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Conduct Problems and Student Engagement in the Classroom: Parenting Practices

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CONDUCT PROBLEMS AND STUDENT ENGAGEMENT IN THE CLASSROOM: PARENTING PRACTICES

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ABSTRACT

Children and adolescents with conduct problems have gained much attention due to frequency of referrals to mental health clinics, concerns with behavior within the home, and school problems. To date, evidence based positive parenting interventions have made the largest impact in producing positive student engagement outcomes within the overt engagement domains (i.e., academically and behaviorally). However, few studies have evaluated the psychological (i.e., teacher-student relationships, peer support for learning, family support for learning) and cognitive (i.e., control and relevance of school work, future aspirations and goals) covert domains of engagement. The current study aims to address this gap and measure the moderating influence of positive parenting behaviors on the covert domains of student engagement (i.e., cognitive and psychological engagement) in high school aged adolescents with conduct problems. Results indicated a significant interaction between Conduct Problems and Parental Involvement, suggesting that Parental Involvement moderates the relationship between conduct problems and future aspiration and goals (FG). Results may suggest that positive parental involvement can increase future aspiration and goals (i.e., cognitive engagement) in adolescents with conduct problems. Future directions and implications of results will also be discussed.

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List of Abbreviations

CP ..... Conduct Problems

CRSW ..... Control and Relevance of Schoolwork

EM ..... Extrinsic Motivation

FSL ..... Family Support for Learning

FG ..... Future Aspirations and Goals

PSL ..... Peer Support for Learning

SE ..... Student Engagement

SEI ..... Student Engagement Instrument

TSR ..... Teacher-Student Relationship

CHAPTER 1

INTRODUCTION

Much research has been devoted to the identification, development, and treatment of conduct problems (Dodge & Pettit, 2003; Frick, 1998; Conduct Problems Prevention Research Group, 2000). Conduct problems in children and adolescents have garnered attention because they are the most common population referred to mental health clinics (Frick & Silverthorm, 2001), for disruptive behavior in the home (Frick, 1998), and for school services (Gottfredson & Gottfredson, 2001). Evidence based parenting approaches are the most well-researched and effective interventions for this population (Shelleby & Shaw, 2014). Interventions targeted towards positive parenting practices have rendered desirable student engagement outcomes (i.e., academically and behaviorally). However, little research has been conducted on the influence of positive parenting behaviors in relation to the more covert domains of student engagement (psychological and cognitive engagement; Appleton, Christenson, Kim, Reschly, 2006). Even fewer studies have observed psychological and cognitive engagement in conduct problem youth. Therefore, the purpose of the current study is to evaluate the moderating relationship of positive parental behaviors on psychological and cognitive engagement within high school aged youth with conduct problems.

Conduct Problems

Conduct problems (CP) are of particular concern within the school environment, largely due to the disruptive behavior and aggressiveness commonly associated with youth with conduct problems (Powell et al., 2011). Disruptive behavior can manifest differently depending on the individual. Within the classroom, for example, conduct problems may include noncompliance (i.e., rule breaking), oppositional behavior towards teachers and/or school administration, and aggressive threats or physical violence (Powell et al., 2011). Aggressiveness towards family, peers, and teachers is a barrier toward developing a positive classroom climate (Morrison, Furlong, D'Incau, & Morrison, 2004). Student perpetrators and those victimized are both at risk for complications with school attendance (Juvonen, Nishina, & Graham, 2000; Kokko, Tremblay, Lacourse, Nagin, & Vitaro, 2006), academic functioning (Ma, Phelps, Lerner, & Lerner, 2009), and learning in the classroom (Dodge & Pettit, 2003). Even covert behaviors such as deceitfulness, lying, and cheating can instigate disruption within a classroom and subsequently impair a student's subjective well-being and reduce opportunities for academic advancement (Morrison, Furlong, D'Incau, & Morrison, 2004). Youth presenting with conduct problems commonly have coexisting mood or behavior disorders (American Academy of Child & Adolescent Psychiatry, 2013), with Attention Deficit/ Hyperactivity Disorder (ADHD), particularly hyperactivity and impulsivity as the most common comorbid condition (Shaw, 2013). Considering the aforementioned

risk factors, it is not surprising that youth with conduct problems often demonstrate academic underachievement (Powell et al., 2011).

Youth presenting with conduct problems who do not receive intervention services are at risk for continued antisocial behavior and negative outcomes which have been shown to persist throughout the lifespan (Kazdin, 1993; Loeber & Farrington, 2000). Some of the most common negative outcomes include delinquency, property and juvenile/criminal offending (Loeber, Farrington, Petechuk, 2003), and forming unhealthy interpersonal relationships (Raudino, Woodward, Fergusson, Horwood, 2012), which might include inter-partner violence (Olsen et al., 1999; Webster-Stratton & Hammond, 1988). Moreover, conduct problems are most strongly related to delinquent behavior (Moffitt, 1993) and demonstrate a trajectory of antisocial behavior continuing from childhood to adulthood (Moffitt, 1993; Moffitt & Caspi, 2001; Caspi, 2000; Moffitt, Caspi, Dickson, Silva, & Stanton, 1996; Offord & Bennett, 1994). Research suggests that individuals with conduct problems are at increased risk for substance abuse (Bardone, Mofitt, Caspi, Dickson, & Silva, 1996; Flory, Milich, Lynam, Leukefeld, & Clayton, 2003), mental health problems (Kim-Cohen et al., 2003), suicidal behaviors (Darke, Ross, & Lynskey, 2003), unemployment (Caspi, Wright, Moffitt, & Silva, 1998; Fergusson & Horwood, 1998), and school problems (Brook & Newcomb, 1995). According to Jaffe, Belsky, Harrington, Caspi, and Moffitt (2006), conduct problem youth are at risk for developing negative parenting skills and behaviors with their children (Raudino, Woodward, Fergusson, Horwood, 2012).

These outcomes are of particular concern since an increasing number of studies have revealed that childhood and adolescent conduct problems have been observed to be stable over time and develop into adulthood (Loeber, Hipwell, Battista, Sembower, & Stouthamer-Loeber, 2009). Fergusson, Horwood, & Ridder (2005) conducted a twenty-five year longitudinal study that followed children (7-9 years) with conduct problems and later measured psychosocial functioning in early adulthood (21-25 years). Their findings suggested that the presence of early conduct problems are one of the primary determinants of psychosocial outcomes in adulthood. Significant associations were discovered between early conduct problems and crime (e.g., violent offences, arrest, and imprisonment), substance abuse, mental health problems, adverse sexual or partner relationships, impaired educational achievement, increased unemployment, and higher rates of welfare dependence (Fergusson, Horwood, & Ridder, 2005).

Thus, it is clearly established that youth with conduct problems are at substantial risk for negative outcomes that can span over the lifetime. The disruptive behaviors that are associated with conduct problems (i.e., defiance, cheating, lying, and problems with authority) not only damage the educational opportunities to the student, but can also interrupt the learning environment of classroom peers (Powell et al., 2011). Arnold et al. (1999) argued that in order to successfully improve academic outcomes, interventions should target problem behavior and aim to facilitate academic interest. Prior to 1999, research consistently claimed that engagement in academic activities promoted

educational success (Arnold et al., 1999). It can be argued that a bidirectional relationship exists, where youth who experience difficulty achieving in school engage in aggressive behaviors, and aggressive behaviors in turn negatively impact academic achievement (Frick et al., 1991).

