

St. Catherine University

**SOPHIA**

---

Master of Social Work Clinical Research Papers

School of Social Work

---

5-2017

## **Strategies and Outcomes in Working with Adolescents Diagnosed with Conduct Disorder**

Elisabeth A. Boegeman

*St. Catherine University*, [boegeman.betsy@gmail.com](mailto:boegeman.betsy@gmail.com)

Follow this and additional works at: [https://sophia.stkate.edu/msw\\_papers](https://sophia.stkate.edu/msw_papers)



Part of the [Social Work Commons](#)

---

### **Recommended Citation**

Boegeman, Elisabeth A.. (2017). Strategies and Outcomes in Working with Adolescents Diagnosed with Conduct Disorder. Retrieved from Sophia, the St. Catherine University repository website:

[https://sophia.stkate.edu/msw\\_papers/710](https://sophia.stkate.edu/msw_papers/710)

This Clinical research paper is brought to you for free and open access by the School of Social Work at SOPHIA. It has been accepted for inclusion in Master of Social Work Clinical Research Papers by an authorized administrator of SOPHIA. For more information, please contact [amshaw@stkate.edu](mailto:amshaw@stkate.edu).

Strategies and Outcomes in Working with Adolescents Diagnosed with Conduct Disorder

by

Elizabeth A. Boegeman, B.S., LADC

MSW Clinical Research Paper

Presented to the Faculty of the  
School of Social Work  
St. Catherine University and the University of St. Thomas  
St. Paul, Minnesota  
in Partial fulfillment of the Requirements for the Degree of

Master of Social Work

Committee Members  
Colin Hollidge, Ph.D., LICSW (Chair)  
Eva Solomonson, LICSW  
Chelle York, LICSW

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University - University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

### **Abstract**

Conduct disorder is defined by the American Psychiatric Association (2013) as: A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of at least three of fifteen criteria, in the past twelve months, with at least one criterion present in the past six months. Conduct disorder is generally considered to be a serious, chronic childhood disorder that is often the primary precursor to an adult presenting with chronic antisocial behavior. According to Lahey, Loeber, Hart, Frick, & al, et (1995), it has been found to be difficult to reduce the frequency of antisocial behavior in children and adolescents with conduct disorder through treatments and interventions, thus conceptualizing conduct disorder as chronic. Writer has worked with many adolescents, especially males, who have been diagnosed with a mental health diagnosis related to conduct issues, thus becoming very interested in the evolution of the symptoms, the diagnosis, and strategies and interventions used for addressing conduct problems.

This systematic literature review will be conducted with the purpose of answering the question: What strategies are being used in working with adolescents who have been diagnosed with conduct disorder, and what outcomes are we seeing? Writer will be including qualitative and quantitative studies, as well as literature reviews. Only scholarly, peer-reviewed, and full-text, published scholarly academic journal articles were included in the research. Only articles that were published between 2002-2016 were reviewed. Twelve articles ultimately met the identified search criteria and were reviewed for the purpose of this systematic literature review. There is wide variation among practices, interventions, and treatments that are being used to manage conduct disorder. Writer aims to give an overview of each strategy, as well as an overview of the outcomes of utilizing each strategy.

Of the twelve articles that were reviewed for this study, seven different types of strategies, or interventions, emerged for working with children and adolescents with conduct disorder or conduct-disordered behavior, while some of the articles suggested more than one type of intervention. The seven interventions include: mindfulness, cognitive behavioral skill-building techniques, eye movement desensitization and reprocessing (EMDR), psychopharmacological interventions, family-based interventions, residential treatment or peer group association, and multi-modal interventions. The articles support that interventions can be beneficial in terms of addressing or treating conduct disorder, as opposed to there being no treatment for conduct disorder due to it being classified as a personality (or characterological) disorder. The articles also support the need for further research in terms of effective interventions for working with children and adolescents with conduct disorder. In future research, it would be important to further the research around interventions and treatment and, perhaps more importantly, further the research around the evolution of conduct problems in children and adolescents, with a focus on the ways in which developmental perspectives, attachment theories, and childhood trauma are associated with the development of child and adolescent conduct problems.

### Acknowledgements

*“The soul is healed by being with children.” –Fyodor Dostoevsky*

To all those who supported me during this process, thank you. I am so fortunate to have people in my life who have been there from the beginning, and will be there until the end—loving me, supporting me, encouraging me, and challenging me. A special thank you to my mom and dad, who taught me to approach the world with kindness, who taught me that I can be and do anything I desire, and who have shown me that they will love me and support me indefinitely. In my family, happiness is togetherness, and for that I am so fortunate. To my three brothers, who have allowed me to stay young at heart and who know me as I always was. You three are my best friends. To my oldest brother Billy, who has been a role model for me in the value of education and the value in speaking up and questioning what’s happening in the world around me. To my other best friends, the ones who aren’t related by blood but are absolutely family, thank you for keeping me sane throughout this program by giving me no choice but to spend time laughing with you on the weekends. Every single one of those laughs was needed and cherished. To the little people in my life, for letting me rediscover the world with you through play. To my beagle, Percy, you never left my side on those late nights of homework, and, after those long days and late nights on campus, there is no welcome home as good as yours, buddy. To the makers and keepers of the Three Rivers park reserves, for providing me a space to breathe and find peace amidst the chaos. To my classmates and coworkers, who have inspired me, challenged me, taught me, vented with me, and accepted me. To the faculty and staff of the social work graduate program at the University of St. Thomas and St. Catherine University, as well as my field placement supervisors, for your commitment, investment, and interest. Thank you for sharing your knowledge and experiences with me, which has enabled me to grow as a person and as a clinician. Thank you for challenging me to get involved in policy work and advocate for those who cannot always advocate for themselves. To the middle school students and staff at Community of Peace Academy, every day I looked forward to being a part of your community, and I learned more from the students than they could have ever learned from me. To Holiday gas station, your hot coffee each morning has been the only thing consistent and predictable in my days. In addition to laughter, coffee has kept me sane.

And finally, to the children and adolescents who have let me into their lives and shared their stories and truths with me. I see your strength and your fear, I hear your brilliance and your uncertainty, and I appreciate your fight and your worth. Thank you for all that you have taught me. My work with children and adolescents has sparked an inner fire in me, and each one of you have kept that inner fire alive. This study, and my continued research in this field, is for you. I hold in me the hope that others will see you, hear you, and appreciate you as I do.

**Table of Contents**

I. Abstract..... 2

II. Acknowledgements..... 4

III. Methods.....6

    A. Research Purpose.....6

    B. Type of Studies.....6

    C. Search Strategies.....7

    D. Inclusion Criteria.....7

    E. Exclusion Criteria.....8

IV. Introduction..... 9

    A. Conduct Disorder..... 9

    B. Adolescent Development..... 13

    C. Sex Differences in Conduct Disorder in Children and Adolescents..... 18

    D. Defining Evidence-Based Practice, Treatment, and Interventions.....21

V. Research Synthesis..... 21

    A. Overview of the Articles.....23

    B. Quality Assessment.....34

VI. Thematic Analysis.....38

    A. Mindfulness..... 40

    B. Eye Movement Desensitization and Reprocessing (EMDR)..... 43

    C. Psychopharmacological Treatments.....44

    D. Family-Based Interventions ..... 50

    E. Residential Treatment and Peer Group Interventions..... 57

    F. Cognitive Behavioral Skills Training..... 60

    G. Multi-Modal Interventions..... 61

VII. Discussion..... 62

    A. Major Findings.....62

    B. Importance to Clinical Social Work Practice.....66

    C. Limitations.....69

    D. Suggestions for Future Research.....70

    E. Conclusion.....71

VIII. References..... 73

## **Methods**

### **Research Purpose**

This systematic literature review will be conducted with the purpose of answering the question: What strategies are being used in working with adolescents who have been diagnosed with conduct disorder, and what outcomes are we seeing?

For the purpose of this study, conduct disorder is the sole mental health diagnosis that is being explored in terms of treatment, despite other mental health diagnoses that may be closely correlated or intertwined with a diagnosis of conduct disorder. Initially, writer had hoped to research data specific to interventions used in addressing conduct disorder in males only; however, there was not enough research found that was specific to child and adolescent males only, therefore the research question was generalized to include male and female adolescents. There is wide variation among practices, interventions, and treatments that are being used to manage conduct disorder. Writer aims to give an overview of each strategy, as well as an overview of the outcomes of utilizing each strategy.

### **Type of Studies**

For the purpose of answering the question: What strategies are being used in working with adolescents who have been diagnosed with conduct disorder, and what outcomes are we seeing, only empirically-based studies will be included in the research. Quantitative and qualitative studies will be included, as well as systematic reviews of the literature. This study seeks to explore concrete, measurable data from the quantitative research that evaluates effectiveness of specific interventions, as well as qualitative research that includes perceptions of the researchers and the participants themselves, and lastly systematic literature reviews that review data collected and studies conducted thus far related to conduct disorder diagnosis in

adolescents. Studies need to be directly exploring interventions and outcomes related to conduct disorder in adolescents.

### **Search Strategy**

Initially, broad searches of academic, peer-reviewed journals within the databases of Academic Search Premier, Child Development and Adolescent Studies, EBSCO Mega File, Family Studies Abstracts, Social Work Abstracts, and SocINDEX were conducted to determine the types of research available on treatment methods and interventions for adolescents who have been diagnosed with conduct disorder. This included a wide range of research that was irrelevant to this study, including conduct disorder in adults, Attention-deficit hyperactivity disorder (ADHD), chemical use in adolescents, conduct disorder specific to certain cultures, and a significant amount of research looking at the juvenile justice system. This study does not seek to evaluate the relationships between the diagnosis of conduct disorder and the diagnosis of another mental health disorder, such as attention-deficit hyperactivity disorder. This study also does not seek to evaluate the relationships between the diagnosis of conduct disorder in an adolescent and his or her involvement with substance abuse or involvement in the juvenile justice system. In order to narrow the scope of the research, specific inclusion and exclusion criteria were developed to focus the research on only studies that are relevant to the research question.

### **Inclusion Criteria**

In the databases of Academic Search Premier, Child Development and Adolescent Studies, EBSCO Mega File, Family Studies Abstracts, Social Work Abstracts, and SocINDEX, searches were conducted in September and October of 2016, using a combination of the following search terms: “conduct disorder” AND “adolescents” AND “interventions” AND “treatments.” Only scholarly, peer-reviewed, and full-text, published scholarly academic journal

articles were included in the research. Only articles that were published between 2002-2016 were reviewed. All of the databases yielded articles that were included in this study. With this initial search, 243 articles met the search criteria. In order to further narrow the search, a combination of the following search terms was used: “conduct disorder” NOT “attention deficit hyperactivity disorder” AND “adolescents” AND “interventions” AND “treatment” NOT “juvenile delinquency” NOT “juvenile offenders” NOT “substance abuse” NOT “depression” NOT “anxiety” NOT “addiction,” and NOT “violence.” Writer attempted narrowing this search using the terms “male,” “boys,” and “management;” however, this narrowed the search too significantly to a sample of 10-13 articles.

### **Exclusion Criteria**

Of the 72 articles that then met the above outlined search criteria, only 42 ultimately met the criteria to be further reviewed for the purpose of this systematic literature review. After reading through all 42 articles, it was determined that only 12 articles truly met the necessary criteria and focused on strategies and interventions, rather than other psychiatric diagnoses, precursors to conduct disorder, or emerging traits, when working with adolescents who have been diagnosed with conduct disorder; therefore, 30 articles were further eliminated. Articles that were ultimately excluded from the research process included articles that were focused on attention-deficit hyperactivity disorder, depression and anxiety, predictors of conduct disorder, substance use, involvement in the juvenile justice system, maternal health in relation to conduct disorder, and several articles that ended up being unrelated to the research question. Decisions regarding whether or not to include particular articles were based on article title and information within the article abstract.

## Introduction

This literature review will explore the topics of conduct disorder, adolescent development, sex differences in conduct disorder in children and adolescents, and will define evidence-based research, interventions, and treatment. These topics will be researched, explored, and defined for the purpose of establishing a basis for answering the research question: What strategies are being used in working with adolescents who have been diagnosed with conduct disorder, and what outcomes are we seeing, or, in plain, what works and what doesn't work? Once establishing the fundamental knowledge of these topics, a systematic literature review will be completed, looking at effective strategies for working with adolescents who have been diagnosed with conduct disorder. This systematic literature review is important because conduct disorder is generally considered to be a serious, chronic childhood disorder that is often the primary precursor to an adult presenting with chronic antisocial behavior. According to Lahey, Loeber, Hart, Frick, & al, et (1995), it has been found to be difficult to reduce the frequency of antisocial behavior in children and adolescents with conduct disorder through treatments and interventions, thus conceptualizing conduct disorder as chronic.

## Conduct Disorder

**DSM-5.** Conduct disorder is defined by the American Psychiatric Association (2013) as: A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of at least three of fifteen criteria, in the past twelve months, with at least one criterion present in the past six months. The fifteen criterion are listed in the DSM-V as follows:

### Aggression to People and Animals

1. Often bullies, threatens or intimidates others.

2. Often initiates physical fights.
3. Has used a weapon that can cause serious physical harm to others (e.g., a bat, brick, broken bottle, knife, gun).
4. Has been physically cruel to people.
5. Has been physically cruel to animals.
6. Has stolen while confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery).
7. Has forced someone into sexual activity.

#### Destruction of Property

8. Has deliberately engaged in fire setting with the intention of causing serious damage.
9. Has deliberately destroyed others property (other than by fire setting).

#### Deceitfulness or Theft

10. Has broken into someone else's house, building, or car.
11. Often lies to obtain goods or favors or to avoid obligations (i.e. "cons" others).
12. Has stolen items of nontrivial value without confronting a victim (e.g., shoplifting, but without breaking and entering; forgery).

#### Serious Violations of Rules

13. Often stays out at night, despite parental prohibitions, beginning before age 13 years.
14. Has run away from home overnight at least twice while living in the parental or parental surrogate home, or once without returning for a lengthy period.
15. Is often truant from school, beginning before age 13 years.

