, and secondary traumatization. Another very important factor to consider is their cultural background. Many students are misunderstood for the way they act when in fact it is the cultural norm. It is important not to judge and to learn more about the student by listening and keeping an open mind.

Restricted procedures are in place for the safety of the students. It is not okay to deny students food, water, and bathroom privileges or use punishment as a consequence. Physical holds may be used but only if the student is attempting to harm themselves or others. Also, keep in mind the age of the student to know if it will be effective. Time outs can be effective and give children a chance to calm down. All staff must be trained in order to place holds, and to ensure the safety of themselves and the student.

Positive Intervention Procedures are procedures educators and staff should follow to ensure the safety and best outcome when dealing with behaviors. Positive Intervention Procedures have

two guidelines for interventions. The first is to modify the ecological and environmental contexts, and second is to teach adaptive, alternative behaviors that achieve the same function as the challenging behavior. The most important component to keep in mind is that preventative and early intervention are the most effective and respectful approaches for use with challenging behaviors.

The first aspect is ecological manipulations, which are planned environmental changes implemented to produce a change in behavior. This is often very effective in supporting adaptive behavior. Areas to keep in mind include setting, interactions, instructional methods, instructional goals, environmental factors, and number and characteristics of the other people in the environment. Positive programming uses whole classroom instructional strategies. Strategies include expanding and developing appropriate social interactions and demonstrate positive regard for the child beyond the behaviors. Giving the child additional attention when he/she is showing interest in something, or using redirection when the student is off task are two techniques useful to benefit the child. It is also important to facilitate appropriate and positive peer interactions among all children by providing opportunities for cooperative learning.

Another component is to review and rehearse daily schedules so students can adapt to consistent scheduling and routine. This will help relieve anxiety associated with change and transition in a busy environment. It is also important to be realistic in the scheduling and not promise anything that cannot be delivered. Next, it is important to review and rehearse classroom rules to set up expectations. Rules should be stated in a positive manner and only be taught one or two rules at a time. Being consistent with expectations is key and reminders are okay especially before difficult activities. Another strategy is to use a schedule within activities to enhance structures.

You can do this by structuring tasks clearly and concretely and make the students aware of behavioral expectations, task sequence, and duration. One of the most important aspects is to teach coping skills by teaching rules in a motivating setting and with activities. Teach the children to use their words to express their feelings and use specified areas of the room or building for them to calm down. You also need to focus on whole class positive behavior by encouraging students to comment on others good behavior. Use positive reinforcements such as stickers, attritional free time, or praise to encourage students to have good peer relations and classroom spirit. Next, select and teach replacement behaviors agreed upon by the child, family and educators. It is important to encourage the positive behavior and teach strategies to positively act instead of using challenging behaviors. Practice the new behavior when the child is calm and provide ample opportunities for the student to practice the replacement behavior. Teach the child when to use the replacement behavior and how to recognize when they need to use it. Provide support for the child during this time and encourage them to make good choices knowing all levels of behavior are different and every situation is different. Specific intervention strategies include differential reinforcement, stimulus change, stimulus satiation, and other direct intervention in consultation with health-care professionals.

Positive Reinforcement is a great strategy to use when working with challenging behaviors. There are differences between a reward and reinforcer. A reward is what you think will work; a reinforcer is what is proven to work. The first step is to figure out what the child's interests are and what he/she responds well to. If they like stickers, they will be more apt to have good behaviors knowing they will receive a sticker or something else they enjoy. It is important to select a reinforcer for a behavior the student can proficiently perform. You also need to

ensure the reinforcer has enough power to ensure the good behavior, include variability and maintain effectiveness, and meet the student's immediate needs and frequency of need.

Positive de-escalation and crisis management strategies are a critical piece of working with students with challenging behaviors. It is crucial to use safe and positive techniques to disrupt behaviors included in the individual's plan. Active listening and de-escalation techniques include listening to a child's comments and feelings, and trying to redirect him/her. You can take the child for a walk to talk privately about what is bothering him/her for example. Another important factor to remember is to avoid power struggles as they can lead to further frustration. Find ways to motivate the child to participate in events at his/her own comfort level.

In any situation, it is important to have a contingency plan in case something is not working or the child needs another form of coping skills. Changes occur often, and it is crucial to be prepared and have many techniques to help a child de-escalate. Another technique to use is called stimulus change to suddenly disrupt the behavior. This is unexpected to the student, and he/she tends to stop what he/she is doing because he/she is caught off guard. Examples include flicking the lights on and off or redirecting the child in a manner they would least expect.