Conduct Problems and the association with School Engagement

Behaviors commonly associated with conduct problems have been observed to negatively impact the learning environment in the classroom, which interferes with learning opportunities and engagement for youth with conduct problems and their peers (Powell et al., 2011). With these factors considered, academic success may be impaired compared to youth without presenting conduct problems (Ma, Phelps, Lerner, & Lerner, 2009). In addition, research has found that this population is significantly related to high behavioral referrals, suspensions, and expulsions, which historically has been representative of behavioral engagement (Brook & Newcomb, 1995; Dodge & Pettit, 2003).

Student dropout is another common measure used to observe the construct of school engagement. Specifically, school dropout is an accepted method of measuring student disengagement, which widely informs the theoretical model of broad types of engagement (e.g., Finn, 1989). These methods are based upon the simple assumption that if a student no longer attends high school the student would have reported low ratings of engagement. Understanding the reciprocal relationship between student dropout and engagement is integral for improving prevention initiatives and interventions focused on school completion. School completion is defined as a student

graduating high school having received satisfactory social and educational skills to be successful in postsecondary education and/or the work force (Christenson et al., 2008; Finn, 2006). According to the National Center for Educational Statistics (2015), data presented in 2013 indicated that 7% of youth and young adults (16-24 years old) were not enrolled in school and did not earn a high school diploma or credential such as the General Educational Development certificate. Although dropout rates have been observed to decline since 1990, families within the lowest income bracket (i.e., lowest quartile of family incomes), minorities (with the exception of Asian Americans), and males in every race/ethnicity have continued to demonstrate the highest rates of school dropout in the United States (National Center for Educational Statistics, 2015). Given the alarming rates of dropout among youth, significant effort has been conducted to assess, prevent, and intervene with at risk youth. Furthermore, understanding potential moderators of the relationship between student engagement and youth with conduct problems is imperative, due to the population's increased risk of experiencing a myriad of negative outcomes associated with dropout, such as low educational achievement, high unemployment rates, and increased welfare dependence in adulthood (Fergusson, Horwood, & Ridder, 2005).

A Positive Psychology Approach

Historically, clinicians and researchers have measured normal versus abnormal functioning by a deficit-based or "disease" model of mental health (Suldo, Huebner, Savage, & Thalji, 2010). This deficient-based model identifies weaknesses associated with mental and physical health while failing to measure

broad contributing factors that impact an individual as a whole (Seligman & Csikszentmihalyi, 2000). Modern approaches to mental health highlighted a need for public awareness on the topic of positive psychological perspectives (Seligman & Koocher, 1999). Reasoning for this transition was to transcend only focusing on "pathology" and instead, conduct research that prioritized positive factors that aided in the production of civic engagement, positive workplace climate, and overarching factors that promoted healthy functioning among families (Seligman & Csikszentmihalyi, 2000). In response to this call of action, the science of positive psychology emerged, and has continued to investigate constructs such as happiness, subjective well-being, optimism, positive youth development, and engagement.

STUDENT ENGAGEMENT

Since the introduction of positive psychology, the interest in the overall construct of student engagement (SE) has been steadily increasing (Fredricks, Blumenfeld, & Paris, 2004). Numerous studies have evaluated the relationship between SE and negative factors such as delinquency, dropout rates (Finn & Rock, 1997; Wehlage, Ruter, Smith, Lesko, & Fernandez, 1989), high boredom levels, and low academic achievement (National Research Council & Institute of Medicine, 2004). Interest in engagement as a protective factor for dropout has been particularly important for minority students, where high drop out rates are observed (Rumberger, 1987). During middle and high school years, engagement has been observed to predict school completion and dropout rates over time

(Balfanz, Herzog, & Mac Iver, 2007; Finn & Rock, 1997; Reschly & Christenson, 2006).

Positive outcomes have been associated with high levels of SE both in and out of the school environment and have been linked to admission and attrition in postsecondary settings (Finn & Owings, 2006). The literature has also explored engagement and its association with acquiring translational abilities in school that are essential for establishing the necessary tools to be successful in the workplace (Fredricks, Blumenfeld, & Paris, 2004).

To date, an operational definition of SE has yet to emerge. Although more recent models of SE identify multiple engagement subtypes, research suggests that they should be studied independently but interpreted as multidimensional (e.g., Appleton et al., 2006; Fredricks, Blumenfeld, & Paris, 2004; Jimerson, Campo, & Grief, 2003; National Research Council and Institute of Medicine, 2004). Appleton and colleagues (2006) have identified four subtypes of engagement that include behavioral, academic, cognitive, and psychological. Each of the aspects of engagement have been observed to predict positive academic and behavioral outcomes (Finn & Rock, 1997; Fredricks et al., 2004; Marks, 2000; Sinclair, Christenson, Evelo, & Hurley, 1998).

Behavioral engagement can be conceptualized as engagement that elicits behavioral participation in the academic, social, or extracurricular activities (Fredericks, Blumenfeld, Paris, 2004). It has also been defined as a student's positive conduct and overall behavior related to academic activities (Finn & Rock, 1997; Heddy, Sinatra, Seli, & Mukhopadhyay, 2014). Overt behavioral indicators

such as poor attendance is highly linked with negative educational outcomes, which only grants partial insight into the complex issues related to dropout and delinquency (Lehr, Sinclair, Christenson, 2004).

Academic engagement as a construct is commonly associated with student grades, time on task, credit accrual, completion of homework, and participation in activities within the classroom (Appleton et al., 2008). Both behavioral and academic engagement data are found in school and/or district records and are reported by the school personnel, compared to student self-report information that is derived from cognitive and psychological engagement measures. (Grier-Reed, Appleton, Rodriguez, Ganuza, Reschly, 2012).

The cognitive engagement subtype is defined as a student's expectations, beliefs towards his/her education, and overall perceptions in association with oneself, teachers, and peers (Jimerson, Campos, & Greif, 2003). Other researchers have stated that cognitive engagement includes metacognitions related to self-regulation, persistence, and goal orientation (Pintrich & De Groot, 1990; Zimmerman, 1990).

Psychological engagement is commonly associated with feelings of belonging and the student's perceived value of the relationships with family, peers, teachers, and the school (Appleton et al., 2006). Outcomes associated with psychological engagement include adaptive persistence with tasks, attendance, participation and positive school behaviors.

Much research to date has examined educational outcomes using academic achievement (grades, attendance, and standardized test scores) or

measures of behavioral data (discipline record, tardiness, or absences) as a means of evaluating the impact of conduct problems on a student's performance and engagement (i.e., Powell et al., 2011). Educational outcomes are frequently investigated within conduct problem research. This is in part because the disruptive behavior commonly associated with conduct problems is most visible in the school environment with school-aged children (see Carter et al., 2012 & review by Appleton et al., 2006). Therefore, when evaluating covert measures of student engagement within the context of positive educational outcomes, it is important to establish the distinction between items on measures that tap into engagement versus "lack of disengagement". This is an important distinction as these items request teachers and students to endorse items regarding the absence of disruptive behavior (e.g., "How often in the past year has the student been observed paying attention in the class"?; Johnson et al., 2001), instead of reporting behaviors associated with engagement (e.g., "I feel as an active member of my school"; Goodenow, 1993)(Jimerson, Campos, Greif, 2003).

Historically, SE research has primarily focused more effort on the overt subtypes of SE (e.g., academic and behavioral) and less research on the covert indicators of engagement (e.g., cognitive and psychological), even though the covert subtypes provide a more thorough approach to understanding the overall construct (Appleton et al., 2006; Jimerson, Campos, Greif, 2003). Therefore, there is established need to measure the two higher inference types of engagement (e.g., psychological and cognitive) due to their relationship with positive outcomes (e.g., school completion and postsecondary attendance), which are highly

influenced by family, school and peer factors, and most distinguishably malleable with intervention (Appleton et al., 2006; Appleton, Christenson, Kim, & Reschly, 2006). Theoretical support and results from intervention studies have suggested the integral relationship between the covert engagement subtypes (cognitive and psychological) and its correlation with positive student behavioral and academic outcomes (Betts, Appleton, Reschly, Chrisenson, & Huebner, 2010; Connell & Wellborn, 1991; McPartland, 1994).