In addition to presenting with at least three of the fifteen criteria, within the past twelve months, the disturbance in behavior must also be causing clinically significant impairment in social, academic, or occupational functioning. In addition, if the individual is age eighteen years or older (which we will not be looking at in this study), a diagnosis of conduct disorder would signify that criteria are not met for a diagnosis of antisocial personality disorder. Conduct disorder is diagnosed with an onset specifier, including: childhood-onset type, where individuals show one symptom characteristic of conduct disorder prior to age ten years; adolescent-onset type, where individuals show no symptom characteristic of conduct disorder prior to age ten years; and unspecified onset, where there is not enough information available to determine whether the onset of the first symptom was before or after age ten years. Other specifiers include if the individual presents with: limited prosocial emotion, lack of remorse or guilt, lack of empathy (callous), unconcerned about performance, and/or shallow or deficient affect. Depending on the amount of criterion met, and the severity of the criterion, individuals with conduct disorder can be diagnosed with mild, moderate, or severe severity (American Psychiatric Association, 2012).

Conduct disorder can also be defined as a pattern of maladaptive behavior, often characterized by antisocial behavior traits, such as physical aggression, deception, and violation of the property or rights of others. Conduct disorder is generally considered to be a serious, chronic childhood disorder that is often the primary precursor to an adult presenting with chronic antisocial behavior. It has been found to be difficult to reduce the frequency of antisocial behavior in children and adolescents with conduct disorder through treatments and interventions, thus conceptualizing conduct disorder as chronic (Lahey, B. B., Loeber, R., Hart, E. L., Frick, P. J., & al, et, 1995). According to Luescher & Neimeyer (2002), the future for children and

adolescents diagnosed with conduct disorder appears to be poor, including greater tobacco, alcohol, and marijuana dependence, sexually transmitted diseases, early pregnancy, becoming involved with antisocial partners, receiving a diagnosis as Antisocial Personality Disorder as adults, and greater medical problems and poorer overall physical health.

According to research by Fricke (2006), conduct disorder is almost always described as being repetitive and persistent, as well as being behaviors that violate the rights of others. With much of the research supporting conduct disorder as a repetitive, persistent, and chronic diagnosis, it is important to look at the etiology of conduct disorder as well as the different interventions for managing conduct disorder at a young age, as symptoms of conduct disorder often emerge in childhood. It is also very important to understand what behaviors requiring professional intervention might look like in comparison to “normal” childhood behaviors or adolescent behaviors aligned with a child going through puberty. According to research by Frick (2006), research shows that earlier onset of symptoms of conduct disorder correlates with the escalation and increased intensity of these symptoms, such as aggression and criminal behavior, into adulthood.

With the prevalence of conduct disorders being high, it is very valuable to further the research on treatment, interventions, and practice strategies, rather than settling on conduct disorder as being a chronic condition. According to research by Baker (2008), parents and caregivers should be regularly assessing their child through the different stages of development and whether or not their child is meeting developmental milestones, whether the perhaps inappropriate behaviors are in fact age-appropriate, whether some behaviors are in excess or out of the ordinary. As children age, they should begin to develop a natural and growing sense of individualization and autonomy, which looks different depending on the age of the child. Many

challenging stages, such as the “terrible twos,” or the transition into the teenage years, come with the presentation of oppositional behaviors by the child or adolescent, which can be very normal and important for that child’s development. While recognizing that these behaviors can be very normal and important, it is also important to recognize when these behaviors are in excess, out of the ordinary, or causing serious impairment in the child or adolescent’s life (Baker, 2008).

### **Adolescent Development**

**Brain Development.** Adolescence is not only a time of rapid physical growth, but it is also a time where the initiation of high-risk behaviors often occurs. These high-risk behaviors can include, but are not limited to: alcohol and drug use, sexual activity, and other forms of acting out. There are many factors besides age that affect brain development and resulting behaviors, including genetics, environmental factors, nutrition, activity, experiences of trauma, parenting, etc. In discussing conduct disorder in adolescents, it is important to look at adolescent brain development, in order to understand normal developmental milestones in adolescence, as well as expected setbacks in adolescence due to the brain not being fully developed.

Anderson (2015), from his research on adolescent brain development, states, “Sequential MRIs demonstrate the immaturity of the early adolescent brain with complete maturation and myelination not apparent until approximately 25 years of age. Every lobe of the brain is immature in the young adolescent” (p. 193). When discussing impulsive behavior in adolescents, many researchers refer to the immaturity of the frontal lobe, as the frontal lobe determines most aspects of learning, moral intelligence, abstract reasoning, judgment, and strategizing. Being this area of the brain is immature, or not fully developed, in adolescents, adolescents do not have the same ability to reason and make decisions as young adults and mature adults do.

Suleiman, Johnson, Shirtcliff, & Galvan (2015) state, “As a result of significant developmental changes, adolescents experience new attractions, motivations, and desires for novel experiences” (p. 571). Many of the behaviors previously discussed as symptoms of conduct disorder can be closely related to the high-risk and novel experiences that adolescents seek out for experience. According to Suleiman, Johnson, Shirtcliff, & Galvan (2015), adolescents develop increased cognitive control as they mature, allowing them to make more adult-like decisions. Suleiman, Johnson, Shirtcliff, & Galvan (2015) go on to say that adolescents also often take greater risks than adults do due to the interaction of cognitive control with social and emotional processing systems, noting that risk-taking behaviors are often associated with conduct problems. Although adolescent brain development allows for adolescents to begin making more adult-like decisions, the ability to monitor and correct for behavior that results in negative outcomes continues to mature well into adulthood. In discussing adolescent maturity, social-emotional development is also important to address.

**Social-Emotional Development.** According to Anderson (2015), along with the immaturity of the frontal lobe in adolescents, the cerebellum is the last area of the brain to mature, which is important in noting in adolescents as the cerebellum is known to be important in navigating complex social situations, explaining why adolescents often have difficulty in navigating social and emotional situations. While adolescents experience a shift in their brain development and decision-making processes, they also experience a significant shift in their social behavior (Suleiman, Johnson, Shirtcliff, & Galvan, 2015). According to Suleiman, Johnson, Shirtcliff, & Galvan (2015), adolescents begin engaging in new types of social and romantic relationships and navigating existing relationships in new ways. While beginning to understand and navigate these new social situations, adolescents also begin to experience

feelings and situations that bring about feelings of empathy, social acceptance, and social rejection. Brain systems contribute to the development of social skills, emotion regulation, and other capacities, specifically related to the adolescent's ability to engage in pro-social behaviors (Suleiman, Johnson, Shirtcliff, & Galvan, 2015). As previously discussed, the neural development linked to emotional processing highly influences adolescent behavior and, despite increased self-control, adolescents are highly motivated by high-risk, exciting, and sensual experiences, or reward-seeking and sensation-seeking behavior. Suleiman, Johnson, Shirtcliff, & Galvan (2015) state:

Our overall understanding of adolescent brain development points to the fact that adolescents have different neural structures than children and recruit these structures differently than adults. Adolescents' tendency toward enhanced sensation and reward seeking coupled with a diminished capacity to engage their impulse control systems in highly emotionally charged contexts, especially in the presence of peers, often results in increased risk taking. Whereas this increased risk taking serves an important purpose in encouraging adolescents to take new chances, learn new skills, and develop into independent adults, it can also result in a number of poor outcomes (p. 572).

It is suggested that some of the "symptoms of normal adolescent development" may look like conduct-disordered behavior, which is important to consider; however, in normal adolescents, pushing limits and exploring new experiences typically looks very different than the behaviors seen in adolescents with conduct disorder. In looking at adolescent development it is also important to look at hormonal changes occurring during the adolescent years that could also account for symptoms of conduct disorder.

**Puberty and Hormones.** During the adolescent years, quite a few hormonal changes and imbalances are happening in the body. Dopamine is the primary hormone that is involved in the reward system of the brain, and dopamine levels are higher in adolescents than in adults, providing an explanation for why adolescents are more susceptible to becoming addicted. Teenagers, unlike adults, often require more excitement in order to generate dopamine production, so many teenagers participate in more high-risk behaviors in order to generate that dopamine production. Due to neurotransmitters in the adolescent brain, risk-taking is often a normal part of adolescence, and the increased dopamine production in adolescents can accelerate those risk-taking behaviors (Anderson, 2015).

Suleiman, Johnson, Shirtcliff, & Galvan (2015) state, “Adolescence begins with hormonal and physiological changes associated with puberty and ends with a social transition to adulthood” (p. 570). As discussed, many hormonal shifts occur in adolescence, at the onset of puberty, and impact brain and body maturation, as well as changes in emotions, goals, and motivations. Pubertal hormones influence brain development, as well as brain function. There are many pubertal endocrine factors that have been demonstrated to be associated with increased sensation-seeking and risk-taking behaviors during adolescence, including testosterone, estrogen, progesterone, prolactin, oxytocin, and cortisol. These hormones are regulated by a wide range of individual differences that occur within the human genes (Suleiman, Johnson, Shirtcliff, & Galvan, 2015).

Boxer, Tobin-Richards, and Petersen (1983) state:

What is clear is that puberty culminates in a dramatic and visually apparent set of changes and that the social and psychological effects of the meanings of these changes

are an important component to understanding the significance of puberty for adolescents and their behavior (p. 89).

Puberty and hormonal changes can be difficult for both adolescent males and females. Although there is definitely a biological component, primarily to the beginning, of puberty, the social-psychological significance of puberty on adolescents is seen as a major determinant of the experience of puberty on adolescents. Adolescents begin to make meaning of the cultural definitions of what is desirable, expectable, and normal, and this is an important part of how adolescents mediate the psychological experience of puberty. The social constraints on behavior throughout adolescence range broadly for a given society, while there may be some common, constant fears of adolescence across cultures, such as increased interest in sexuality. In our society, adolescence has been characterized as a time of storm and stress, and it has been given a powerful role in adolescents' behavior (Boxer, Tobin-Richards, & Petersen, 1983).

**Chemical Use in Adolescents.** As previously mentioned, drug and alcohol use can be a common high-risk behavior that is initiated in the adolescent years, and chemical use has also been studied as a factor in increasing conduct-disordered behavior in adolescents. In order to prevent, manage, or treat adolescent chemical use, specific aspects of peer social norms that influence adolescent substance use need to be identified (Eisenberg, Toumbourou, Catalano, & Hemphill, 2014). Two social norms that influence adolescent substance use, include “coolness,” or an association with popularity, and “commonness,” or the prevalence of using behavior in an adolescent peer group. Eisenberg, Toumbourou, Catalano, & Hemphill (2014) state:

Social factors may be particularly germane to adolescent health behaviors, including substance use, due to the developmental characteristics of this unique state of life. Young adolescents (roughly ages 11-14) begin the process of differentiating themselves from

their parents and orienting towards their peers. Socially, young adolescents turn increased attention to peer social cues in order to establish peer acceptance (p. 1487).

It is also suggested that adolescents are at a stage where questioning authority, rebelling, and forming one's own identity are basic, anticipated, developmental tasks. Eisenberg, Toumbourou, Catalano, & Hemphill (2014) discuss the influence of social norms, the desire for acceptance, and institutional characteristics on adolescent substance use, and they discuss the importance of establishing school-wide social norms around drug and alcohol use prohibition and prevention. Eisenberg, Toumbourou, Catalano, & Hemphill (2014) go on to suggest that the social milieu of school plays an important role in adolescents' lives, thus alluding to school-based interventions for the treatment of conduct disorder. As we have acknowledged the hormonal changes that occur in adolescence, we would be remised to not consider the difference in changes that occur between males and females.

### **Sex Differences in Conduct Disorder in Children and Adolescents**

As previously mentioned, writer had initially hoped to research data specific to interventions used in addressing conduct disorder in males only; however, there was not enough research found that was specific to child and adolescent males only, therefore the research question was generalized to include male and female adolescents. While this study does not look at interventions specific to one sex, it remains important to understand the differences across the sexes in conduct disorder in children and adolescents. According to Luescher & Neimeyer, conduct disorder is the most common reason that boys are being referred for mental health services, and it is the second most common reason for referral for girls. Boys are being diagnosed with conduct disorder more often than girls are, and some people argue that this is due to the fact that there are differences in the degree of which boys and girls engage in the behaviors

included in the diagnosis of conduct disorder. For young girls diagnosed with conduct disorder, the behavior pattern tends to look like verbal aggression and oppositional behavior, whereas in boys it looks more like physical aggression. It is suggested that three times as many young boys are referred to clinics for conduct behavior as are girls, due to the difference in physical aggression. According to Tcheremissine & Lieving (2006), in particular, the tendency towards greater aggression in boys than girls was more pronounced for behaviors that produce pain and physical injury than for those that result in psychological or social harm. Luescher & Neimeyer (2002) state:

Girls' early problem behavior becomes shaped toward the expression of internalizing disorders (like depression), rather than externalizing disorders (like aggression) through gender socialization. Girls develop adaptive skills (language and social skills) earlier than boys, and this facilitates girls' expressiveness and constructive social interactions and decreases their engagement in problem behavior. There is also some support for the faster biological development and physical maturity of girls, which may buffer them from genetic and environmental factors that might lead to externalizing behavior. Finally, girls also tend to engage in more empathetic and prosocial behavior, which may decrease their engagement in disruptive and aggressive behaviors (p. 98).

Kann & Hanna (2000) state:

Disruptive behavior disorders in children and adolescents can lead to a lifetime of social dysfunction, antisocial behavior, and poor adjustment. The consequences of these behaviors affect not only the children and adolescents who suffer from them, but their families, their peers, and society as a whole (p. 267).

There is quite a bit of research on disruptive behavior disorders, but most of the information has been conducted with all male or predominantly male populations, and there is a relative absence of research on female children and adolescents in the realm of disruptive behavior disorders. In the research, it has been found that sons of substance-abusing fathers are more likely to develop higher levels of aggression than sons of non substance-abusing fathers. It has also been found that maternal depression, maternal negativity, paternal negativity, and life stress significantly predicted girls' externalizing problems; however, the same factors did not indicate these behaviors in boys. It is suggested that parent psychological status, such as mental health and capabilities for parent-child support, has more of an influence on girls than on boys because of the socialization of girls in the family (Kann & Hanna, 2000).

Recent studies have shown that the development of externalizing behavior in childhood and adolescence, which has been discussed as a factor in diagnosing conduct disorder, can be described through different developmental pathways in girls and boys. A study by Castelao & Kroner-Herwig (2013) focused on potential differences between boys and girls by exploring the trajectories of self-reported externalizing symptoms for girls and boys. Like other research, Castelao & Kroner-Herwig (2013) discuss the prevalence of externalizing behavior, such as aggression, oppositional behavior, and hyperactivity, in child and adolescent mental health problems, and discusses the concern that this causes parents, teachers, and society due to the social and educational problems that often accompany these externalizing behaviors.