Long Term Prevention supports prevention for the long haul with alternative behaviors to keep maladaptive behaviors from reoccurring. Teach the child to self-monitor and self-evaluate in order to help him/herself maintain good problem-solving skills. Make sure to take into account the child's lifestyle and environmental factors when devising a long-term plan. Make sure it is attainable, the child is comfortable, and the plan has been practiced. The last component is to facilitate inclusion. Students need to have the skills to enter back into a mainstream classroom or school as well as establish the skills needed to be successful. It is

important to take all factors into consideration and keep the child, his/her family, and all staff aware of their progress.

In conclusion, it is important to remember any plan has multiple components. Each child is different, requires different interventions and strategies, there is no one right answer, and it takes time to figure out what works best for each child. It is crucial to have teamwork in every situation, and have multiple perspectives on how to work effectively with each child. Pick your battles and do not get into power struggles with students. Tailor interventions to the developmental level of each child. Long-term prevention and positive intervention procedures are long-term solutions children will use for years to come to help them manage stressful situations. Effective behavioral support is process-orientated and requires ongoing team problem solving.

By reviewing these studies and research it is important to recognize how important it is to be aware of the underlying situations unique to each child. If teachers are aware of environmental factors of children's environment early on and into adolescence, we can understand how it may impact their future. We as educators can then better understand how to help these children and be understanding on a day to day basis so they can be successful.

References

- American Psychological Association. (2012). Understanding child sexual abuse: Education, prevention, and recovery. *Journal of Prevention and Intervention in the Community, 40*, 263-270.
- Bezdjian, S., Baker, L. A., & Tuvblad, C. (2011). Genetic and environmental influences on impulsivity: A meta-analysis of twin, family, and adoption studies. *Clinical Psychology Review, 31*(7), 1209-1223.
- Burnette, M. L. (2013). Gender and the development of oppositional defiant disorder: Contributions of physical abuse and early family environment. *Development and Psychology, 18*(3), 195-204.
- Carroll, X., Yi, H., Liang, Y., Pang, K., Leeper-Woodford, S., Riccardi, P., & Liang, X. (2012). *Family-environmental factors associated with attention deficit-hyperactivity disorder in Chinese children: A case-control study*. Retrieved from www.plosone.org.
- Centers for Disease Control and Prevention. (2010). Retrieved from www.cdc.gov.
- Centers for Disease Control and Prevention. (2013). Retrieved from www.cdc.gov.
- Cunningham, C. D., & Boyle, M. H. (2002). Preschoolers at risk for attention-deficit hyperactivity disorder and oppositional defiant disorder: Family, parenting, and behavioral correlates. *Journal of Abnormal Psychology, 30*, 555-569.
- Evans, G., Maxwell, L., & Hart, B. (1999). Parental language and verbal responsiveness to children in crowded homes. *Developmental Psychology, 35*(4), 1020-1023.

- Fabes, R. A., Poulin, R. E., Eiseberg, N., & Madden-Derdich, D. A. (2002). Psychometric properties and relations with children's emotional competence. *Marriage and Family Review, 34*(3-4), 285-310.
- Ganesalingam, K. (2006). Self-regulation and social and behavioral functioning following childhood traumatic brain injury. *Journal of the International Neuropsychological Society, 12*, 609-621.
- Harrison, J. R., Vannest, K., Davis, J., & Reynolds, C. (2012). Common problem behaviors of children and adolescents in general education classrooms in the United States. *Journal of Emotional Behavioral Disorders, 20*(1), 55-64.
- Jianghong, L., & Li, L. (2012). The effect of pediatric traumatic brain injury on behavioral outcomes: A systematic review. *Developmental Medicine and Child Neurology, 55*, 37-45.
- Jimenez, M. E., Wade, Jr., R., Lin, Y., Morrow, L. M., & Reichman, N. E. (2016). Adverse experiences in early childhood and kindergarten outcomes, *American Academy of Pediatrics, 137*(2), p. 11.
- Kolk, A., Ennok, M., Lougesaar, R. Kaldoja, M. L., & Talvik, T. (2011). Long-term cognitive outcomes after pediatric stroke. *Pediatric Neurology, 44*(2), 101-109.
- Lahey, B. B., Schwab-Stone, M., Goodman, S. H., Waldman, I. D., Canino, G., Rathouz, P. J., ...Jensen, P. S. (2000). Age and gender differences in oppositional behavior conduct problems: A cross-sectional household study of middle childhood and adolescence. *Journal of Abnormal Psychology, 3*, 488-503.