Conduct Problems and Parenting practices

Much research has examined associations between the development of conduct problems and the relationship with family factors (e.g., Posthumus, Raaijmakers, Maassen, van Engeland, & Matthys; Shaw, 2013). A large body of research has targeted early childhood and adolescent populations based on established theories including social learning and attachment theories (Shaw, 2013). Specifically, this research has suggested that behavior patterns can be modified before the adolescent years (Shelleby & Shaw, 2014). Additional research has found that parent behavior such as negativity and poor responsivity (Belsky, Hsieh, & Crinic, 1998; Shaw, Bell, Gilliom, 2000) has been linked to early onset of conduct problem behaviors in young children (Lorber & Egeland, 2011). Family factors such as marital support, parent perception, and parenting practices all have been observed to have associations with conduct problems in early childhood (Webster-Stratton, 1989; Trudeau, Mason, Randall, Spoth, Ralston, 2012; Bjorknes, Kjobli, Manger, Jakobsen, 2012). The association between parenting processes originate from Oregon Social Learning Centre

(Patterson, 1982; 1986; Patterson & Reid, 1984) who studied parent-child interactions and proposed particular parenting behaviors that act as risk factors for conduct problems. In addition, intervention studies have examined the influence parenting behaviors (i.e., poor responsiveness, harsh and inconsistent discipline) have on the persistence of conduct problems in early to late adolescence (Farrington, 2005; Webster-Stratton &Taylor, 2001; Pardini, Fite, Burke, 2008). The five identified parenting domains that have directly been linked to conduct problems include, lack of supervision, absence of positive rewarding behavior; neglect, inconsistent/non-contingent, and harsh discipline (Dadds, 1995).

Numerous studies suggest a link between negative parenting behaviors as a risk factor for the persistence of conduct problems. Abu-Rayya, Motkal, Yang, and Baohui (2012) discuss how the differentiation of unhealthy and healthy family functioning can alter emotional and behavioral outcomes for children. Their results indicated that as unhealthy family functioning factors increased the risk for conduct problems in children and adolescents increased. One meta-analysis provided evidence that parental time with the adolescent, parental supervision, and harsh discipline are among the most influential variables associated with the development of conduct disorder (Thompson, Hollis, & Richards, 2003).

Furthermore, increasing evidence has shown that parenting interventions moderate conduct problem behaviors with adolescents whom display low (i.e., lower endorsement of CP) and high (i.e., higher endorsement of CP) levels of conduct problems (Shelleby, Shaw, 2014). Reid, Webster-Stratton, and Baydar

(2004), suggest that children with higher levels of conduct problem behaviors at baseline experience greater benefit from parent interventions. Specifically, positive outcomes have been observed in parenting intervention studies that focus on identifying problem parenting behavior (e.g., harsh and inconsistent discipline, lack of supervision), and increasing positive parenting (e.g., warmth, positive reinforcement) (Shelleby & Shaw, 2014). These results further suggest a moderating relationship across parenting behaviors on conduct problem presentation.

PARENTING PRACTICES AND SE

Parenting practices and behaviors with youth have broadly been investigated through composites of parenting styles: permissive, neglectful, authoritarian, and authoritative. Furthering the work of parenting styles, Baumrind (2010) found in a longitudinal study that preschool students whose parents parenting style was identified as directive, authoritative, and democratic experienced more well-adjustment and competency in adolescence compared to students whose parenting styles fell within the authoritarian, disengaged, and permissive type. Adolescents from the authoritarian, disengaged, and pessimistic type were distinguishably maladjusted and incompetent (Baumrind, Larzelere, & Owens, 2010). Unlike positive parenting practices (e.g., praise and effective discipline have proved to be protective factors against negative outcomes (Tremblay et al., 2004).

Permissive parenting is most associated with inconsistent discipline, where the parent does not place appropriate demands or rules within the home

environment. Within this environment, the child/adolescent is expected to plan, manage, and control his or her duties in the home and school with little involvement from the parent (Smokowski, Bacallao, Cotter, & Evans, 2015).

Authoritarian parenting is conceptualized as strict parenting practices, which place high demands and rules on a child/adolescent, while authoritative is associated with placing high level of demands in conjunction with high levels of warmth (Maccoby & Martin,1983). Research suggests that adolescent engagement, specifically life aspirations/goals and psychological wellbeing, are positively influenced by authoritative and authoritarian parenting styles (Roman, Davids, Moyo, Schilder, Lacante, & Lens, 2015). However, prior investigations have also revealed that harsh discipline is commonly linked to authoritarian-power-assertive style, which frequently results in negative life outcomes for adolescents (Maccoby & Martin, 1983; Thompson, Hollis, & Richards, 2003). For example, a study evaluating authoritarian parental practices and its relationship to the development of conduct problems found a linear relationship between authoritarian discipline use and conduct problems. Interestingly, this relationship was independent of the association with family socioeconomic status and psychological distress with the mother (Thompson, Hollis, & Richards, 2003). Longitudinal studies (Dodge, Bates, Pettit, 1990; Dodge, Pettit, Bates, Valente, 1995) measuring the development of aggression found that in a random sample of 585 children, that harsh discipline behaviors were linked with later development of externalizing behavior conditions.

Parenting style consists of distinct parenting characteristics that have been observed to impact parent-child relationships and educational outcomes (Smokowski, Bacallao, Cotter, & Evans, 2015). The dependent variables examined include the level of parental demandingness and responsiveness that vary on a continuum (Maccoby & Martin, 1983). Parental responsiveness is associated with supervision/monitoring and warmth, which manifests as the parents ability to encourage individuality, assertiveness, and self-regulation skills by being responsive and supportive to the child/adolescent's needs (Simmons, Simmons & Su, 2013). Alternatively, parental demandingness is categorized as the level of parental expectations and perceptions of the appropriate demands of independence from the child or adolescent (Maccoby & Martin, 1983).

RESEARCH QUESTIONS AND HYPOTHESES

Considering the social importance of and paucity of research within this area, we sought to advance in the literature by evaluating the moderating influence of positive parenting factors on home and school environment outcomes in adolescents presenting with conduct issues. Specifically, we addressed three primary research questions:

1. As the severity of parent-reported conduct problems increase, do student psychological and cognitive engagement decrease for at-risk youth?

It is hypothesized that any observed main effect of conduct problem symptoms will demonstrate a negative linear relationship with both psychological and cognitive engagement subscales. That is, for every one unit increase in conduct

problem symptomatology, both psychological and cognitive engagement subscale scores will decrease by the respective conduct problem main effects.

2. As positive parenting practices increase, do student psychological and cognitive engagement increase for at-risk youth?

It is hypothesized that the positive parenting and parental involvement subscales will demonstrate observed positive linear relationships with the student psychological and cognitive engagement scales

3. Do positive parenting practices moderate the relationship between conduct problems and student engagement?

Lastly, we hypothesized that both the positive parenting and parental involvement subscales would moderate the relationship between conduct problem symptoms and the psychological and cognitive student engagement subscale scores.