Castelao & Kroner-Herwig (2013) explored different predictors, or trajectories, of externalizing behavior in girls and boys, including: externalizing symptoms, depressive symptoms in children and adolescents, dysfunctional parenting style, negative family climate, mothers' depressive symptoms, stressful life events, and family conflict. In this study, the girls

and boys were placed into different classes, based on their symptoms, including high-decreasing, moderate, and low. The results of the study showed that the percentage of boys and girls in each class differed, and there were different developmental courses of externalizing behavior for boys and girls; however, their analysis revealed more similarities than differences in the trajectories. Being the developmental course of symptoms differed between boys and girls, it is important to consider different prevention methods when working with child and adolescent boys and girls (Castelao & Kroner-Herwig, 2013).

### **Defining Evidence-Based Practice, Treatment, and Intervention**

According to Merriam-Webster Dictionary's medical definition (2017), an "Intervention" is defined as: the act or fact or a means of interfering with the outcome or course especially of a condition or process (as to prevent harm or improve functioning).

According to Merriam-Webster Dictionary's medical definition (2017), "Treatment" is defined as: a. the act or manner or an instance of treating someone or something. b. the techniques or actions customarily applied in a specified situation. According to

Merriam-Webster Dictionary's medical definition (2017), a "Strategy" is defined as: an adaptation or complex of adaptations (as of behavior, metabolism, or structure) that serves or appears to serve an important function in achieving evolutionary success.

According to Drake, et al. (2001), evidence-based practices are defined as: interventions for which there is scientific evidence consistently showing that they improve client outcomes. These are the definition that will be considered for the purpose of this systematic literature review.

### **Research Synthesis**

This systematic literature review will be conducted with the purpose of answering the question: What strategies are being used in working with adolescents who have been diagnosed

with conduct disorder, and what outcomes are we seeing? For the purpose of this study, conduct disorder is the sole mental health diagnosis that is being explored in terms of treatment, despite other mental health diagnoses that may be closely correlated or intertwined with a diagnosis of conduct disorder.

For the purpose of answering the question: What strategies are being used in working with adolescents who have been diagnosed with conduct disorder, and what outcomes are we seeing, only empirically-based studies will be included in the research. Writer will be including qualitative and quantitative studies, as well as literature reviews. This study seeks to explore concrete, measurable data from the quantitative research that evaluates effectiveness of specific interventions, as well as qualitative research that includes perceptions of the researchers and the participants themselves, and lastly systematic literature reviews that review data collected and studies conducted thus far related to conduct disorder diagnosis in adolescents. Studies need to be directly exploring interventions and outcomes related to conduct disorder in adolescents.

Initially, broad searches of academic, peer-reviewed journals within the databases of Academic Search Premier, Child Development and Adolescent Studies, EBSCO Mega File, Family Studies Abstracts, Social Work Abstracts, and SocINDEX were conducted to determine the types of research available on treatment methods and interventions for adolescents who have been diagnosed with conduct disorder. This included a wide range of research that was irrelevant to this study, including conduct disorder in adults, ADHD, chemical use in adolescents, conduct disorder specific to certain cultures, and a significant amount of research looking at the juvenile justice system.

Only scholarly, peer-reviewed, and full-text, published scholarly academic journal articles were included in the research. Only articles that were published between 2002-2016 were

reviewed. All of the databases yielded articles that were included in this study. Initially, 243 articles met the search criteria. With the utilization of inclusion and exclusion criteria, this researcher was able limit the number of articles to 72 articles and then to 42 articles. After reading through all 42 articles, it was determined that only 12 articles truly met the necessary criteria and focused on strategies and interventions, rather than other psychiatric diagnoses, precursors to conduct disorder, or emerging traits, when working with adolescents who have been diagnosed with conduct disorder; therefore, 30 articles were further eliminated.

### **Overview of the Articles**

**Mindfulness Training.** Singh, et al. (2007) discuss the utilization of mindfulness training, in intervening with adolescents with conduct disorder, in their article “Adolescents With Conduct Disorder Can Be Mindful of Their Aggressive Behavior.” Mindfulness training can provide an option to help these adolescents focus and attend to conditions that may increase their aggressive, disruptive, or maladaptive behavior. In their study, three seventh-grade adolescents, who were referred for therapy in school and diagnosed with conduct disorder, were part of the mindfulness-based intervention. A multiple baseline across subjects design was used, with four phases: baseline, training in mindfulness, mindfulness practice, and follow-up. For all three adolescents, the data show that aggressive behavior decreased minimally during the mindfulness training and substantially during the twenty-five weeks of practice that followed training.

**Emotion-Focused Early Intervention.** Hawes, Price, and Dadds (2014) examined the research to date regarding the ability of family-based interventions to be effective in working with adolescents with conduct disorder, or with callous-unemotional traits, in their article, “Callous-Unemotional Traits and the Treatment of Conduct Problems in Childhood and Adolescence: A Comprehensive Review”. Using a systematic search strategy, these researchers

identified sixteen treatment outcome studies that look at family-based interventions. Titles and abstracts of identified articles were screened based on specific criteria. Eleven of the sixteen studies report on callous-unemotional traits in relation to clinical change in conduct problems following family-based intervention, and six studies report on the effects of family-based intervention on change in callous-unemotional traits. The researchers found that clinical change in conduct problems did occur among children with callous-unemotional traits, following family-based intervention, and that there is compelling evidence that social-learning-based parent training is capable of producing lasting improvement in callous-unemotional traits, particularly when delivered early in childhood.

**Non-Medical Psychosocial Interventions.** Buitelaar, Smeets, Herpers, Scheepers, Glennon, and Rommelse (2012) discuss the recommendation for utilizing psychosocial interventions as the first option for treatment of conduct disorder, in their article, "Conduct Disorders." They discuss that, in order for treatment to be effective, it must be multi-modal and involve family-based and social systems-based approach, continuing over extensive periods of time. They look at psychological interventions, as well as medical interventions, and also discuss the need to continue studying and implementing innovative effect treatments for conduct disorder.

**Multisystemic Therapy.** Lofholm, Olsson, Sundell, and Hansson (2009) consider the findings of a Swedish trial of multisystemic therapy in relation to the findings of other such trials in the United States and Norway, in their article, "Multisystemic therapy with conduct-disordered young people: Stability of treatment outcomes two years after intake." This study looked at treatment outcomes two years after referral to multisystemic therapy for 156 young people who had been diagnosed with conduct disorder. A mixed factorial design was used. The

results of this study show a decrease in psychiatric problems and antisocial behaviors among the 156 participants; however, do not support the long-term effectiveness of MST relative to the services usually available and provided for conduct-disordered young people in Sweden. The authors then explore the differences in services offered, and actions taken, to conduct-disordered young people in the United States.

**Parent Training Program.** Baruch, Vrouva, and Wells (2011) discuss the use of group-based parent training programmes as a common intervention for addressing conduct problems in young people, in their article, “Outcome Findings from a Parent Training Programme for Young People with Conduct Problems.” The participants in the study included 123 parents of young people aged 10 to 17 with conduct problems. The participants were primarily referred for behavior problems at home and school, with antisocial behavior problems, family problems, and school problems presenting as the most common problems. The program was intended to equip parents with strategies for managing and improving challenging behavior, covering parent-teen interaction, behavioral contracts, appropriate consequences for high-risk challenging behavior, praising the young person, nurturance strategies, and enlisting outside support, through six, two-hour classes. A Child Behaviour Check List (CBCL), which is a broad-spectrum inventory that records the emotional and behavioral problems of children and adolescents as reported by their parents or guardians, was completed by participants at the beginning and at the end of the parenting program. The results suggested that there was a significant reduction post-treatment in CBCL internalizing, externalizing, and total scores. The study provided evidence in support of therapeutic improvement achieved by some young people whose parents attended the program; however, results indicated that the impact of this program as a stand-alone group-training program may be limited. It is suggested that greater impact would be likely if both the parent and

adolescent were present and sessions for both the parent and adolescent were included as part of the overall intervention.

**Pharmacological Aspects of Treatment.** Tcheremissine and Lieving (2006) discuss the pharmacological aspect of effective interventions in treating conduct disorder, in their article, “Pharmacological Aspects of the Treatment of Conduct Disorder in Children and Adolescents.” They discuss evidence supporting the use of antipsychotics, antidepressants, mood stabilizers, antiepileptic drugs, stimulants, and adrenergic drugs as effective therapeutic options for individuals with conduct disorder; however, also address the importance of combining psychopharmacology with behavioral and psychosocial interventions. They provide a summary of selected studies of pharmacological treatments for conduct disorder, stating that there is currently no single pharmacological intervention that can radically change the course of conduct disorder or overcome the long-term prognosis, therefore a comprehensive treatment plan must be used to in treating adolescents with conduct disorder. They discuss the benefits and drawbacks of the above listed psychopharmacological interventions, specifically addressing the significant impact that Lithium and Risperidone have had on symptoms of conduct disorder. They bring light to concerns around the association of antidepressants and suicidal ideation in children and adolescents. They also discuss the importance of evaluating the efficacy of psychopharmacological interventions in inpatient settings and outpatient settings separately, as the severity of the conduct disorder symptoms likely varies between patients in inpatient and outpatient settings. They also suggest that it is equally important to test psychopharmacological interventions with children and adolescents separately, as some psychopharmacological interventions have been shown to be useful for the treatment of aggressive children with conduct disorder, but the same conclusions cannot be drawn for adolescents.

**Controlled Trials of Pharmacological Interventions.** Sarteschi (2014) located and reviewed studies of psychopharmaceutical randomized controlled trials, in his article, “Randomized Controlled Trials of Psychopharmacological Interventions of Children and Adolescents with Conduct Disorder: A Descriptive Analysis” (2014). Fifteen randomized, controlled studies were located and reviewed, all studying youths with the singular diagnosis of conduct disorder. None of the studies were longer than 10 weeks in length, and none had more than 100 participants. The studies were primarily conducted on all-male participants in inpatient hospital settings. Sarteschi reported that it was striking to find how few drug intervention studies exist when conduct disorder is selected as the sole area of investigation. Sarteschi states that Lithium and antipsychotics are tested most often in the treatment of conduct disorder, with Lithium being the most documented drug treatment for CD; however, the results are mixed. According to her research, long-term efficacy data were limited in pediatric populations and, in some studies, symptoms worsened. Sarteschi also found that Smith and Coghill’s (2010) research uncovered that Risperidone was effective for youths with conduct disorder that did not possess a comorbid ADHD diagnosis. Her findings indicate that need for future, lengthy conduct disorder medication trials that follow the Consolidated Standards of Reporting Trails guidelines.

**Residential Treatment.** Frankfort-Howard and Romm (2002) studied the outcomes of residential treatment on adolescents diagnosed with conduct disorder, in their article, “Outcomes of Residential Treatment of Antisocial Youth: Development of or Cessation from Adult Antisocial Behavior.” The authors studied the case histories of 42 former residents, presenting with an admitting diagnosis of conduct disorder and/or a juvenile court finding of delinquency, ranging in age from fourteen to eighteen, of an adolescent residential program. The study uncovered that significantly fewer youth persisted in their antisocial behavior into adulthood than

the national average, and that, of those who persisted, none of them completed treatment. In this study, none of the young persons who completed treatment moved into adult antisocial behavior. Many studies suggest that 40-50% of antisocial youth persist into their antisocial behavior into adulthood, and only 28.6% of the subjects of this study did. The authors do highlight that the number of residential treatment outcome studies with young people diagnosed with conduct disorder remains low, making it difficult to fully understand the impact of residential treatment on outcome.

**Eye Movement Desensitization and Reprocessing (EMDR).** Soberman, Greenwald, and Rule (2002) look at eye movement desensitization and reprocessing as a treatment strategy for conduct disorder, in their article, “A Controlled Study of Eye Movement Desensitization and Reprocessing (EMDR) for Boys with Conduct Problems.” The article discusses the association of trauma contributing to the development and persistence of conduct problems. EMDR is a promising trauma treatment. The participants included 29 boys with conduct problems, in residential or day treatment, who were randomized into standard care or standard care plus three trauma-focused EMDR sessions. The group who received the EMDR treatment showed significant reduction of memory-related distress, as well as trends towards reduction of post-traumatic symptoms, and large and significant reduction of problem behaviors by 2-month follow-up. The findings support the use of EMDR in trauma treatment for boys ages 10-16, as well as the hypothesis that effective trauma treatment can lead to reduced conduct problems.

**Behavioral and Pharmacological Treatments.** Peterson and Scanlan (2002) provide a review of some of the most effect behavioral and pharmacological treatments identified in the research, in their article, “Diagnosis and Placement Variables Affecting the Outcome of Adolescents with Behavioral Disorders.” In reviewing the research, the authors discuss

multisystemic therapy as one of the most effective alternatives identified in the research. The authors then completed an outcome study that analyzed the outcome of the population according to the variables suggested in the literature, including diagnosis, comorbidity, and living environment. The subjects included 37 males, drawn randomly from the total population of 92 males, who participated in a residential treatment program. Their post-treatment functioning was assessed using the Global Assessment of Functioning (GAF) scale. The results support that adolescents with conduct disorder may be more treatment resistant, evoke negative responses from peers and caregivers, and negatively affect their level of functioning. Comorbidity also negatively affects adjustment. The results also indicate that adolescents with conduct disorder showed a lower level of functioning when placed in group home environments than in foster or family-home environments, and that the home environment is the best placement in which treatment can occur for an adolescent with a primary or secondary diagnosis of conduct disorder.

**Parenting Intervention.** Day, Kowalenko, Ellis, Dawe, Harnett, and Scott (2011) look at a specific parenting program designed to intervene with children with severe conduct problems, in their article, “The Helping Families Programme: A new parenting intervention for children with severe and persistent conduct problems.” The authors conducted literature reviews and consultation with experts to better understand factors that contribute to severe and persistent conduct problems and identify principles and methods to be included in their new parenting program intervention. They developed the Helping Families Programme, which is grounded in an ecological perspective and is deemed an innovative, multimodal intervention. Fifteen families serve as the participants of the study. The results of the study are inconclusive, as the pilot was not complete at the time of this article’s publication; however, indicated that the initial piloting

of the program offered early support for the potential value of the underlying principles and methods of the program.