- Li, L., & Liu, J. (2013). The effect of pediatric traumatic brain injury on behavioral outcomes: A systematic review. *Developmental medicine and Child Neurology*, 55(1), 37-45.
- Marsh, R. J. (2016). Identifying students with mental health issues: A guide for classroom teachers. *Intervention in School and Clinic*, 51(5), 318-322.
- McLean, C. P., Morris, S. H., & Conklin, P. (2014). Trauma characteristics and posttraumatic stress disorder among adolescent survivors of childhood sexual abuse. *Journal of Family Violence*, 28(5), 559-566.
- Modry-Mandell, K. L., Gamble, W. C., & Taylor, A. R. (2006). Family emotional climate and sibling relationship quality: Influences on behavioral problems and adaptation in preschool-aged children. *Child and Family Studies*, 16, 61-73
- Muenzenmaier, K., Schneeberger, A. R., Castille, D. M., Battaglia, J., Seixas, A. A., & Link, B. (2014). Stressful childhood experiences and clinical outcomes in people with serious mental illness: A gender companion in a clinical psychiatric sample. *American Journal of Psychotherapy*, 29, 419-429.
- Mulligan, A., Anney, R., Butler, O'Regan, M., Richardson, T., Tulewicz, E. M.,...Gill, M. (2011). Home environment association with hyperactivity/impulsivity in children with ADHD and their non-ADHD siblings. *Child Care, Health, and Development*, 39(2), 202-212.
- Munkvold, L. H. (2011). Oppositional defiant disorder—gender differences in co-occurring symptoms of mental health problems in a general population of children. *Abnormal Child Psychology*, 39, 577.

- Nakai, T., Hamatake, M., & Nakao, T. J. (2004). Prenatal exposures to environmental chemicals and birth order as risk factors for child behavior problems. *New England Journal of Medicine*, *50*, 97.
- Nangin & Tremblay. (2001). Childhood behavior problems and the early onset of criminal offending. *Journal of Clinical Child and Adolescent Psychology*, *40*(5), 659-667.
- Oliveria Pires, T. D., Da Silva, C., & Goncalves de Assis, S. (2013). Association between family environment and attention deficit hyperactivity disorder in children-mothers' and teachers' views. *Biomed Central*, *13*.
- Rallis, B. A., Esposito-Smythers, C., & Mehlenbeck, R. (2015). Family environment as a moderator of the association between conduct disorder and suicidality. *Journal of Aggression, Maltreatment, & Trauma*, *24*(2), 150-168.
- Rutter, M. (2001). Attainment adjustment in two geographical areas. *British Journal of Psychiatry*, *126*, 493-509.
- Sedlak, A. J., Mettenburg, J., Basena, M., Pettia, I., McPherson, K., Greene, A., & Li, S. (2010/2012). Fourth national incidence study of child abuse and neglect. *Journal of Adolescent Substance Abuse*, *17*(4), 75-97.
- Silberg, J. L., Maes, H., & Eaves, L. J. (2012). Unraveling the effect of genes and environment in the transmission of parental antisocial behavior to children's conduct disturbance, depression, and hyperactivity. *Journal of Child Psychology and Psychiatry*, *56*(6), 668-677.

- Silva, R., Alpert, M., Pouget, E., Silca, V., Trosper, S., Reys, K., & Dummit, S. (2005). A rating scale for disruptive behavior disorders based on the DSM-IV item pool. *Psychiatric Quarterly*, 76(4).
- Soo Yoo, Y., Popp, J. Y., & Robinson, J. (2013). Maternal distress influences young children's family representations through maternal view of child behavior and parent-child interactions. *Child Psychiatry Human Development*, 45, 52-64.
- Tatsuta, N., Nakai, K., Murata, K., Suzuki, K., Iwai-Shimada, M., Kurokawa, N., ... Satoh, H. (2011). Impacts of prenatal exposures to polychlorinated biphenyls, methylmercury, and lead on intellectual ability of 42-month-old children in Japan. *Environmental Research*, 133, 321-326.
- Taylor, J., Allan, N., Mikolajewski, A. J., & Hart. (2012). Common genetic and nonshared environmental factors contribute to the association between socioemotional dispositions and the externalizing factor in children. *Journal of Child Psychology and Psychiatry*, 54(1), 67-76.
- Valiente, C., Lemery-Calfant, K., & Reiser, M. (2007). Pathways to problem behaviors.: Chaotic homes, parent and child effortful control and parenting. *Social Development*, 16(2), 249-267.
- Wachs, T. D. (2000). *Necessary but not sufficient: The respective roles of single and multiple influences on individual development*. Washington, DC: American Psychological Association.