CHAPTER 2

METHOD

PARTICIPANTS

Demographic and descriptive information is represented in Table 2.1. Participants included (n=615) adolescents who were enrolled in 50 high schools across five states in the Northeastern, Midwestern, and Southeastern regions in the United States. Most of the participants were male (66.2%) and were in the eighth (6.7%), ninth (44.9%), tenth (42.3%), and eleventh (4.7%) grades (1.5% of participants did not identify their grade level). The majority of students were White/Caucasian (52.2%), with the remainder being Black/African American (38.9%) or "other" (8.9%). All participants were diagnosed with an emotional/behavioral disorder or exhibited emotional, social, or behavioral symptoms, which identified them as at-risk for high school dropout as rated by school staff. Parent reports indicated that the majority of students in the study had received previous diagnosis of ADHD (48.3%), Depression (28.5%), Anxiety (25.9%), Bipolar Disorder (10.1%), or "other" mental health problem (7.8%). Overall, the sample had an average IQ of 91 (SD=11.4; range=70-140), which was gathered from standardized measures of intellectual or cognitive functioning (Stanford-Binet, Wechsler Intelligence Scale for Children, Woodcock-Johnson Tests of Cognitive Abilities, or Wechsler Abbreviated Scale of Intelligence.

Participants in the current analysis originated from the Center for Adolescent Research in Schools (CARS), a five-year nationwide study funded by the United States Department of Education. The CARS study was a randomized-control trial (RCT) design that was constructed to implement empirically based strategies in 54 high schools in five states (Kansas, Missouri, Ohio, Pennsylvania, and South Carolina) and to assist teachers and administration personnel through the implementation and evaluation process. Intervention strategies focused on core student challenges, which included academic, behavior, social skills, general living, mental health, and connectedness concerns. Interventions included school enhancement, teacher capacity, building youth competence, and increasing family and community supports. The sample for the current analysis includes data from 615 students who were recruited and eligible to participate in the initial data gathering process, prior to the CARS intervention implementation wave. The initial data collection was gathered in the beginning of fall 2011.

PROCEDURE

The initial recruitment process took place during the 2010-2011 school year (a year prior to data collection). School personnel, including teachers, administrators, and other school staff were instructed to distinguish up to 20 students within each 50 participating schools. The school personal used the following inclusion criteria:

1. During the 2010-2011 school year students must be enrolled in 8th, 9th, 10th, or 11th grade and be designated to attend one of the participating high schools in the fall of 2011.
2. Social, emotional, or behavioral problems must be identified by parent reports on a broadband behavior rating inventory or elevated levels of anxiety and depression on a student self-report measure.
3. Student impairment must fall within at least one of the following criteria:
    a. A combined total of five or more absences and/or tardies in any month during the current semester (not due to illness)
    b. Four or greater reported office and/or behavioral referrals within one semester.
    c. Two or more in school suspensions (ISS) or out of school suspension (OSS) within the current academic year.
    d. One or more Fs or two or more Ds in any core academic subject, earned within the two most recent grading periods.
4. Participants identified with intellectual disabilities or developmental disabilities (e.g.,Autism, Aspergers) were excluded from the study.
5. The students' cognitive ability must fall in the average range (IQ equal to or greater than 75).
6. One parent/guardian and the student must be fluent in English.

7. Students currently receiving special education services are eligible to participate.

As previously stated, participants were nominated by teachers based on a description of observed externalizing and internalizing problem behaviors. If the student and parent agreed to participate in the study, a formal consent from both individuals was obtained. Once consent/assent was granted, initial surveys were administered which included a battery of psychosocial assessment of family functioning/structure, school, social, and overall student school functioning. Both the student and the parent received $50 for their efforts.

Students were further screened in order to meet study inclusion criteria. A significant score in the first two gates of the *Systematic Screening for Behavioral Disorders* (SSBD, Walker, & Severson, 1990), a minimum score of one standard deviation above the norm on problem behavior, and a minimum score of one standard deviation below the norm on social skills within the *Social Skills Rating System* (SSRS, *Gresham & Elliot, 1990*) sub-scales were necessary to meet inclusion criteria for the study.

In order to determine further eligibility, consent was provided for CARS staff to collect demographic, academic performance, cognitive ability (e.g., IQ score on file) and school functioning information from the school. For students who lacked an IQ score on record, trained CARS staff administered the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 2011) in order to obtain an accurate representation of the student's cognitive abilities.

The current analysis evaluated data from parent and student reports from all participating high schools across the multisite RCT (Kansas, Missouri, Ohio, Pennsylvania, and South Carolina) during the 2011-2012 school year. Each site was affiliated with a university and both the university site and participating school districts received institutional review board approval.

MEASURES

DEMOGRAPHICS AND OTHER DESCRIPTIVE VARIABLES. Demographic data (e.g., age, race/ethnicity, gender, grade, free/reduced lunch status, psychological disorder diagnoses, household income, and family context) were gathered from parents/guardians.

CONDUCT PROBLEMS. The current study used the *Behavior Assessment System for Children, Second Edition Parent Version (BASC- PRS;Reynolds & Kamphaus, 2004)* in order to assess conduct problems. The BASC-2 is a multi-method, multidimensional measure used to evaluate the behavior of children and young adults from 2-25 years of age. The Parent form (PRS) requires the individual to rate adolescents' behaviors on an adaptive and clinical scale. Subscales within the adaptive and clinical scales include Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Learning Problems, Somatization, and Withdrawal. For the purpose of the current analysis, only the Conduct Problem subscale was used to measure the students overall level of conduct problems. The Conduct Problem subscale consists of 12 items (e.g., questions regarding lying and breaking rules) and has demonstrated strong internal consistency reliability (α=.91*;Reynolds & Kamphaus, 2004)* for

ages 15-18.The current sample produced acceptable reliability (α=.89). Items are rated on a 4-point Likert scale (N for Never, S for Sometimes, O for Often, or A for Almost Always).

PARENTING PRACTICES. Information on parenting behaviors was obtained using the *Alabama Parenting Questionnaire (APQ; Frick, 1991).* The APQ measures five dimensions of effective parenting behaviors such as Use of Positive Discipline Techniques, Discipline Consistency, Use of Corporal Punishment, Supervision and Monitoring, and Positive Involvement. The measure consists of 42 items that are rated on a 5-point Likert scale (1=Never, 2=Almost Never, 3=Sometimes, 4=Often, and 5 =Always). A total score for each of the five domains was computed by summing raw scores for each scale. This renders a more comprehensive interpretation since a high score on negative parenting behaviors (e.g. Poor Supervision and Monitoring, Corporal Punishment) are not interpreted in the same way as a high score on positive parenting behavior subscales (e.g., Parent Involvement, Positive Parenting). Previous research has supported the validity and reliability of these scales, with a reported internal consistency of .68, and good criterion validity in discriminating differences between clinical and non-clinical samples (Dadds, Maujean, & Fraser, 2003; Frick, Christian, & Wooton, 1999; Shelton et al., 1996). Acceptable reliability was yielded for positive parenting (α=.82) and parental involvement (α=.79).

STUDENT ENGAGEMENT. Student's individual perceptions of their engagement was measured using the Student engagement instrument (SEI;

Appleton et al., 2006). The SEI is an instrument created for use with middle and high school students and evaluates self-reported engagement within the Appleton and colleagues (e.g., Appleton et al., 2006; Christenson et al., 2008) four-part typology of student engagement subtypes (e.g., behavioral, academic, cognitive, and psychological). The SEI consists of 35 items, which load onto to six subtypes of SE: Future Aspirations and Goals (FG; 5 items), Control and Relevance of School Work (CRSW; 9 items), Extrinsic Motivation (EM; 2 items), Teacher-Student Relationships (TSR; 9 items), Family-Support for Learning (FSL; 4 items), and Peer-Support for Learning (PSL; 6 items). Each item is endorsed on a 4-point Likert rating scale (1=*strongly agree*, 2=*agree*, 3=*disagree*, and 4= *strongly disagree*); higher scores are indicative of higher levels of engagement. In the current analysis a total score for each subtype was used to observe unique significance in the model.