**Review of the Past Ten Years.** Burke, Loeber, and Birmaher (2002) review empirical findings on conduct disorder in their article, “Oppositional Defiant Disorder and Conduct Disorder: A Review of the Past 10 Years, Part II.” In reviewing empirical findings of conduct disorder research, the authors found that research has questioned that conduct disorder is intractable, especially when multiple domains of risk and impairment are being targeted in the intervention. The research suggests that there is not one single causative factor to conduct disorder; therefore it is not likely that one single modality will be effective in treating conduct disorder. The research discusses the ways in which conduct disorder has been regarded as resistant to treatment interventions and acknowledges that no giant leaps have been made in the treatment of conduct disorder; however, small steps have been taken particularly in new strategies of service delivery when it comes to conduct disorder. The reviewed research looks at psychopharmacological treatment, individual interventions, parent and family treatment, community-based interventions, and multimodal intervention.

Authors	Research Aim	Country	Research Design	Service Delivery Method	Participants	Citation
Geoffrey Baruch, Ioanna Vrouva, and Charles Wells	To evaluate the impact of a parent training program on young people presenting with conduct problems	England	A one-group pre-post design	Group-based parent training	123 parents of young people aged 10 to 17 with conduct problems	Baruch, G., Vrouva, I., & Wells, C. (2011). Outcome findings from a parent training programme for young people with conduct problems. <i>Child and Adolescent Mental Health</i> , 16(1), 47-54.
Jan K. Buitelaar,	To update diagnostic and	Netherlands	Literature Review	N/A	N/A	Buitelaar, J. K., Smeets, K. C.,

<p>Kirsten C. Smeets, Pierre Herpers, Floor Scheepers, Jeffrey Glennon, and Nanda N.J. Rommelse</p>	<p>therapeutic approaches to conduct disorder in light of the forthcoming DSM-5 definition</p>					<p>Herpers, P., Scheepers, F., Glennon, J., &amp; Rommelse, N. N. (2013). Conduct disorders. <i>Euro pean child &amp; adolescent psychiatry</i>, 22(1 ), 49-54.</p>
<p>Jeffrey D. Burke, Rolf Loeber, and Boris Birmaher</p>	<p>To review empirical findings on oppositional defiant disorder and conduct disorder</p>	<p>United States</p>	<p>Systematic literature review</p>	<p>N/A</p>	<p>N/A  Selected summaries of the literature over the past decade were presented</p>	<p>Burke, J. D., Loeber, R., &amp; Birmaher, B. (2002). Oppositional defiant disorder and conduct disorder: a review of the past 10 years, part II. <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i>, 41(11), 1275-1293.</p>
<p>Crispin Day, Sascha Kowalenko, Megan Ellis, Sharon Dawe, Paul Harnett, and Stephen Scott</p>	<p>To better understand the factors that contribute to severe and persistent conduct problems and to identify the principles and potential methods to be included in a new intervention</p>	<p>United Kingdom and Australia</p>	<p>Literature review and consultation with experts in the field</p>	<p>N/A</p>	<p>N/A</p>	<p>Day, C., Kowalenko, S., Ellis, M., Dawe, S., Harnett, P., &amp; Scott, S. (2011). The Helping Families Programme: A new parenting intervention for children with severe and persistent conduct problems. <i>Child and Adolescent Mental Health</i>, 16(3), 167-171.</p>
<p>Robyne Frankfort-Howard and Stephan Romm</p>	<p>To uncover the variables which might predict which youth go on to become antisocial adults and which do not</p>	<p>United States</p>	<p>Systematic literature review</p>	<p>N/A</p>	<p>N/A  The authors studied the case histories of 42 former</p>	<p>Frankfort-Howard, R., &amp; Romm, S. (2002). Outcomes of residential treatment of</p>

					residents of an adolescent residential treatment program, with either a diagnosis of conduct disorder or a court finding of juvenile delinquency	antisocial youth: Development of or cessation from adult antisocial behavior. <i>Residential Treatment for Children &amp; Youth, 19(3), 53-70.</i>
David J. Hawes, Matthew J. Price, and Mark R. Dadds	Are callous-unemotional traits associated with clinical outcomes and processes in the family-based treatment of child and adolescent conduct problems? Can family-based intervention produce change in callous-unemotional traits?	Australia	Systematic literature review	N/A	N/A  16 treatment outcomes studies were reviewed	Hawes, D. J., Price, M. J., & Dadds, M. R. (2014). Callous-unemotional traits and the treatment of conduct problems in childhood and adolescence: A comprehensive review. <i>Clinical child and family psychology review, 17(3), 248-267.</i>
Cecilia Andree Löfholm, Tina Olsson, Knut Sundell, and Kjell Hansson	Examining the 24-month post-referral outcomes of multisystemic therapy (MST) in reducing young people's behavior problems as compared with treatment as usual (TAU) provided within the normally operating social services	Sweden	A 2 (treatment type: MST vs TAU) x 2 (time: pre-treatment vs follow-up after 24 months) x 6 site (MST-team) mixed factorial design was used with a 50/50 random allocation between MST and TAU groups	Mental health	Young people aged 12-17 who fulfilled the criteria for a clinical diagnosis of conduct disorder according to the DSM-IV. The sample consisted of 95 boys (61%) and 61 girls (39%) with a mean age of 15.0 years	Löfholm, C. A., Olsson, T., Sundell, K., & Hansson, K. (2009). Multisystemic therapy with conduct-disordered young people: stability of treatment outcomes two years after intake. <i>Evidence &amp; Policy: A Journal of Research, Debate and Practice, 5(4), 373-397.</i>
Mary Peterson and Mark	A review of some of the most effective	United States	Systematic literature review	Data collection by telephone	37 males drawn randomly	Peterson, M., & Scanlan, M. (2002).

<p>Scanlan</p>	<p>behavioral and pharmacological treatments identified in the research</p> <p>To analyze the outcome (post-discharge success) of their population according to the variables suggested in the literature, including diagnosis, comorbidity, and living environment</p>		<p>Outcome study</p>		<p>from the total population of 92 males, who participated in the Residential Treatment Center (RTC) program at Regional West Medical Center (RWMC) in Scottsbluff, Nebraska during the time period between June 1999 to January 2001</p>	<p>Diagnosis and placement variables affecting the outcome of adolescents with behavioral disorders. <i>Residential Treatment for Children &amp; Youth, 20</i> (2), 15-23.</p>
<p>Christine M. Sarteschi</p>	<p>To review and assess published psycho-pharmaceutical randomized controlled trials targeting youths with the singular diagnosis of conduct disorder</p>	<p>United States</p>	<p>Systematic literature review</p>	<p>N/A</p> <p>15 studies were located and reviewed. None were longer than 10 weeks in length, and none had more than 100 participants</p>	<p>N/A</p>	<p>Sarteschi, C. M. (2014). Randomized Controlled Trials of Psychopharmacological Interventions of Children and Adolescents with Conduct Disorder: A Descriptive Analysis. <i>Journal of evidence-based social work, 11</i>(4), 350-359.</p>
<p>Nirbhay N. Singh, Giulio E. Lancioni, Subhashni D. Singh Joy, Alan S.W. Winton, Mohamed Sabaawi, Robert G. Wahler, and Judy Singh</p>	<p>To assess the effectiveness of a mindfulness training procedure in modulating aggressive behavior</p>	<p>Not indicated</p>	<p>Multiple baseline across subjects design , with four phases: baseline, training in mindfulness, mindfulness practice, and follow-up</p>	<p>Mental health/ dialectical behavioral therapy mindfulness training</p>	<p>Three seventh grade adolescents who were diagnosed with conduct disorder and at risk for expulsion from school because of aggressive behavior</p>	<p>Singh, N. N., Lancioni, G. E., Singh Joy, S. D., Winton, A. S., Sabaawi, M., Wahler, R. G., &amp; Singh, J. (2007). Adolescents with conduct disorder can be mindful of their aggressive behavior. <i>Journal of Emotional and Behavioral</i></p>

						<i>Disorders, 15 (1), 56-63.</i>
Glenn B. Soberman, Ricky Greenwald, and David L. Rule	To test the hypothesis that successful trauma treatment—as indicated by reduction in trauma-related distress—would lead to a reduction in conduct problem symptoms	United States	Experimental design: Random assignment in treatment group versus control group (standard care or standard care plus 3 trauma-focused EMDR sessions)	Residential or day treatment	29 males, ages 10-16, with conduct problems in residential or day treatment  14 participants in the experimental group and 15 in the control group	Soberman, G. B., Greenwald, R., & Rule, D. L. (2002). A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problems. <i>Journal of aggression, maltreatment &amp; trauma, 6(1), 217-236.</i>
Oleg V. Tcheremissine and Lori M. Lieving	To examine pharmacological aspects of the treatment of conduct disorder	United States	N/A	Literature Review	N/A	Tcheremissine, O. V., & Lieving, L. M. (2006). Pharmacological aspects of the treatment of conduct disorder in children and adolescents. <i>CNS drugs, 20(7), 549-565.</i>

Table 1. General Overview of Each Article.

**Quality Assessment**

A quality assessment was completed for all twelve articles, using four assessment criteria including: clarity of the article’s purpose, adequate description of the subjects in each article, adequate description of the date in each article, and whether or not the study evaluates its original aim. For the purpose of the quality assessment, a scale of 1-4 was used to rate the articles, with 1 being poor, 2 being fair, 3 being good, and 4 being very good. All twelve of the articles did a good to very good (3-4) job of clearly articulating the purpose of the article (see Table 2). There was no difficulty in identifying the purpose in any of the twelve articles. Eleven

of the twelve articles did a good to very good (3-4) job of adequately describing the subjects in each other (see Table 2), with the exception of the article by Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2013). The article by Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2013) did not identify any subjects for their article, including not identifying the search criteria used to identify the research referenced in their article.

All twelve articles did a fair to very good (2-4) job of adequately describing the data, with the rating score based on the clarity of the description and amount of substance given in the description (see Table 2). Nine of the twelve articles, or a significant 75% of the articles, did a very good job of adequately describing the data (see Table 2). One of the twelve articles, or approximately 8%, did a good job of adequately describing the data (see Table 2). Two of the twelve articles, or approximately 17% of the articles, did a fair job of adequately describing the data (see Table 2). The nine articles that did a very good job of adequately describing the data provided a clear, adequate, full description of the data. The article by Soberman, Greenwald, & Rule (2002) provided a very comprehensive, detailed description of the data; however, the data was somewhat difficult to interpret due to unfamiliarity with reading MANOVA and t-Test results and unfamiliarity with interpreting inferential statistics. The article by Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2013) did not present any data to identify. The article by Day, Kowalenko, Ellis, Dawe, Harnett, & Scott (2011) had inconclusive data, due to the pilot program being incomplete at the time of this article's publication.

All twelve articles did a good to very good (3-4) job of evaluating the study's original aim (see Table 2). Overall, 10 of the 12 articles, or approximately 83% of the articles, received a 3 (good) or 4 (very good) in all four categories, with all twelve articles receiving a 3 (good) or 4 (very good) in at least two out of the four categories, or 50% of the categories. The majority of

the articles ranked very highly across all four of the assessment criteria, thus making these twelve articles a strong selection for the purpose of this systematic literature review.

Article	Is the purpose of the article clear?	Are the study subjects adequately described in the article?	Is there an adequate description of the data?	Does the study evaluate its original aim?
“Outcome findings from a parent training programme for young people with conduct problems” (Baruch, Vrouva, & Wells, 2011).	4	4	4	4
“Conduct disorders” (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2013).	3	1	2	3
“Oppositional defiant disorder and conduct disorder: a review of the past 10 years, part II” (Burke, Loeber, & Birmaher, 2002).	4	4	4	4
“The Helping Families Programme: A new parenting intervention for children with severe and persistent conduct problems” (Day, Kowalenko, Ellis, Dawe, Harnett, & Scott, 2011).	3	4	2	3
“Outcomes of residential treatment of antisocial youth: Development of or cessation from adult antisocial behavior” (Frankfort-Howard & Romm, 2002).	4	4	4	4
“Callous-unemotional traits and the treatment of conduct problems in childhood and adolescence: A comprehensive review” (Hawes, Price, & Dadds, 2014).	4	4	4	4
“Multisystemic therapy with conduct-disordered young people: stability of				

treatment outcomes two years after intake (Löfholm, Olsson, Sundell, & Hansson, 2009).	4	4	4	4
“Diagnosis and placement variables affecting the outcome of adolescents with behavioral disorders” (Peterson & Scanlan, 2002).	4	4	4	4
“Randomized controlled trials of psychopharmacological interventions of children and adolescents with conduct disorder: A descriptive analysis” (Sarteschi, 2014).	4	4	4	4
“Adolescents with conduct disorder can be mindful of their aggressive behavior” (Singh, Lancioni, Singh Joy, Winton, Sabaawi, Wahler, & Singh, 2007).	4	4	4	4
“A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problems” (Soberman, Greenwald, & Rule, 2002).	3	3	3	3
“Pharmacological aspects of the treatment of conduct disorder in children and adolescents” (Tcheremissine & Lieving, 2006).	4	4	4	4

Table 2. Quality Assessment. 1= Poor, 2= Fair, 3=Good, 4=Very good

## Thematic Analysis

### Defining Conduct Disorder

Research articles looking at conduct disorder differ slightly in their definition of the disorder. Singh, et al. (2007) highlight the American Psychiatric Association's (2000) definition of conduct disorder in the DSM-IV as, "A repetitive and persistent behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated (p. 93)." Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) define conduct disorder as, "A frequently occurring psychiatric disorder characterized by a persistent pattern of aggressive and non-aggressive rule breaking antisocial behaviors that lead to considerable burden for the patients themselves, their family and society" (p. 49). Baruch, Vrouva, & Wells (2011) suggest that conduct disorder is associated with severe functional impairment and often presents with disorders such as depression, anxiety, and ADHD. In addition to the above definitions, Day, Kowalenko, Ellis, Dawe, Harnett, & Scott (2010) discuss the associations with conduct disorder of frequent and serious non-compliance, aggression, destructiveness, and violation of social rules such as lying and bullying, in addition to the family and social risk factors and problematic outcomes in emotional and social development. Soberman, Greenwald, & Rule (2002) state that the behaviors associated with conduct disorder constitute the basis of one-third to one-half of all child and adolescent clinical referrals. Peterson & Scanlan (2002) go as far as saying, "Conduct Disorder (CD) is a diagnosis that is easy to make and difficult to treat" (p. 16).

Singh, et al. (2007) discuss that often times adolescents with conduct disorder engage in aggressive and disruptive behaviors that are controlled or managed through behavioral or other psychosocial interventions; however, these interventions do not ensure lasting changes when these adolescents continue to be exposed to situations that may cause them to become aggressive

or disruptive. It is believed that as much as 40-50% of children with unaddressed antisocial behaviors go on to become antisocial as adults (Frankfort-Howard & Romm, 2002). Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) state that conduct disorder is a significant public health and societal concern, due to the significant burden for the patient, family, immediate environment, and the disruption caused in scholastic and work performance and also peer and family relationships. Two authors (Baruch, Vrouva, & Wells, 2011; Day, Kowalenko, Ellis, Dawe, Harnett, & Scott, 2010) agree that young people with conduct disorder are likely to have worse mental health, less successful family lives, and poorer social and economic outlooks in adulthood. Despite the public health and societal risks, excessive risk-taking behaviors and addictive behaviors associated with conduct disorder, and the economic costs of excessive and antisocial behavior in children and adolescents, conduct disorder has been relatively less studied compared to other psychiatric disorders (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012). Six articles mention the economic cost of conduct disorders that are left untreated, on individuals, families, and society (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Baruch, Vrouva, & Wells; Day, Kowalenko, Ellis, Daw, Harnett, & Scott, 2010; Löfholm, Olsson, Sundell, & Hansson, 2009; Tcheremissine & Lieving, 2006; Burke, Loeber & Birmaher, 2002). Burke, Loeber & Birmaher (2002) state:

Scott and colleagues (2001) found that the cost of using public services (including foster and residential care, remedial education services, and other societal costs) was three times greater for those with CD than for those with conduct problems that did not meet criteria for CD, and 10 times that of those with no conduct problems (p. 1288).

**Mindfulness**

“Mindfulness is the awareness and nonjudgmental acceptance by a clear, calm mind of one’s moment-to-moment experience without either pursuing the experience or pushing it away” (Singh, et al., 2007, p. 57). One study, or approximately 8% of the studies in this review, by Singh, et al. (2007) suggests that mindfulness practice can help these adolescents attend to the conditions that may cause or increase maladaptive behavior. A multiple baseline design was used to assess the effectiveness of a mindfulness-based training program to modulate the aggressive behavior of three adolescents who were diagnosed with conduct disorder. Despite suggesting that multicomponent treatments are most effective when working with adolescents with conduct disorder, Singh, et al. used a single-component therapy with adolescents who were facing a serious external contingency, expulsion from school. The hypothesis of the study was that adolescents could be taught a simple self-regulatory technique that they could then choose to use to control their aggressive behavior that had previously gotten them in trouble. Learning these socially acceptable self-regulatory skills would then help these adolescents take responsibility for their own lives and use these skills to manage and control their behaviors.

Singh, et al. (2007) used a mindfulness technique called Mindfulness on the Soles of the Feet, which has been used to control aggression. The researchers taught these adolescents to shift attention from an emotionally-stimulating thought, event, or situation to a neutral part of the body, or a part of the body that is not usually impacted by emotional stimulation, such as how the stomach is. In this study, the neutral part of the body is the soles of the feet. This technique had been previously studied with a young man with mental retardation and mental illness, as well as with individuals in an inpatient psychiatric hospital, and this study was an attempt to add to the research by using the same intervention, but with adolescents with conduct disorder. The three

seventh-grade adolescents were referred for therapy in their school, after having received multiple disciplinary actions and being at risk for expulsion due to aggressive behavior at school. Each student had a diagnosis of conduct disorder and had minimally passing grades at school, with IQs ranging from 105-115. One student also had a learning disability, history of bullying other students, history of fire setting, and history of psychiatric hospitalizations. Another student was in his fourth foster care placement, aggressive toward his peers, and cruel to neighborhood animals. The third student had been physically abused as a child, was aggressive toward her peers, was highly non-compliant, had a history of running away from home and school, and had a history of inpatient psychiatric hospitalizations.

During the training phase of the study (Singh, et al., 2007), an experienced and trained therapist met with each adolescent separately for about fifteen minutes, three times a week, for four weeks, to learn and practice the mindfulness technique. The adolescents initially expressed that they were not very interested in learning anything new, but then agreed that they needed to behave differently to avoid expulsion from school, and they agreed to use this mindfulness technique to control their aggressive behavior in school. The Mindfulness on the Soles of the Feet training aimed to help the adolescent control his or her emotion before it was expressed as a socially maladaptive behavior. After the twelve training sessions, the therapist met with each student once a month, for about 15 minutes, for 25 weeks, to discuss situations where the adolescents had been using the technique automatically. Singh et al. (2007) states, in terms of results:

For all three adolescents, the data shows that aggressive behavior or bullying decreased minimally during the mindfulness training and substantially during the 25 weeks of practice that followed training. Although the behaviors were not eliminated, they were

reduced to a level that was tolerated at their school... Follow-up data, accessed through school records, showed that all three adolescents graduated from middle school without any further threat of expulsion due to their aggressive behavior (p. 59).

The adolescents reported to the therapist that, at first, they practiced mindfulness inconsistently, until some of its benefits started to emerge, and then the adolescents began to practice mindfulness more consistently. The adolescents also reported that they experienced a number of benefits of using mindfulness, including relaxing, reduction in impulsivity, feeling more in control of their behaviors, being more focused on what they were doing, and improved sleep, and they were able to continue using the intervention effectively without any continued training from the therapist (Singh, et al., 2007).

Singh, et al. (2007) suggest that the data from their study indicates that, when adolescents choose to change their behavior, they are able to self-regulate specific behaviors in settings of their choice, for as long as they choose. They emphasize the importance of adolescents taking control of their behavior and assuming responsibility for all of their behaviors, both adaptive and maladaptive, as opposed to taking on the “victim mentality” of being misunderstood. A limitation of their study is that each of the three students were facing expulsion from school, which may have been quite a large incentive to exercise self-control, and there were no students in the study who were not facing this threat. It is also suggested that the therapist is/was a major role in the individuals being able to learn from, and apply, the mindfulness training. The adolescents were able to learn the mindfulness procedure successfully, use it in situations that previously triggered aggressive behavior, and maintain a decrease in aggressive behavior, keeping their aggressive behavior at “socially acceptable levels” in school.

**Eye Movement Desensitization and Reprocessing (EMDR)**

One study, or approximately 8% of the studies in this review, by Soberman, Greenwald, & Rule (2002) suggests the importance of trauma in its contribution to the development and persistence of conduct problems. Eye movement desensitization and reprocessing (EMDR) has been selected a promising trauma treatment and utilized in the study of Soberman, Greenwald, & Rule (2002) in treating twenty-nine boys with conduct problems in residential or day treatment. All of the participants reported at least one distressing traumatic memory, indicating a prevalence of trauma history for the purpose of the study. Regarding the importance of addressing trauma when working with children and adolescents with conduct problems, Soberman, Greenwald, & Rule (2002) state:

We know a lot about risk factors for the development of conduct disorder. These risk factors include: temperament, gender, low intelligence, ADHD, impulsivity, poor coping skills, social failure, parental psychopathology, inappropriate discipline, affiliation with deviant peers, and socioeconomic disadvantage. We address these factors with a variety of treatment approaches and help some youth to be successful in socially acceptable ways. Unfortunately, there is as yet no consistently effective treatment for adolescents with conduct disorder; even preferred approaches yield only modest results. This may be explained, at least in part, by failure to address the trauma component (p. 218).

Soberman, Greenwald, & Rule (2002) indicate that several bodies of literature provide convincing support for the proposition that trauma plays a key role in conduct problems, highlighting the violence begets violence, and trauma leads to many cardinal features of conduct disorder. Data suggests that EMDR has a similar effect across both child and adolescent age groups. Following their study, using EMDR on adolescent males with conduct disorder,

Soberman, Greenwald, & Rule (2002) were able to determine that EMDR did work for boys with conduct problems in reducing reactivity to treated traumatic memories, and treating traumatic memories with EMDR did lead to reduced conduct problems. Soberman, Greenwald, & Rule (2002) indicate that their findings replicate and extended previous findings supporting EMDR's effectiveness in resolving distress and reactivity associated with traumatic memories in child and adolescent populations, which in this case happened to be boys with conduct problems. The present findings also provide support for the theory that post-traumatic symptoms often contribute to the development and continued presence of conduct problems.

### **Psychopharmacological Treatments for Conduct Disorder**

Six studies, or approximately 50% of the studies in this review, suggested the importance of integrating psychopharmacological interventions in the treatment of conduct problems (Tcheremissine & Lieving, 2006; Singh, et al., 2007; Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Peterson & Scanlan, 2002; Sarteschi, 2014; Burke, Loeber, & Birmaher, 2002). Tcheremissine & Lieving (2006) state that behavioral manifestations of conduct disorder have become one of the most common reasons for referrals to community psychiatrists in recent years. According to two studies (Singh, et al., 2007; Tcheremissine & Lieving, 2006), there are no psychopharmacological treatments for conduct disorder approved or licensed by the Federal Drug Administration (FDA); although psychotropic drugs have been proven effective in controlling some symptoms of the disorder, such as aggression that is impulsive, explosive, hostile, or rageful. They go on to state that predatory or instrumental aggression that is associated with low levels of autonomic nervous system arousal typically does not respond to psychiatric medication. Four studies suggest that, when working with people with conduct disorder, psychopharmacological interventions are best used in combination with

psychosocial interventions (Tcheremissine & Lieving, 2006; Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Peterson & Scanlan, 2002; Sarteschi, 2014).

Tcheremissine & Lieving (2006) state that there is currently no single pharmacological intervention that can radically change the course of conduct disorder or overcome the long-term prognosis, therefore a comprehensive treatment plan must be used to in treating adolescents with conduct disorder. Sarteschi (2014) reviewed studies where a psychopharmacological intervention was introduced to adolescents with a singular diagnosis of conduct disorder and reported that it was striking to find how few drug intervention studies exist when conduct disorder is selected as the sole area of investigation. In terms of this writer's research, three studies suggest that psychopharmacological treatment for conduct disorder should be chosen in conjunction with the comorbid mental health condition that likely presents with conduct disorder in adolescents, or chosen to address specific target symptoms (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Peterson & Scanlan, 2002; Tcheremissine & Lieving, 2006). Tcheremissine & Lieving (2006) state, "Pharmacological interventions aimed at specific clinical targets, such as aggression, hyperactivity, anxiety, and mood symptoms, are an important part of a comprehensive therapeutic approach to the treatment of conduct disorder" (p. 561). Burke, Loeber, & Birmaher (2002) state, "Open reports and clinical experience have suggested that the mood stabilizers, the typical and atypical antipsychotics, Clonidine, and the stimulants may be used for the treatment of children and adolescents with CD" (p. 1285).

**Stimulants.** Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) discuss psychostimulants being used to treat aggression, in the context of comorbidity with ADHD, producing a medium to large effect on aggression. In discussing comorbid ADHD, Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) suggest that CNS

stimulants are well-studied, effective, and safe, and they seem to elicit a positive response and substantial short-term beneficial effects. Tcheremissine & Lieving (2006) suggest that, for a long time, stimulants were considered inappropriate for the treatment of children with conduct disorder; however, early work showed the effectiveness of d-amphetamine and methylphenidate in the improvement of antisocial behavior in adolescents. Burke, Loeber & Birmaher (2002) also support the effectiveness of methylphenidate in addressing specific symptoms of CD.

Tcheremissine & Lieving (2006) also state that trials of stimulants have suggested that the effectiveness of these stimulants on conduct-disordered behavior in adolescents demonstrates no relationship between ADHD severity and improvement in behaviors specific to conduct disorder. Burke, Loeber & Birmaher (2002) give caution to prescribing stimulants to adolescents with conduct disorder, given the high risk of substance abuse in adolescents with conduct disorder.

**Neuroleptics and Antipsychotics.** Low doses of antipsychotics can also be effective for managing aggressive symptoms in children and adolescents; however, producing worrisome side effects. Tcheremissine & Lieving (2006) suggest that antipsychotics are the most commonly prescribed drug in the United States for children and adolescents with severe patterns of disruptive and aggressive behavior. Two studies (Tcheremissine & Lieving, 2006; Burke, Loeber & Birmaher, 2002) state that Haloperidol and Lithium have both been found to decrease behavioral symptoms. Tcheremissine & Lieving (2006) state that Haloperidol is associated with less adverse effects than Lithium, while Burke, Loeber & Birmaher (2002) state that Lithium is “better tolerated.” According to Tcheremissine & Lieving (2006), there is a growing body of data supporting the long-term tolerability and efficacy of Lithium in the pediatric population. Burke, Loeber & Birmaher (2002) also speak to the short-term efficacy of Lithium as opposed to long-term efficacy. Sarteschi (2014) states that Lithium and antipsychotics are tested most often in the

treatment of conduct disorder, with Lithium being the most documented drug treatment for CD; however, the results are mixed. According to Sarteschi's (2014) research, long-term efficacy data were limited in pediatric populations and, in some studies, symptoms worsened. Tcheremissine & Lieving (2006) state that Aripiprazole and Olanzapine have also been found to be effective in reducing aggressive and impulsive behaviors in children, while Burke, Loeber & Birmaher (2002) suggest that Carbamazepine was not found to be effective in addressing aggression. Tcheremissine & Lieving (2006) suggest that the adverse effects of antipsychotics need to be considered for long-term use. Peterson & Scanalan (2002) suggest that neuroleptics can be beneficial in treating paranoia, psychotic ideation, and aggression; however, like Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012), they agree that the side effects can potentially outweigh the benefits.

In discussing antipsychotics for the treatment of conduct disorder, Burke, Loeber & Birmaher (2002) state that both Molindone and Thioridazine have been found to be effective in addressing aggression; however, Risperidone has been found to be superior and safe for the short-term treatment of children and adolescents with conduct disorder. According to, Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012), Risperidone, an anti-psychotic drug that is often prescribed off-label, is the most extensively studied medication for aggression and conduct disorder in children and adolescents, proving to have a large effect on aggression in a sample of 875 subjects. Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) report that, in Europe, Risperidone has been approved for six-week treatment of aggression in conduct disorder in children and adolescents with subaverage intellectual functioning or mental retardation. Tcheremissine & Lieving (2006) agree that outcomes from several clinical trials support the anti-aggressive properties of Risperidone in adolescents with disruptive behavior and

developmental disabilities, and also suggest that Risperidone may have efficacy in treatment of aggressive youth with conduct disorder. Sarteschi (2014) found that Smith and Coghill's (2010) research uncovered that Risperidone was effective for youths with conduct disorder that did not possess a comorbid ADHD diagnosis.