Multiple studies have published the SEI's psychometric properties (e.g., Appleton et al., 2006; Betts, Appleton, Reschly, Christenson, & Huebner, 2010; Carter, Lovelace, Appleton, & Thompson, 2012; Lovelace, Reschly, Appleton, & Lutz, 2012). Follow up validation research conducted by Betts et al. (2010) has presented validity concerns regarding the use of the Extrinsic Motivation (EM) factor due to its limited number of items (e.g., two items), which were reversed scored. Previous research has suggested that subscales should contain at least three items to establish acceptable internal consistency reliabilities (Cook, Hepworth, Wall, & Warr, 1981). In addition, Betts et al (2010) recommended the removal of EM from the SEI; which is observed in studies that utilized the five-

factor model to calculate SE using the SEI (e.g.,. Carter et al., 2012). Subsequently, the sixth factor (EM) was removed from the current analysis. Reports from preceding research on the SEI has produced good internal consistency estimates for each of the five SE subtypes (TSR=.88; PSR=.82; FSR=.76; CRSW=.80, and FG=.78) (Appleton et al., 2006; Spanjers, Burns, & Wagner, 2008). The current study found acceptable reliability for TSR, FSL, PSL, CRSW, FG (.84, .81, .86, .82, .87, respectively)

DATA ANALYTIC STRATEGY

A three-step procedure was conducted to measure the moderating influence of positive parenting practices between the relationship of conduct problem symptoms and the SE variables, as recommended by Baron and Kenny (1986).

(1) The first step of the analysis investigated the relationship between the first predictor (i.e., Conduct Problems) and the five SE (outcome) variables (i.e., [1] TSR, [2] PSL, [4] FSL, [4] CRSW, and [5] FG).

(2) The second step examined the relationship between the second set of predictors, which encompassed the positive parenting variables (i.e., Parental Involvement & Positive Parenting) and the five SE (outcome) variables (i.e., [1] TSR, [2] PSL, [4] FSL, [4] CRSW, and [5] FG).

(3) The third step of the analysis evaluated the moderating effects of each the predictor variables and were investigated separately

to aid in the interpretation of the exclusive impact of Positive Parenting and Parental Involvement has on the relationship between Conduct Problems and the SE (outcome) variables. Therefore, interaction terms were designed by following the method below:

a. In order to address multicollinarity between the main effects and the interaction terms, variables were centered to reduce the collinearity, which will assist in the interpretation of the coefficients (DeCoster & Claypool, 2004). The centered variables will be the product of the following calculation: the mean of each independent variable will be subtracted from each participants score on each predictor variable.
b. The interaction term was created from the centered variables by multiplying both the centered independent and moderator variable together (i.e., CP*, Positive Parenting and CP*Parental Involvement).

The model was then tested using the centered predictors and the interaction terms. Each parenting practice moderator was evaluated separately by observing the differences in their unique dimensions in order to gain further understanding of the relationship between conduct problems and student psychological and cognitive engagement. To evaluate the unique influence, models were run for each dependent variable (i.e., five models). All predictor variables were included in each of the five models to order to measure the

relationship of each predictor on each dependent variable. To reduce the chance of making a Type-I error, a Bonferroni correction was used, by adjusting the alpha levels to .01.

CHAPTER 3

RESULTS

Table 3.1 presents the demographic information for study participants. Descriptive information for the main study variables can be viewed in Table 3.2, along with a correlation matrix are shown in Table 3.2. The results from the multiple regression analyses will then be presented.

DESCRIPTIVE AND CORRELATIONAL STATISTICS FOR STUDY VARIABLES

Information on conduct problem symptoms and parenting practices were provided by parent or legal guardian report. The average number of conduct problems was 9 (*SD*=5), as measured by the BASC-II. The average number on the positive parenting subscale was 25 (*SD*=4), and the parental involvement subscale produced an average of 35 (*SD*=6). The student engagement variables were obtained by the student's self-report of engagement level across the psychological and cognitive domains. For the psychological engagement subscales, students reported an average of 28 (SD=5) on TSR, an average of 18 (SD=3) for PSL, and an average of 13 (SD=2) on the FSL subscale. Additionally, the cognitive subscales, and average of 25 (SD=4) on CRSW and 23 (SD=4) on FG was observed.

Multiple significant associations were identified and are displayed in Table 3.3. The main effect of conduct problems was significantly associated with both of the parenting practices variables of positive parenting (r=-.21, p<.01) and parental involvement (r=-.30, p<.01), and only one of the dependent variables, FSL (r=.20, p<.01). Positive parenting was significantly correlated with parental involvement (r=.64, p<.01), in addition to FSL (r=.21, p<.01), CRSW (r=.09, p<.05), and FG (r=.08, p<.05). Parental involvement was significantly associated with TSR (r=.16, p<.01), PSL (r=.14, p<.01), FSL (r=.26, p<.01), CRSW (r=.18, p<.01), and FG (r=.21, p<.01).

RESULTS FROM MULTIPLE REGRESSION MODELS

In order to investigate the moderating role of parenting practices on the relationship between conduct problems and student engagement, we constructed five models using a hierarchal strategy, where; (1) in the first step we added the covariates to the model (ADHD symptoms, ethnicity, free/reduced lunch status, medication status, and IQ), (2) the main effects were then added (Conduct Problems, Positive Parenting, and Parental Involvement), (3) lastly, the interaction terms were placed in the model.

PSYCHOLOGICAL ENGAGEMENT

The results of the regression analyses for the psychological engagement outcome variables are reported in *Table 3.4 - 3.6*. The overall interaction model for TSR accounted for 3.5% of the variance (R^2 = .035, F(10, 565) = 2.02).Parental involvement was observed to be significant predictor of TSR (β = .19, p<.01). This finding suggests that for every one unit increase of Parental

Involvement, TSR is predicted to increase by .19 units, in the hypothesized direction. The overall model for PSL accounted for 4.3% (R^2 = .043, F(10, 570) = 2.56) of the overall variance explained. The main effect of Parental Involvement was also a significant predictor of PSL (β = .20, p<.01). In addition a medium effect-size was observed (R^2= .09, F(10, 574) = 6.30) in the overall FSL model, suggesting that 9% of the variance was accounted for in Family Support for Learning. Parental involvement emerged as a significant predictor of FSL (β = .16, p<.01). Lastly, results suggest that while controlling for ADHD symptoms, ethnicity, free/reduced lunch status, medication status, and IQ, Conduct Problems significantly predicted changes in FSL, (β = -.16, F(8, 576) = 7.30, p <.01, R^2 = .079) in the hypothesized direction; as Conduct Problem symptom severity increased, student's self-reported FSL score decreased. This suggests that for every one unit increase of Conduct Problem symptoms, FSL is predicted to decrease by .16 units. Inconsistent with hypotheses, Conduct Problem symptoms did not significantly predict any of the other student engagement dependent variables (TSR, PSL, CRSW, or FG).

COGNITIVE ENGAGEMENT

The results of the regression analyses for the cognitive engagement outcome variables are reported in *Table 3.7 & 3.8*. A medium effect-size was discovered in the overall interaction model for FG (R^2 = .09, F(10, 573) = 5.61), implying that 9% of the variance was represented in FG. In reference to the overall model, we observed a significant interaction between Conduct Problems and Parental Involvement (β = .13, p<.01). Parental Involvement moderates the

relationship between Conduct Problems and FG in the anticipated direction. Results indicated that 10% of the variance was explained in the overall interaction model for CRSW (R^2 = .10, F(10, 566) = 6.72). Two covariates, Free and Reduced Lunch Status (β = .15, p<.01) and IQ (β =-.16, p<.01) were both observed to be a significant predictor of CRSW in the overall model. Parental Involvement was also observed to be a significant predictor of CRSW (β =.20, p<.01). Such that, as Parental Involvement increased, student's self-reported CRSW score increased. This result implies that for every one-unit increase of Parental Involvement, CRSW is predicted to increase by .20 units.