**Antidepressants.** Peterson & Scanlan (2002) suggest antidepressants, particularly the SSRI's for depressive and anxiety disorders, along with impulsivity, and Clonidine and Quanfacine for hyperarousal symptoms, commonly in tandem with stimulants. Tcheremissine and Lieving (2006) support those findings, indicating that Clonidine has proven to show significant improvement in decreasing symptoms of aggressiveness. Tcheremissine & Lieving (2006) suggest that a growing body of data supports the use of antidepressants in treating individuals with symptoms of conduct disorder, particularly because of the relationship between Serotonin and aggression, with Trazodone and Citalopram demonstrating positive impact on aggressive and impulsive behaviors. Tcheremissine & Lieving (2006) address the growing concern in the scientific community and general public that widely used antidepressants might be associated with increased risk of suicide in the pediatric population. Tcheremissine & Lieving (2006) go on to suggest that all patients and families should be alerted of this risk when discussing antidepressants as a form of treatment.

**Mood stabilizers.** Mood stabilizers can also reduce aggression associated with conduct disorder, producing a moderate effect. Anti-convulsants or mood stabilizers are used for bipolar disorder and states of mood lability or severe impulsivity (Peterson & Scanlan, 2002).

Tcheremissine & Lieving (2006) state that the mood stabilizer Valproate Semisodium has been examined as a treatment for adolescents with disruptive behavior and resulted in significant, dose-dependent improvements in measures of impulse control and self-restraint completed by

both clinicians and subjects, both being variables that have been shown to be predictive of clinical recidivism. Tcheremissine & Lieving (2006) also state that Carbamazepine was examined in treating aggressive and explosive children diagnosed with conduct disorder; however, it was not superior to the placebo in the study and was accompanied by a number of adverse effects. Sarteschi (2014) states that Lithium is the most common mood stabilizer that is used in the treatment of aggression associated with conduct disorder; however, the results are mixed. Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) state that clinicians are often deterred from using Lithium in children and adolescents, due to the need for frequent blood sampling and association with adverse side effects. According to Sarteschi's (2014) research, long-term efficacy data were limited in pediatric populations and, in some studies, symptoms worsened. Regarding sedatives and anxiolytics, especially benzodiazepines and antihistamines, Peterson & Scanlan (2002) suggest that they generally show limited usefulness and their problematic side-effects on memory and cognition, along with abuse potential, outweigh any therapeutic significance.

Tcheremissine & Lieving (2006) discuss the importance of evaluating the efficacy of psychopharmacological interventions in inpatient settings and outpatient settings separately, as the severity of the conduct disorder symptoms likely varies between patients in inpatient and outpatient settings. They also suggest that it is equally important to test psychopharmacological interventions with children and adolescents separately. They state that, for example, Lithium has been shown to be useful for the treatment of aggressive children with conduct disorder; however, the same conclusion could not be drawn for adolescents.

### **Family-Based Interventions**

Family-based interventions were the most highly suggested intervention for working with children and adolescents with conduct disorder, with nine of the twelve studies in this review, or 75%, suggesting the importance of family-based intervention (Singh, et al., 2007; Hawes, Price & Dadds, 2014; Day, Kowalenko, Ellis, Daw, Harnett, & Scott, 2010; Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Baruch, Vrouva, & Wells, 2011; Löfholm, Olsson, Sundell, & Hansson, 2009; Peterson & Scanlan, 2002; Tcheremissine & Lieving, 2006; Burke, Loeber & Birmaher, 2002). Singh, et al. (2007) suggest that most empirically tested psychosocial interventions focus primarily on overt, rather than covert, maladaptive behaviors. Singh, et al. (2007) go on to discuss the primary role of family members in the development and maintenance of overt, versus covert, conduct problems in children and adolescents, thus requiring that these interventions are delivered within the family context. Singh, et al. (2007) do not define “overt” versus “covert” in their article, therefore, these definitions were sought elsewhere. In an article by Loeber & Schmalting (1985), “Empirical evidence for overt and covert patterns of antisocial conduct problems: A metaanalysis,” overt or confrontive antisocial behaviors are defined as behaviors such as arguing, temper tantrums, and fighting. Loeber & Schmalting (1985) define covert or concealed antisocial behaviors as behaviors such as stealing, truancy, and fire setting. Hawes, Price, & Dadds (2014) also discuss the importance of parent-child dynamics and parenting practices in understanding and addressing child and adolescent conduct problems. Singh, et al (2007) suggest that family-based interventions are effective to some extent; however, they have limitations particularly in terms of their requirements for extensive parent involvement and effort, as well as socioeconomic barriers encountered by the parents.

Day, Kowalenko, Ellis, Daw, Harnett, & Scott (2010) comprehensively address the complex issues associated with conduct disorder in children living in complex social situations, stating:

Children with severe and persistent conduct problems living in complex family circumstances are exposed to significantly elevated risks of future negative outcomes, such as criminal activity, substance misuse, and unemployment (Broidy et al., 2003) and are more likely to be responsible for the significant social and economic costs associated with conduct disorder (p. 167).

Five studies discuss the effectiveness of parent training programs, based on social learning theory, in addressing conduct problems in young people and addressing the internalizing of problems in young people (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Baruch, Vrouva, & Wells, 2011; Day, Kowalenko, Ellis, Daw, Harnett, & Scott, 2010; L fholm, Olsson, Sundell, & Hansson, 2009; Hawes, Price, & Dadds, 2014).. All five studies suggest the importance of reducing harsh and inconsistent parenting practices and increasing positive and consistent parenting practices. Burke, Loeber & Birmaher (2002) also discuss the effectiveness of parent training programs; however, suggesting that parent child interaction training (PCIT) has been demonstrated to be more beneficial, specifically in younger children. Two studies emphasize the importance of parent management training (PMT), a treatment that teaches parents consistent parenting practices, positive and less harsh discipline practices, ways to effectively monitor children, and techniques for giving positive feedback to children. They suggest that parent management training programs are effective in decreasing aggression, as well as decreasing oppositional and non-compliant behavior, through attending to appropriate behavior while responding directly and consistently to disruptive or deviant behavior (Buitelaar,

Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Peterson & Scanlan, 2002). Like Singh, et al. (2007), Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) acknowledge the impact of parent psychopathology, work stress, and lack of motivation on parents' participation in treatment. Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) also indicate that the data suggests that the effectiveness of parent management training declines with increasing age of the child, with strong evidence for efficacy limited to children up to around eight years of age.

Baruch, Vrouva, & Wells (2011) agree that parent training programs are an effective intervention for addressing conduct problems in young people, specifically highlighting the effectiveness of group-based parent training programs. They suggest parent-training programs for twelve to seventeen year olds with conduct problems, and family-focused interventions including Multisystemic Therapy (MST) and Functional Family Therapy for more severe or persistent antisocial behavior. According to Baruch, Vrouva, & Wells (2011), "Parent training uses behavior management principles taken from social learning theory (Miller & Prinz, 1990; Kazdin, 2005; Scott & Yule, 2008; Scott & Dadds, 2009). It includes training parents in how to track and monitor behavior, training in the use of positive reinforcement, and training to use mild punishment in an immediate and predictable manner" (p. 47). The results of the study did suggest that, while the program had a significant impact on conduct problems in adolescents, the impact might have been even greater if both the parent and adolescent were present for the sessions and if the adolescents were a more integral part of the overall intervention.

Five studies (Peterson & Scanlan, 2002; Baruch, Vrouva, & Wells, 2001; L fholm, Olsson, Sundell, & Hansson, 2009; Tcheremissine & Lieving, 2006; Burke, Loeber & Birmaher, 2002) indicate that the research states that the most effective interventions to treat adolescents

with conduct disorder are interventions with family involvement, with Multi-Systemic Therapy (MST) being one of the most effective alternatives identified in the research. Löfholm, Olsson, Sundell, & Hansson (2009) define Multi-Systemic Therapy as, “An intensive family and community-based treatment for adolescents with serious clinical problems that include criminal behavior, violence, substance abuse, and serious emotional disturbance (Henggeler et al., 2007” (p. 373). Peterson & Scanlan (2002) state that MST develops interventions and support within the family, while using the family system’s strengths as “treatment levers” to help move and shape the adolescent’s behaviors, while Löfholm, Olsson, Sundell, & Hansson (2009) state that MST aims to restructure a young person’s ecology to support pro-social development and decrease delinquent behavior. According to Burke, Loeber & Birmaher (2002), MST has been demonstrated not only to be effective in reducing antisocial behavior but also to be highly cost-effective. Similar to MST, although in a therapeutic foster care setting, Tcheremissine & Lieving (2006) suggest that Multidimensional Treatment Foster Care (MTFC) has been effective in targeting youth within the context of therapeutic foster homes, using family therapy and school intervention components. The youth receive discipline and positive reinforcement from two, carefully-trained parents for approximately six months and then are returned to their homes for continued support and parent training.

Day, Kowalenko, Ellis, Daw, Harnett, & Scott (2010) discuss the development of a new multimodal parenting program intervention for parents of children with conduct disorder, which uses a modular approach to address parent behavior, cognition and emotion across five key risk factor domains: parental mood and dysregulation; parent-child, family, and school relationships; substance misuse; social support and networks; and managing life events and crises. While the outcomes of this study are inconclusive, due to the program continuing to be piloted at the time

the article was written, the program was guided by the Medical Research Council (MRC) framework for the development and evaluation of complex interventions and was also developed based on the effectiveness of Multi-Systemic Therapy (MST) and Functional Family Therapy, and the initial pilot offered support for the potential value of this program.

Hawes, Price, & Dadds (2014) discuss their research around the impact of callous-unemotional traits in treatment of children and adolescents presenting with symptoms of conduct disorder, in comparison to children and adolescents who do not present with callous-unemotional traits (lack of guilt, lack of empathy, shallow affect, etc.). They suggest that the presence of callous-unemotional traits have been examined as a predictor of conduct problems following parent training intervention in a small amount of studies to date; however, in those studies, there appears to be a significant correlation between callous-unemotional traits and poor treatment outcomes. They go on to suggest that there are inconsistencies in whether the following factors impact or change callous-unemotional traits in children: change in parents' psychological aggression towards their child, improvements in harsh/inconsistent parenting, and parental distress. Hawes, Price, & Dadds (2014) indicate that, despite the effectiveness of these interventions appearing to non-significant, these interventions are a good place to start and may result in clinically significant gains nonetheless. They also state that there is evidence that suggests that social-learning-based parenting training is capable of producing lasting improvement in callous-unemotional traits, particularly when delivered in early childhood. Hawes, Price, & Dadds (2014) go on to suggest that therapeutic gains for children with significant callous-unemotional traits will most likely arise from shifts in parent-child emotional engagement, as operationalized by behavior such as reciprocal eye contact. Hawes, Price, & Dadds (2014) state, "Eye contact is critical to understanding the emotional state of the other and

is critical for the healthy development of conscience, empathy, and social competence” (pp. 262-263).

Löfholm, Olsson, Sundell, & Hansson (2009) discuss the implementation of Multisystemic therapy within the normally operating social services of Sweden, assessing for effectiveness after seven months, and found that multisystemic therapy performed no better or no worse than other interventions offered to children and adolescents with behavior problems. However, 24-month post-referral follow-up was then completed, due to the research suggesting that multisystemic therapy treatment effects may emerge only between twelve and eighteen months after the initiation of the intervention. Löfholm, Olsson, Sundell, & Hansson (2009) studied the impact of MST on youth psychiatric symptoms, delinquent behaviors, substance use, social competence, and school attendance. They also looked at involvement of other social services, parenting skills, and parental mental health. Their findings do not support the long-term effectiveness of MST, contrary to long-term results achieved in the United States and Norway but similar to results obtained in Canada, relative to the services usually available for conduct-disordered young people in Sweden, as most of the young people in the treatment and control groups showed a decrease in their problem behavior and an improvement in their family relations and social skills.

Löfholm, Olsson, Sundell, & Hansson (2009) state that, in the United States, research on the effectiveness of MST has shown positive results in both the short-term and long-term, and similar results have been reported from Norway. According to Löfholm, Olsson, Sundell, & Hansson (2009), an unpublished study from Canada was unable to successfully replicate treatment results, and meta-analytic reviews of MST have produced contradictory results. Opportunities to influence implementation, adherence to the MST treatment model, and

demographic and organizational differences may influence the outcomes of different trials of multisystemic therapy. Löfholm, Olsson, Sundell, & Hansson (2009) discuss the differences between the approaches of the United States and Sweden with young offenders, stating that young offenders (up to twenty years old) in Sweden are almost entirely aided through a child welfare approach, with therapeutic interventions, while young offenders in the United States are processed within the juvenile justice system, which is a risk factor in itself.

Löfholm, Olsson, Sundell, & Hansson (2009) state that, in Sweden, the standard procedure for prosecutors or criminal courts that come into contact with delinquent youth is to refer them to social services rather than imposing legal sanctions on the individual, and only 14% of young people referred for intervention are placed outside the home, while the remainder are provided with in-home services. Löfholm, Olsson, Sundell, & Hansson (2009) state:

In addition to young offenders, the social child welfare system in Sweden is also charged with intervening when young people display other problem behaviors such as aggression, substance use, and school problems. In other words, the target group for child welfare services in Sweden may be broader than is the case with the US juvenile justice system. A meta-analysis has shown, for example, that treatment given by the juvenile justice system has worse effects than treatment mediated by other institutions (Lipsey, 1999). In many states in the US, age of criminal responsibility is 10 years, and the sanctions are intended to punish rather than rehabilitate (Tonry & Doob, 2004). In addition, placement in out-of-home care is the most common intervention aimed at youths with antisocial problem behavior (Lipsey & Wilson, 1998) and in-home services have developed primarily to relieve the pressure on youth institutions (Altschuler, 1998). This may mean that alternatives to placement of youth with problem behaviors are considered only once

institutionalization has been ruled out. Taken together, these differences may have an impact on the relative effectiveness of treatment as usual in Sweden when compared to the US (p. 390).

Hawes, Price, & Dadds (2014) also discuss inconsistencies in the wide and long-term effectiveness of parent training programs, indicating that the factors that predict, influence, or account for these variations in treatment outcomes remains limited and inconsistent to date. Hawes, Price, & Dadds (2014) do suggest that poor response to intervention has been associated with a range of socioeconomic factors that may interfere with the family's ability to implement strategies and engage with services. Hawes, Price, & Dadds (2014) state:

These include socioeconomic disadvantage, minority group status, younger maternal age, and parental psychopathy (e.g., Beauchaine et al., 2005; Gardner et al., 2010; Lundahl et al., 2006; Reyno and McGrath, 2006). In contrast, the notion that child characteristics may contribute to individual differences in treatment response has received relatively little attention, as have the mechanisms through which such characteristics might interact with core therapeutic processes (Matthys et al., 2012; Schechter et al., 2012) (p. 251).