TABLE 3.1. Demographic and descriptive variables for participants (N=615).

	n	%
Gender	--	--
Male	407	66.2
Female	208	33.8
Grade	--	--
8	41	6.7
9	276	44.9
10	260	42.3
11	29	4.7
Ethnicity	--	--
Caucasian	321	52.2
African American	239	38.9
Other	55	8.9
*Receipt of Free or Reduced Lunch**	438	71.2
Currently on Medication	196	31.9
*Mental Health Diagnoses**	--	--
ADHD/ADD	297	48.3
Bipolar Disorder	62	10.1
Depression	175	28.5
Anxiety	159	25.9
Other Mental Health Problem	48	7.8

*Note: * = reported by parent or legal guardian.*

Table 3.2 Descriptive statistics for the main study variables

	n	***M(SD)***	***Skewness***	***Kurtosis***
*Conduct Problems**	610	9(5)	.66	.16
*Parenting Practices**				
Positive Parenting	611	25(4)	-.60	-.21
Parental Involvement	600	35(6)	-.10	.10
Psychological Engagement				
Teacher-Student Relationships (TSR)	603	28(5)	-.08	.73
Peer Support for Learning (PSL)	608	18(3)	-.49	1.2
Family Support for Learning (FSL)	612	13(2)	-.40	.28
Cognitive Engagement				
Control and Relevance of School Work (CRSW)	603	25(4)	-.07	.40
Future Aspirations and Goals (FG)	610	23(4)	-.53	.12

*Note: *=Parent or legal guardian report.*

Table 3.3 Correlations for study variables

		1	2	3	4	5	6	7	8
1	Conduct Problems	-	- .28**	- .21**	-.03	.04	- .20**	-.04	-.04
2	Positive Parenting		-	.64**	.07	.04	.21**	.09*	.08*
3	Parental Involvement			-	.16**	.14**	.26**	.18**	.21**
4	TSR				-	.39**	.33**	.60**	.38**
5	PSL					-	.27**	.34**	.36**
6	FSL						-	.41**	.49**
7	CRSW							-	.53**
8	FG								-

Note: **p<.01

Table 3.4 Multiple Regression Analyses for Teacher Student Relationship Engagement

	β	***SE***	***t-value***	***p-value***
TSR				
Intercept	-.165	.375	-.439	.661
Level 1				
ADHD Symptoms	.05	.08	1.29	.198
Medication Status	-.01	.09	-.35	.727
Intellectual Quotient (IQ)	.00	.00	.04	.96
Ethnicity	-.04	.06	-1.06	.290
Free & Reduced Lunch	.01	.09	.35	.72
Level 2				
Conduct Problems	-.00	.43	-.21	.829
Positive Parenting	-.03	.05	-.69	.488
Parental Involvement	.18	.05	3.39	.001*
Level 3				
CPXParental Involvement	-.02	.05	-.48	.630
CPXPositive Parenting	.04	.05	.80	.421

Note: TSR=Teacher-student relationship; R^2 = .03; $F(10, 565) = 2.02$. *p<.01

Table 3.5 Multiple Regression Analyses for Peer-Student Relationship Engagement

	β	***SE***	***t-value***	***p-value***
PSL				
Intercept	-.32	.36	-.89	.37
Level 1				
ADHD Symptoms	.05	.08	1.34	.19
Medication Status	-.05	.08	-1.2	.22
Intellectual Quotient (IQ)	.01	.00	.45	.65
Ethnicity	.01	.06	.38	.70
Free & Reduced Lunch	.05	.09	1.28	.19
Level 2				
Conduct Problems	.05	.04	1.35	.18
Positive Parenting	-.05	.05	-1.03	.30
Parental Involvement	.19	.05	3.62	.00*
Level 3				
CPXParental Involvement	.00	.04	.18	.86
CPXPositive Parenting	.08	.05	1.56	.12

Note: PSL= Peer-student relationship; R^2 = .04; $F(10, 570) = 2.56$.*p<.01

Table 3.6 Multiple Regression Analyses for Family-Support for Learning Engagement

	β	***SE***	***t-value***	***p-value***
FSL				
Intercept	.24	.37	.64	.52
Level 1				
ADHD Symptoms	-.00	.08	-.16	.86
Medication Status	.16	.09	.39	.70
Intellectual Quotient (IQ)	.-.56	.00	-1.32	.19
Ethnicity	.04	.07	.87	.38
Free & Reduced Lunch	.02	.09	.37	.71
Level 2				
Conduct Problems	.-.16	.04	-3.70	.00*
Positive Parenting	.70	.05	1.27	.20
Parental Involvement	.16	.05	3.11	.00*
Level 3				
CPXParental Involvement	.09	.05	1.78	.07
CPXPositive Parenting	-.01	.05	-.23	.82

Note: R^2 = .09; $F(10, 574)$ = 6.30. *p<.01

Table 3.7 Multiple Regression Analyses for Future Aspirations and Goals Engagement

Note: R^2 = .09; $F(10, 573)$ = 5.61. *p<.01

	β	***SE***	***t-value***	***p-value***
FG				
Intercept	-.42	.37	-1.11	.26
Level 1				
ADHD Symptoms	.07	.08	1.87	.06
Medication Status	.03	.09	.82	.41
Intellectual Quotient (IQ)	.01	.00	.24	.81
Ethnicity	.11	.06	2.54	.01*
Free & Reduced Lunch	.09	.09	2.20	.02
Level 2				
Conduct Problems	-.01	.04	-.23	.82
Positive Parenting	-.07	.05	-1.34	.18
Parental Involvement	.26	.05	4.85	.00*
Level 3				
CPXParental Involvement	.13	.05	2.63	.00*
CPXPositive Parenting	-.05	.05	-1.12	.26

Table 3.8 Multiple Regression Analyses for Control and Relevance of School Work Engagement

	β	***SE***	***t-value***	***p-value***
CRSW				
Intercept	.89	.36	2.43	.01
Level 1				
ADHD Symptoms	.00	.08	.16	.87
Medication Status	-.00	.08	-.17	.87
Intellectual Quotient (IQ)	-.16	.00	-3.90	.00*
Ethnicity	.06	.06	1.58	.11
Free & Reduced Lunch	.15	.09	3.43	.00*
Level 2				
Conduct Problems	-.00	.04	-1.60	.88
Positive Parenting	-.03	.05	-.55	.59
Parental Involvement	.20	.05	3.81	.00*
Level 3				
CPXParental Involvement	-.05	.05	-.10	.32
CPXPositive Parenting	.07	.05	1.40	.16

Note: R^2 = .10; $F(10, 566) = 6.72$. *p<.05

CHAPTER 4

DISCUSSION

The current study explored the moderating effects of Parental Involvement and Positive Parenting on the relationship between Conduct Problem symptoms and the covert domains of Student Engagement (i.e., psychological and cognitive engagement). This paper was designed to fill the gap in the literature by investigating the impact of conduct problems on student engagement, as well as observe the role of parental involvement and positive parenting on the covert domains of engagement. Results and implications of these findings are discussed below.

CONDUCT PROBLEMS AND STUDENT ENGAGEMENT

The first step of the analyses was to examine the influence of conduct problem symptoms on each engagement domain. Conduct problems were found to have a significant negative relationship with FSL. This result is consistent with our hypothesis that as Conduct Problem symptomology increases FSL would subsequently decrease. This may suggest that the higher level of disruptive behavior problems experienced at home has a negative effect on the home environment, which is not an uncommon findings in the conduct problem literature (Frick, 1998). However, inconsistent with the hypothesis, Conduct Problems were not found to have a significant relationship with TSR, PSR, FG, or CRSW. These findings may be due to rater bias, since Conduct Problems were

rated by the parent and/or legal guardian and the student engagement measures were self-report, which may indicate inconsistencies between the level of conduct problems observed and the level of experienced engagement in the school. Since limited studies have evaluated the covert domains of engagement, future research should continue to investigate these relationships in youth with conduct problems compared to typically developing youth.

PARENTING PRACTICES AND STUDENT ENGAGEMENT

The second step of the analyses examined the relationship between the two parenting practices variables (i.e., Parental Involvement & Positive Parenting). Parental involvement was observed to be a significant predictor of all psychological engagement outcomes (TSR, PSL, & FSL) and in the anticipated direction, such that as parental involvement increased, TSR, PSL, and FSL increased. On the contrary, the Positive Parenting variable rendered insignificant relationships with all student engagement outcomes (TSR, PSR, FSL, FG, and CRSW). When comparing the main effect relationships on student engagement, this unexpected result may be due to parents over reporting their involvement and student's underreporting the existence and quality of their relationships and learning. This is all not that uncommon for students with emotional and behavioral difficulties to perceive the level of teacher, peer, and family support to be less then observed.

CONDUCT PROBLEMS, PARENTING PRACTICES, AND STUDENT ENGAGEMENT

The third step of the analyses was to examine the moderating role of parental involvement and positive parenting between the relationship of conduct

problems and both student engagement domains (i.e., psychological and cognitive). Only one significant interaction emerged and that was between parental involvement and student future aspirations and goals, which may indicate that the presence of parental involvement does increase the level of cognitive engagement (i.e., future aspirations and goals) in adolescents with conduct problems.

Limitations

A plausible explanation for insignificant results may be due to the study's cross-sectional design. Longitudinal analyses may have produced more significant findings since the measures would have been evaluated across multiple time points. Another limitation contributing to insignificant findings may have been due to limited raters for Conduct Problems, Parental Involvement, and Positive Parenting. Future studies may benefit from exploring the differences between ratings (i.e., parent and student) on both the Conduct Problems and the parenting practices variables to investigate discrepancies.

Implications for Research

Studying the dosage of positive parenting practices may assist in a better understanding of the relationship between using these techniques and developing favorable student engagement outcomes. It was found that parental involvement does moderate conduct problems and future aspirations and goals. This is integral and in agreement with other studies that parental involvement does increase desirable outcomes and reduce problem behavior (see literature review above). However, in continuation of previous research, this study has

expanded positive parental involvement to impact a student's future aspirations and goals (i.e., cognitive engagement domain). One may suggest that this component of cognitive engagement is malleable and therefore sensitive to change with the inclusion of parental involvement. Results may suggest that continuing to include parental involvement strategies in interventions to increase student engagement may be beneficial. Results also may inform future or current parent interventions that incorporate parental involvement as a useful tool for increasing desirable outcomes, such as increasing cognitive engagement with adolescents with conduct problems. It is suggested that future research evaluate the reciprocal relationship between conduct problem symptomology and parental involvement, largely in part because a negative significant relationship was found between Conduct Problems and FSL, yet Parental Involvement moderated the relationship between Conduct Problem symptomology and future aspirations and goals. If as conduct problems increase, family support for learning decreases, one may posit that unless the conduct problems are addressed and decreased first, parental involvement may be limited and available to be utilized and/or implemented in the home environment to increase cognitive engagement. However, only additional research can help parse the unique and reciprocal relationships between parenting involvement and cognitive engagement with adolescents with conduct problems.

Implications for Families and Schools

Results from this study may assist in informing families and schools about the relevance and importance of parental involvement in the lives of adolescents

with conduct problems. Specifically, parental involvement not only improves academic and behavioral outcomes, but additionally impacts cognitive engagement. This also informs schools that school based interventions in conjunction with parental involvement may be beneficial when aiming to increase student engagement. This is of particular salience for the school system since higher student engagement is linked to increased desirable student outcomes both academically and behaviorally.

REFERENCES

Abu-Rayya, H. M., & Yang, B. (2012). Emotional and Behavioral Problems and Their Underlying Risk Factors Among Children in New South Wales, Australia. *International Journal Of Mental Health*, *41*(3), 3-23.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing American Academy of Child & Adolescent Psychiatry (2013). Facts for Families: Conduct Disorder #33. http://www.aacap.org

Appleton, J. J., Christenson, S. L., Kim, D.,, & Reschly, A. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology*, *44(5)*, 427-445.

Appleton, J. J., Christenson, S. L., Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45, 369-86.

Arnold, D. H., Ortiz, C., Curry, J.C., Stowe, R.M., Goldstien, N. E., Fisher, P. H., et al. (1999). Promoting academic success and preventing disruptive behavior disorders through community partnership. *Journal of Community Psychology,* 27, 589-598.

Balfanz, R., Herzog, L., & Mac IVer, D.J (2007). Preventing student disengagement and keeping students on the graduation path in urban

middle-grade schools: Early identification and effective intervention. *Educational Psychologist*, 42(4), 223-235.

Bardone, A. M., Moffitt, T. E., Caspi, A., Dickson, N., & Silva, P. (1996). Adult mental health and social outcomes of adolescent girls with depression and conduct disorder. *Development and Psychopathology*, 8,811-829.

Baumrind, D., Larzelere, R. E., & Owens, E. B. (2010). Effects of preschool parents' power assertive patterns and practices on adolescent development. *Parenting: Science And Practice*, *10*(3), 157-201. doi:10.1080/15295190903290790

Belsky, J., Hsieh, K. H., Crnic, K. (1998). Mothering, fathering, and infant negativity as antecedents of boys' externalizing problems and inhibition at age 3 years: Differential susceptibility to rearing experience*? Development and Psychopathology, 10*, 301-319

Betts, J. E., Appleton, J. J., Reschly, A. L., Christenson, S. L., & Huebner, E. S. (2010). A study of the factorial invariance of the Student Engagement Instrument (SEI): Results from middle and high school students. *School Psychology Quarterly, 25(2),* 84-93.

Bjorknes, R., Kjobli, J., Manger, T.,Jakobsen, R. (2012). Parent training among ethnic minorities: Parenting practices as mediators of change in child conduct problems. *Interdisciplinary Journal of Applied Family Studies, 6,1 101-114.*

Brook, J. *S., &* Newcomb, M. D. (1995). Childhood aggression and unconventionality: Impact on later academic achievement, drug use, and workforce involvement*. Journal of Genetic Psychology,* 156, 393-410*.*

Carter, C. P., Reschly, A. L., Lovelace, M. D., Appleton, J. J., & Thompson, D. (2012). Measuring student engagement among elementary students: Pilot of the Student Engagement Instrument—Elementary Version. *School Psychology Quarterly, 27(2),* 61-73.

Caspi, A., Wright, B. R. E., Moffitt, T. E., & Silvia, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociological Review*, 63, 424-451.

Caspi, A. (2000). The child is the father of man: personality continuities from childhood to adulthood. *Journal of Personality and Social Psychology, 78*, 1, 158-172.

Christenson, S. L., Reschly, A. L., Appleton, J. J., Berman, S., Spanjers, D., & Varro, P. (2008). Best practices in fostering student engagement. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (5th ed.). Bethesda, MD: National Association of School Psychologists.

Conduct Problems Prevention Research Group. (2000). Merging universal and indicated prevention programs: The Fast Track model. *Addictive Behaviors,* 25, 913-927.