### **Residential Treatment and Peer Group Interventions**

Two studies, or approximately 17% of the studies in this review, suggested residential treatment or peer group association as interventions for addressing conduct problems in adolescents (Peterson & Scanlan, 2002; Frankfort-Howard & Romm, 2002). Peterson & Scanlan (2002) addressed peer groups as an intervention when working with adolescents with conduct problems. Peterson & Scanlan (2002) state:

Dishon, McCord, and Poulin (1999) highlight the problems related to the iatrogenic effects that occur in peer-group interactions. Their longitudinal research showed that the “deviancy training” which happens in long-term treatment group settings, increases adolescent problem behavior and negative lifetime outcomes. Other research has supported the negative influence of deviant peers on the psychosocial development of adolescents (Patterson, 1993; Elliott, Huizinga, & Ageton, 1985) (p. 17).

Burke, Loeber & Birmaher (2002) also caution peer group interventions, due to the finding of iatrogenic effects of early-adolescent interventions that bring together children with conduct problems. Peterson & Scanlan (2002) state that residential treatment level of care is often considered unavoidable and essential in treating high-risk adolescents. Peterson & Scanlan (2002) state:

Residential treatment is required for those adolescents who represent significant risk to themselves or others and who cannot be maintained in a community setting. Many of these adolescents have a diagnosis within the behavior disorder spectrum. The adolescents within this spectrum present a unique challenge, because the group environment of a residential program may be at odds with the concept of family and home interventions that have been identified as successful strategies in the research (pp. 17-18).

Burke, Loeber, & Birmaher (2002) state that association with deviant peers appears to lead to the initiation of delinquent behavior in boys and exposure to delinquent peers may enhance preexisting delinquency. Peterson & Scanlan (2002) conducted a study of a residential treatment program that used a combination of positive peer-culture and a structured behavior medication program to treat adolescents with a diagnosis on the behavior disorder spectrum.

Their study indicated that adolescents with conduct disorder who were discharged to either home or treatment foster care displayed significant higher levels of functioning, compared to adolescents who were discharged to group home environments. They suggest that adolescents with conduct disorder may be more treatment resistant, often evoking negative responses from peers and caregivers, which then negatively impacts their level of functioning. In conclusion, Peterson & Scanlan (2002) state:

A home environment is the best placement in which treatment can occur for an adolescents with a primary or secondary diagnosis of conduct disorder. The reason for that success may be the lack of “deviancy training” or it may be the development of wrap-around services that are anchored to a home environment. However, there is a secondary benefit to RTC programs, as they are then able to treat their adolescent populations without the effect of “deviancy training” by the conduct-disordered adolescents. Thus, the axiom of “there’s no place like home” is often true for many reasons (p. 21).

In contrast, Frankfort-Howard & Room (2002) suggest that residential treatment has proven to be effective in managing conduct problems in adolescents, specifically if the adolescent completes the program. They suggest that, for treatment to be effective, the treatment must address all the problem areas an antisocial youth presents with, including behavioral, affective, academic, and social. Frankfort-Howard & Romm (2002) also speak to the importance of aftercare programs for adolescents post-discharge, in order to address stress in their environment and provide continued support.

Burke, Loeber & Birmaher (2002) suggest that school-based interventions, ranging from the use of metal detectors and playground activities to overall school organization and

philosophy, have found mild outcomes at best, with little to no behavioral change. School programs designed to reduce bullying, a symptom of conduct disorder have increased over the years, incorporating a number of strategies to reduce bullying; however, evaluations of these programs have found mixed results in the reduction of bullying and antisocial behavior.

### **Cognitive Behavioral Skills Training**

Two studies, or approximately 17% of the studies in this review, discuss the use of cognitive behavioral skills training in addressing and intervening with conduct problems in adolescents (Singh, et al., 2007; Peterson & Scanlan, 2002). Singh, et al. (2007) suggest that cognitive-behavioral skills training programs have been shown to be effective with adolescents with aggressive conduct problems, as adolescents are enabled to engage in and take control over their own behavior, as well as problem-solve more effectively around situations that evoke different behaviors. However, they suggest that there is concern around whether or not children and adolescents with conduct disorder will actually choose to learn a cognitive behavioral approach and then engage in it long enough to utilize that approach long-term. Singh, et al. suggest that there is a need to develop and evaluate single-component self management strategies and that cognitive-behavioral approaches, especially skills training programs, have provided the most effective example of this type of approach; however, these approaches have only demonstrated a short-term effect on the behavior of children with conduct problems. Singh, et al. (2007) state:

One way of improving the long-term effectiveness of cognitive-behavioral strategies may be to teach children with conduct disorders a specific skill that can enable them to self-regulate a single or a small number of particular behaviors in specific settings. The onus of change is then on the adolescent rather than on an external agency, such as parents,

teachers, or therapists. How to motivate an adolescent with conduct problems to self-regulate his or her behavior is, of course, an entirely different matter (p. 61).

Peterson & Scanlan (2002) also indicate that cognitive-problem-solving-skills are an empirically supported treatment of conduct issues. Like Singh, et al. (2007), they state that cognitive problem-solving skills trainings enables youth to identify appropriate, pro-social ways to achieve their goals, as well as identify potential negative consequences to their behavior.

### **Multi-Modal Interventions**

Nearly all of the studies mention the importance of interventions for adolescents with conduct disorder being multifaceted; however, four studies in particular discuss multi-modal intervention more in depth (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Tcheremissine & Lieving, 2006; Peterson & Scanlan, 2002; Burke, Loeber, & Birmaher, 2002). Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) suggest that aggressive behaviors, such as hitting, pushing, slapping, biting, kicking, spitting, and hair pulling are universal in young children; however, children and adolescents who are diagnosed with conduct disorder have not socialized and learned to inhibit these aggressive behaviors, thus continuing to manifest aggressive and rule-breaking behaviors. They suggest that, to be effective, treatment of conduct disorder must be multi-modal, involving a family-based and social systems-based approach, and continuing over an extended period of time. The patient and his or her parents/caregivers should be informed of the diagnosis, its potential consequences, and the need for long-term treatment, and crises should be dealt with through family support, problem solving, and outreach activities.

Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) state that pharmacotherapy should not be the first line of treatment, but should be considered when

patients are not responding to other interventions and are demonstrating escalated behaviors. They also state that it has been suggested that pharmacotherapy may be more effective when combined with psychosocial/behavioral treatments, as opposed to given alone. Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse (2012) state that many multi-focused psychosocial treatment programs have been developed, including parent management training, structural family therapy, and skill-building in one program. Tcheremissine & Lieving (2006) and Burke, Loeber & Birmaher (2002) also discuss the necessity of a multidisciplinary approach to the treatment of conduct disorder, including behavioral parent training, interpersonal skills training, family therapy, and the use of psychotropic agents, in order to increase the overall effectiveness of each applied intervention.

In terms of diagnosing and treating conduct disorder, Peterson & Scanlan (2002) state: A detailed and comprehensive neuropsychiatric evaluation should be completed with close attention to the medical history, including accidents, injuries, and corresponding deficits and dysfunction. There is wide agreement in the field that the best treatment of CD is multi-modal, which includes the medical, cognitive, behavioral, educational, family and environmental vulnerabilities of each child (pp. 16)

## **Discussion**

### **Summary of Findings**

This systematic literature review looked at strategies that are being used in working with adolescents who have been diagnosed with conduct disorder, as well as the outcomes we are seeing from these strategies or interventions. There is wide variation among practices, interventions, and treatments that are being used to manage conduct disorder. For the purpose of this study, conduct disorder is the sole mental health diagnosis that is being explored in terms of

treatment, despite other mental health diagnoses that may be closely correlated or intertwined with a diagnosis of conduct disorder. It proved to be difficult to focus solely on conduct disorder in children and adolescents, as much of the research suggests treatment of conduct disorder in terms of its comorbidity with another childhood mental health diagnosis. All of the articles defined conduct disorder similarly, as a repetitive and persistent behavior, associated with functional impairment, violation of age-appropriate societal norms or rules, and aggressive and non-aggressive rule breaking. The impact of conduct disorder on the individual themselves, as well as their family members and society was also discussed at length. As previously mentioned, despite the public health and societal risks, excessive risk-taking behaviors and addictive behaviors associated with conduct disorder, and the economic costs of excessive and antisocial behavior in children and adolescents, conduct disorder has been relatively less studied compared to other psychiatric disorders (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012).

Of the twelve studies that were reviewed for this study, seven different types of strategies, or interventions, for working with children and adolescents with conduct disorder, or conduct-disordered behavior, were reviewed. Some of the articles suggested more than one type of intervention for working with conduct disorder. One article (Singh, et al., 2007) discussed the importance of using mindfulness to address conduct disorder, suggesting that adolescents could be taught to use a self-regulatory technique to control their aggressive behavior in moment-to-moment experiences. In looking at different skill-building techniques used in treating conduct disorder, two studies discuss the use of cognitive behavioral skills training in addressing and intervening with conduct problems in adolescents (Singh, et al., 2007; Peterson & Scanlan, 2002). Singh, et al. (2007) suggest that cognitive-behavioral skills training programs have been

shown to be effective with adolescents with aggressive conduct problems, as adolescents are enabled to engage in and take control over their own behavior, as well as problem-solve more effectively around situations that evoke different behaviors. However, they suggest that there is concern around whether or not children and adolescents with conduct disorder will actually choose to learn a cognitive behavioral approach and then engage in it long enough to utilize that approach long-term. Another study (Soberman, Greenwald, & Rule, 2002) discussed using eye movement desensitization and reprocessing (EMDR) to address conduct issues in adolescents, suggesting that trauma often contributes to the development and persistence of conduct problems.

Six studies (Tcheremissine & Lieving, 2006; Singh, et al., 2007; Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Peterson & Scanlan, 2002; Sarteschi, 2014; Burke, Loeber, & Birmaher, 2002) suggested the importance of integrating psychopharmacological interventions in the treatment of conduct disorder, with four of those studies suggesting that, when working with people with conduct disorder, psychopharmacological interventions are best used in combination with psychosocial interventions (Tcheremissine & Lieving, 2006; Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Peterson & Scanlan, 2002; Sarteschi, 2014). In discussing psychopharmacological interventions for conduct disorder, the importance of addressing the most significant symptoms was discussed, as different medications are recommended for the treatment of different symptoms. In discussing psychopharmacological interventions for conduct disorder, it is important to highlight that there are no psychopharmacological treatments for conduct disorder specifically approved or licensed by the Federal Drug Administration (FDA) (Singh, et al., 2007; Tcheremissine & Lieving, 2006).

Family-based interventions were the most highly suggested intervention for working with children and adolescents with conduct disorder, with nine of the twelve studies in this review suggesting the importance of family-based intervention (Singh, et al., 2007; Hawes, Price & Dadds, 2014; Day, Kowalenko, Ellis, Daw, Harnett, & Scott, 2010; Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Baruch, Vrouva, & Wells, 2011; Löfholm, Olsson, Sundell, & Hansson, 2009; Peterson & Scanlan, 2002; Tcheremissine & Lieving, 2006; Burke, Loeber & Birmaher, 2002). Five studies (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Baruch, Vrouva, & Wells, 2011; Day, Kowalenko, Ellis, Daw, Harnett, & Scott, 2010; Löfholm, Olsson, Sundell, & Hansson, 2009; Hawes, Price, & Dadds, 2014) discussed the effectiveness of parent training programs, based on social learning theory, while five studies also indicated that the research states that the most effective family-based intervention, in treating adolescents with conduct disorder, is Multi-Systemic Therapy (MST) (Peterson & Scanlan, 2002; Baruch, Vrouva, & Wells, 2001; Löfholm, Olsson, Sundell, & Hansson, 2009; Tcheremissine & Lieving, 2006; Burke, Loeber & Birmaher, 2002). All of the studies that suggested that importance of family-based interventions agreed upon the importance of reducing harsh and inconsistent parenting practices and increasing positive and consistent parenting practices.

Two studies suggested residential treatment or peer group association as interventions for addressing conduct problems in adolescents (Peterson & Scanlan, 2002; Frankfort-Howard & Romm, 2002). One study (Peterson & Scanlan, 2002) states that residential treatment level of care is often considered unavoidable and essential in treating high-risk adolescents, while also acknowledging that the research suggests that “deviancy training” happens in long-term treatment group settings, often increasing adolescent problem behavior and negative lifetime

outcomes, especially when groups of children and adolescents with conduct problems are brought together. While one study (Peterson & Scanlan, 2002) suggests a home environment is the best place in which treatment can occur for adolescents with a diagnosis of conduct disorder, in comparison to residential treatment, another study (Frankfort-Howard & Romm, 2002) suggests that residential treatment has proven to be effective in managing conduct problems in adolescents, specifically if the adolescent completes the program.

Nearly all of the studies mention the importance of interventions for adolescents with conduct disorder being multifaceted; however, four studies in particular discuss multi-modal intervention more in depth (Buitelaar, Smeets, Herpers, Scheepers, Glennon, & Rommelse, 2012; Tcheremissine & Lieving, 2006; Peterson & Scanlan, 2002; Burke, Loeber, & Birmaher, 2002). The multi-modal interventions discussed include: pharmacological interventions in combination with other therapeutic interventions, parent management training, structural family therapy, and individual skills training and building. Peterson & Scanlan (2002) state that there is a wide agreement in the field that the best treatment of conduct disorder is multi-modal, including the medical, cognitive, behavioral, educational, family, and environmental vulnerabilities of each child.

### **Importance to Clinical Social Work Practice**

As Tcheremissine & Lieving (2006) suggest, behavioral manifestations of conduct disorder have become one of the most common reasons for referrals to community psychiatrists in recent years. Clinical social workers find themselves working in a variety of settings with children, adolescents, and families where behavioral manifestations of conduct disorder are present, including, but not limited to: schools, treatment programs, hospitals, clinics, government centers, and in agencies that offer individual and family therapy. We, as an American society, do

not know enough about how to effectively intervene with children and adolescents with conduct disorder and, beyond that, how to apply these strategies or interventions to different settings.

Acknowledging this limitation in society is important for clinical social work practice, as clinical social workers should seek out specialized and evidence-informed trainings regarding effective interventions. This writer has first-hand knowledge and experience that supports this, in working as a counselor on an adolescent dual diagnosis inpatient psychiatric unit. So often children and adolescents with conduct problems are referred to the juvenile justice system, as they often present with criminal behaviors; however, the research does not support this as the most effective intervention; in fact, it is actually suggested that peer-based interventions can be more harmful for children and adolescents with conduct disorder (Peterson & Scanlan, 2002; Burke, Loeber, & Birmaher, 2002). To further support the need for training, social workers must be particularly aware of interventions that may actually cause further harm to their clients, and specialized trainings and education would likely aid social workers in avoiding these harmful interventions.

As stated in the National Association of Social Work's *Code of Ethics* (2008), it is our responsibility as clinical social workers to promote social justice and social change with and on behalf of our clients, with a focus on the six core values, including: service, social justice, dignity and worth of the person, importance of human relationships, integrity, and competence. Based on the research reviewed, there appears to be significant room for improvement in working with children and adolescents with conduct disorder, in terms of aligning our interventions with our code of ethics and social work values. With this client population, it is important to consider these children and adolescents as people, with dignity, worth, and specialized needs, as opposed to seeing a set of untreatable symptoms that are associated with violating and often criminal behavior. As clinical social workers, it is our responsibility to challenge social injustices this

population faces, to ensure access to resources that meet their individualized needs, to treat our clients with dignity and integrity despite their behaviors, and to recognize the importance of their relationships in promoting, restoring, maintaining, and enhancing their well-being.

In researching strategies for intervening with children and adolescents with conduct disorder, this writer identified many opportunities for clinical social workers to educate themselves and others in terms of making changes in how we are working with children and adolescents with conduct problems in the United States and also opportunities for policy change in the juvenile justice system. As mentioned in the research synthesis, Löfholm, Olsson, Sundell, & Hansson (2009) explored the effectiveness of Multisystemic therapy (MST) in Sweden versus in the United States, stating that research on the effectiveness of MST has shown positive results in both the short-term and long term in the United States. Löfholm, Olsson, Sundell, & Hansson (2009) go on to discuss the differences between the approaches of the United States and Sweden with young offenders, stating that young offenders (up to twenty years old) in Sweden are almost entirely aided through a child welfare approach, with therapeutic interventions, while young offenders in the United States are processed within the juvenile justice system, which is a risk factor in itself. In Sweden, delinquent youth are referred to social services, rather than having legal consequences imposed on them, and the social child welfare system in Sweden is also responsible for intervening when young people display aggression, substance use, and school problems (Löfholm, Olsson, Sundell, & Hansson, 2009). As clinical social workers in the United States, we need to actively examine, and advocate for, child welfare service involvement versus juvenile justice system involvement for children and adolescents presenting with conduct problems, as sanctions in the juvenile justice system are often intended to punish rather than rehabilitate.

**Limitations**

All studies have limitations, and there are certainly limitations in terms of this writer's systematic literature review. This is the first, and hopefully not the last, systematic literature review to be completed by this writer, thus bringing about limitations in terms of inexperience. Despite the research on working with children and adolescents with conduct disorder being seemingly limited in relation to research on other childhood mental health diagnoses, this writer reviewed a relatively small sample for the purpose of this study, utilizing the identified inclusion and exclusion criteria. Writer did find a wide variety of research on conduct disorder; however, the focuses of the research were not specific to the purpose of the writer's study, which was to answer the question: What strategies are being used in working with adolescents who have been diagnosed with conduct disorder, and what outcomes are we seeing?

Due to writer's research focusing specifically on conduct disorder as the sole mental health diagnosis, some research articles containing valuable information were eliminated based on the inclusion and exclusion criteria. This served as a limitation, as the eliminated research did discuss strategies and interventions in working with conduct problems; however, the focuses were on the following: comorbidity in conduct disorder and another mental health diagnosis, conduct problems in adulthood, and a significant amount of research looking at the juvenile justice system. While writer considered looking specifically at conduct disorder and the juvenile justice system, this criteria was excluded due to writer's personal bias about the juvenile justice system being utilized as a primary intervention for children and adolescents with conduct problems. In addition, due to the significant amount of studies done on the juvenile justice system, looking at the juvenile justice system as an intervention for children and adolescent with conduct disorder could be looked at independently for the purpose of a research study.

Another limitation of the study is that only scholarly, peer-reviewed, and full-text, published academic journal articles were included, and only articles that were published between 2002-2016 were reviewed. This eliminated all of the articles published prior to 2002, and this also eliminated research that was not able to be accessed through this search, such as research that is found in books. Perhaps this study could have been improved by changing the design of the study and completing a more in-depth study, with a larger time-frame or less exclusion criteria around the type of source, at a few suggested interventions, such as family-based intervention or multi-modal intervention.

### **Suggestions for Future Research**

Research discusses, and provides evidence of, the need for further research around strategies and interventions for treating children and adolescents diagnosed with conduct disorder. This writer would argue that the area requiring further research is the area of understanding what leads to conduct problems in children and adolescents, specifically looking at their attachments with others and their childhood experiences, including traumatic experiences. As previously mentioned, according to Lahey, Loeber, Hart, Frick, & al, et (1995), it has been found to be difficult to reduce the frequency of antisocial behavior in children and adolescents with conduct disorder through treatments and interventions, thus conceptualizing conduct disorder as chronic. Writer hypothesizes that children and adolescents with conduct disorder so often end up in the juvenile justice system as a result of being viewed as possessing a chronic, defect of their character that cannot be treated and that is associated with criminal behavior. Future research should possibly take a look at comparative outcomes for when adolescents are treated via the child welfare system versus the juvenile justice system.

For clinicians working with children and adolescents with conduct problems, writer would strongly suggest that clinicians look at these symptoms in terms of attachment. There appears to be a significant lack in the research around attachment and trauma in terms of better understanding conduct problems in children and adolescents, and it is assumed that this is a huge disservice to this population. While there has been some research done in terms of the impact of attachment and trauma on conduct-disordered behavior, there is a need for more recent and extensive research, as well as a need to incorporate this research into our interventions. In John Bowlby's theory of attachment, he discusses avoidant/dismissive attachment, and this type of attachment is associated with the interpersonal struggle of not trusting others, being self-reliant, narcissism, and reluctance to share any emotional feelings that may stir up connections with others. Donald Winnicott discusses childhood deprivation being associated with delinquency, and Selma Fraiberg discusses how unresolved trauma can lead to identification with the aggressor/aggressive behavior. Young people who are avoidantly attached, and often viewed as more deviant individuals, are more likely to act out or stir up feelings in others, instead of feelings themselves. Young people with a history of trauma also often present with these acting out behaviors, and it is very important to consider Bessel van der Kolk's research around this. In further exploring and researching the internal world of a client, their development, attachment patterns, and trauma history, we are likely to make significant gains in the outcomes we see in our work with children and adolescents with conduct disorder.

### **Conclusion**

According to Singh, et al. (2007):

Children and adolescents with conduct disorders present enormous therapeutic challenges because they manifest diverse maladaptive behaviors that have multifactorial etiologies.

Further, the trajectory of overt and covert manifestation of conduct problems varies with changing risk and protective factors, developmental pathway, parental psychopathology, maternal parenting, and ongoing biological and social transactions. Even though a plethora of interventions have been developed, little in the research literature enables therapists to predict with intervention will work with a specific adolescent. The chance of successfully intervening with adolescents with conduct disorder is increased several-fold by using multifactorial and multisystem interventions (Henggler, Schoenwald, Rowland & Cunningham, 2002; McMahon & Kotler, 2006) (pp. 60-61).

In this study, writer was able to gather a significant amount of research around different strategies and interventions for working with children and adolescents with conduct disorder; however, writer was also able to uncover and acknowledge the need for further research in this area. While there is a need to further explore tangible interventions for conduct problems, there is also a significant need to better understand the evolution of conduct problems in children and adolescents, including the ways in which developmental perspectives and attachment theories are associated with the development of child and adolescent conduct problems. The need for family involvement in working with children and adolescents is evident, as well as the need to utilize a variety of different interventions based on a variety of different needs in this population. While there is quite a need for further research in this area, most importantly, the knowledge and research that we do have thus far around conduct disorder in children and adolescents suggest that there are successful ways to address and intervene with conduct problems, and conduct disorder is not a chronic defect of one's character, but rather a representation of the way in which their internal world has developed.

### References

- American Psychiatric Association. (2013). *Desk reference to the diagnostic criteria from DSM-* (5<sup>th</sup> ed.). Arlington, VA: American Psychiatric Publishing.
- Anderson, J. E. (2015, November 2). Brain Development in Adolescents: New Research – Implications for Physicians and Parents in Regard to Medical Decision Making. *Issues in Law & Medicine*, 30(2), 193-196. Retrieved from EBSCOhost.
- Baker, K. (2016). Conduct disorders in children and adolescents. *Paediatrics and Child Health*, 19 (2), 73–78. doi:10.1016/j.paed.2016.08.009
- Baruch, G., Vrouva, I., & Wells, C. (2011). Outcome findings from a parent training programme for young people with conduct problems. *Child and Adolescent Mental Health*, 16(1), 47-54.
- Boxer, A. M., Tobin-Richards, M., & Petersen, A. C. (1983). Puberty: Physical Change and its Significance in Early Adolescence. *Theory Into Practice*, 22(2), 85-90. Retrieved from Academic Search Premier.
- Buitelaar, J. K., Smeets, K. C., Herpers, P., Scheepers, F., Glennon, J., & Rommelse, N. N. (2013). Conduct disorders. *European child & adolescent psychiatry*, 22(1), 49-54.
- Burke, J. D., Loeber, R., & Birmaher, B. (2002). Oppositional defiant disorder and conduct disorder: a review of the past 10 years, part II. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41(11), 1275-1293.
- Castelao, C. F., & Kroner-Herwig, B. (2013). Developmental Trajectories and Predictors of Externalizing Behavior: A Comparison of Girls and Boys. *Journal of Youth & Adolescence*, 43, 775-789.

- Day, C., Kowalenko, S., Ellis, M., Dawe, S., Harnett, P., & Scott, S. (2011). The Helping Families Programme: A new parenting intervention for children with severe and persistent conduct problems. *Child and Adolescent Mental Health, 16*(3), 167-171.
- Drake, R., Goldman, H., Leff, H., Lehman, A., Dixon, L., Mueser, K., & Torrey, W. (2001). Implementing evidence-based practices in routine mental health service settings. *Psychiatric services, 52*(2), 179-182.
- Eisenberg, M., Toumbourou, J., Catalano, R., & Hemphill, S. (2014, September). Social Norms in the Development of Adolescent Substance Use: A Longitudinal Analysis of the International Youth Development Study. *Journal of Youth & Adolescence, 43*(9), 1486-1497. Retrieved from SocINDEX with Full Text.
- Frankfort-Howard, R., & Romm, S. (2002). Outcomes of residential treatment of antisocial youth: Development of or cessation from adult antisocial behavior. *Residential Treatment for Children & Youth, 19*(3), 53-70.
- Frick, P. J. (2006). Developmental pathways to conduct disorder. *Child and Adolescent Psychiatric Clinics of North America, 15*(2), 311–331. doi:10.1016/j.chc.2005.11.003
- Hawes, D. J., Price, M. J., & Dadds, M. R. (2014). Callous-unemotional traits and the treatment of conduct problems in childhood and adolescence: A comprehensive review. *Clinical child and family psychology review, 17*(3), 248-267.
- Kann, R. T., & Hanna, F. J. (2000). Disruptive Behavior Disorders in Children and Adolescents: How Do Girls Differ From Boys? *Journal of Counseling & Development, 78*, 267-274. Retrieved from EBSCOhost.

- Lahey, B. B., Loeber, R., Hart, E. L., Frick, P. J., & al, et (1995). Four-year longitudinal study of conduct disorder in boys: Patterns and predictors of persistence. *Journal of Abnormal Psychology, 104*(1), 83–93. doi:10.1037//0021-843x.104.1.83
- Loeber, R., & Schmalting, K. B. (1985). Empirical evidence for overt and covert patterns of antisocial conduct problems: A metaanalysis. *Journal of abnormal child psychology, 13*(2), 337-353.
- Löfholm, C. A., Olsson, T., Sundell, K., & Hansson, K. (2009). Multisystemic therapy with conduct-disordered young people: stability of treatment outcomes two years after intake. *Evidence & Policy: A Journal of Research, Debate and Practice, 5*(4), 373-397.
- Luescher, J., & Neimeyer, G. J. (2002). Sex Differences in Conduct Disorder in Children and Adolescents. *Journal of Clinical Activities, Assignments & Handouts in Psychotherapy Practice, 2*(4), 95-108. Retrieved from EBSCOhost.
- Merriam-Webster. (2017). Online dictionary: Merriam-Webster dictionary.
- Peterson, M., & Scanlan, M. (2002). Diagnosis and placement variables affecting the outcome of adolescents with behavioral disorders. *Residential Treatment for Children & Youth, 20* (2), 15-23.
- Sarteschi, C. M. (2014). Randomized Controlled Trials of Psychopharmacological Interventions of Children and Adolescents with Conduct Disorder: A Descriptive Analysis. *Journal of evidence-based social work, 11*(4), 350-359.
- Singh, N. N., Lancioni, G. E., Singh Joy, S. D., Winton, A. S., Sabaawi, M., Wahler, R. G., & Singh, J. (2007). Adolescents with conduct disorder can be mindful of their aggressive behavior. *Journal of Emotional and Behavioral Disorders, 15*(1), 56-63.

- Soberman, G. B., Greenwald, R., & Rule, D. L. (2002). A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problems. *Journal of aggression, maltreatment & trauma*, 6(1), 217-236.
- Suleiman, A. B., Johnson, M., Shirtcliff, E. A., & Galvan, A. (2015, August). School-Based Sex Education and Neuroscience: What We Know About Sex, Romance, Marriage, and Adolescent Brain Development. *Journal of School Health*, 85(8), 567-574. Retrieved from EBSCOhost.
- Workers, N. A. (2008). NASW Code of Ethics (guide to the everyday professional conduct of social workers). *Washington, DC: NASW*.
- Tcheremissine, O. V., & Lieving, L. M. (2006). Pharmacological aspects of the treatment of conduct disorder in children and adolescents. *CNS drugs*, 20(7), 549-565.