Connell, J. P. & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. Gunnar, L. & Sroufe, L. (Eds.), *Competence, autonomy, and relatedness:*

A motivational analysis of self-system processes (pp. 43-77). Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.

Cook, J. D., Hepworth, S. J., Wall, T. D., & Warr, P. B. (1981). *The experience of work: A compedium and review of 249 measures and their use.* San Diego: Academic Press.

Dadds, M.R. (1995). Families, children, and the development of dysfunction. New York: Sage Press.

Dadds, M.R., Maujean, A., Fraser, J. (2003). Parenting and Conduct Problems in Children: Australian data and Psychometric properties of the Alabama Parenting Questionnaire. *Australian Psychologist 38*, 238-241.

Darke, S., Ross, J., & Lynskey, M. (2003). The relationship of conduct disorder to attempted suicide and drug use history among methadone maintenance patients. *Drug and Alcohol Review*, 22, 21-25.

Dodge, K., Bates, J., Pettit, G. (1990) Mechanisms in the cycle of violence. *Science* 250: 1678-1683.

Dodge, K., & Pettit, G. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology*, 39, 349-371.

Dodge, K., Pettit, G., Bates, J., Valente, E. (1995). Social information processing patterns partially mediate the effect of early physical abuse on later conduct problems. *Journal of Abnormal Psychology* 104:632-643.

Farrington, D. P. (2005). Childhood origins of antisocial behavior. *Clinical Psychology and Psychotherapy*, 12, 177–190.

Fergusson, D. M., & Horwood, L. J. (1998). Early conduct problems and alter life opportunities. *Journal of Child Psychiatry*, 39, 1097-1108.

Fergusson, D. M., Horwood, L. J., & Ridder, E. (2005) Show me the child at seven: the consequences of conduct problems in childhood for psychosocial functioning in adulthood. *Journal of Child Psychology & Psychiatry, 46*, 8, 837-849

Finn, J.D. (1989) Withdrawing from school. *Review of Educational Research,* 59, 117-142.

Finn, J. D., & Rock, D. A., (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology*, 82, 21-234.

Finn, J.D., & Owings, J. (2006). The adult lives of at risk students: The role of attainment and engagement in high school statistical analysis report. National Center for Education Statistics: U.S. Department of Education.

Flory, K., Milich, R., Lynam, D. R., Leukefeld, C., & Clayton, R. (2003). Relation between childhood disruptive behavior disorders and substance use and dependence symptoms in young adulthood: Individuals with symptoms of attention-deficit/hyperactivity disorder and conduct disorder are uniquely at risk. *Psychology of Addictive Behaviors*, 17, 151-158.

Frick, P. J. (1991). The Alabama Parenting Questionnaire. Unpublished rating scale, University of Alabama.

Frick, P.J. (1998). *Conduct disorders and severe antisocial behavior*. New York: Plenum Press.

Frick, P. J., Christian, R. E., & Wootton, J. M. (1999). Age trends in the association between parenting practices and conduct problems. *Behavior Modification*, 23, 106-128.

Frick, P.J., & Silverthorn, P. (2001) Psychopathology in children. In P.B. Sutker & H.E. Adams (Eds.), *Comprehensive handbook of psychopathology* (3rd ed., pp. 881-920). New York: Kluwer Academic/Plenum Press.

Frick, P., Kamphaus, R. W., Lahey, B. B., Loeber, R., Christ, M. G., Hart, E., & Tannenbaum, L. E. (1991). Academic underachievement and the disruptive behavior disorders. *Journal of Consulting and Clinical Psychology*, 59-289-294.

Fredericks, J. A., Blumenfeld, P.C., & Paris, A. J. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59-109.

Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools, 30,* 79-90.

Gottfredson, G.D., & Gottfredson, D.C. (2001). What schools do to prevent problem behavior and promote safe environments. *Journal of Educational and Psychological Consultation*, 12, 313-344

Grier-Reed, T., Appleton, J., Rodriguez, M., Ganuza, Z., Reschly, A. (2012). Exploring the student engagement instrument and career percpetions with college students. *Journal of Educational and Developmental Psychology*, 2, 85-96.

Heddy, B. C., Sinatra, G. M., Seli, H., & Mukhopadhyay, A. (2014). Transformative experience as a facilitator of interest development and transfer in a college success course for at-risk students. Paper presented at the American Educational Research Association, Philadelphia, PA.

Jaffe, S. R., Belsky, J., Harrington, H., Caspi, A., & Moffitt, T. E. (2006) When parents have a history of conduct problems: how is the caregiving environment affected? *Journal of Abnormal Psychology, 115:2*, 309-319

Jimerson, S. R., Campos, E., & Greif, J.L. (2003). Toward an understanding of definitions and measures of school engagement and related terms. *The California School Psychologist*, 8, 7-27.

Johnson, M. K., Crosnoe, R., & Elder, G. H., Jr. (2001). Student's attachment and academic engagement: The role of race and ethnicity. *Sociology of Education*, 74, 318-340.

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology*, 92, 349-359.

Kazdin, A.E. (1993). Treatment of conduct disorder: Progress and directions in psychotherapy research. *Development and Psychopathology, 5,* 277-310.

Kim-Cohen, K., Caspi, A., Moffitt, T.E., Harrington, H., Milne, B. J., & Poulton, R. (2003). Prior juvenile diagnoses in adults with mental disorder: Developmental follow-back of a prospective-longitudinal cohort. *Archives of General Psychiatry*, 60, 709-717.

Kokko, K., Tremblay, R E., Lacourse, E., Nagin, D. S., & Vitaro, F. (2006). Trajectories of prosocial behavior and physical aggression in middle childhood: Links to adolescent school dropout and physical violence. *Journal of Research on Adolescence*, 16, 403-428.

Lehr, C. A., Sinclair, M.F., & Christenson, S. L. (2004). Addressing student engagement and truancy prevention during the elementary years: A replication study of the Check and Connect model. *Journal of Education for Students Placed at Risk*, 9, 279-301.

Loeber, R., & Farrington, D.P. (2000). Young children who commit crime: Epidemiology, developmental origins, risk factors, early interventions, and policy implications. *Development and Psychopathology, 12,* 737-762.

Loeber, R., Hipwell, A., Battista, D., Sembower, M., & Stouthamer-Loeber, M. (2009). Intergenerational Transmission of Multiple Problem Behaviors: Prospective Relationships between Mothers and Daughters. *Journal Of Abnormal Child Psychology*, *37*(8), 1035-1048. doi:10.1007/s10802-009-9337-x

Lorber, M, F., Egeland, B. (2011). Parenting and infant difficult: Testing a mutual exacerbation hypothesis to predict early onset conduct problems. *Child Development, 82*, 2006-2020.

Lovelace, M. D., Reschly, A. L., Appleton, J. J., & Lutz, M. E. (2012). The student engagement instrument: Fit with at-risk youth and association with disengagement, dropout, achievement, and extracurricular involvement. Manuscript submitted for publication.

Ma, L., Phelps, E., Lerner, J. V., & Lerner, R. M. (2009). Academic competence for adolescents who bully and who are bullied: Findings from the 4-H study of positive youth development. *Journal of Early Adolescence*, 29, 862-897.

Maccoby, EE., Martin, JA. (1983). Socialization in the context of the family: parent-child interaction. Hetherington EM (ed) Socialization, personality and social development. Handbook of child psychology (4th edn). Wiley, New York, 4, 1-101.

Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal*, 37, 153-184.

McPartland, J. M. (1994). Dropout prevention in theory and practice. In R. Rossi (Ed.), *Schools and students at risk: Context and framework for positive change* (pp. 255-276). New York, NY: Teachers College Press.

Moffitt, T.E. (1993). Adolescence-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674-701.

Moffitt, T. E., Caspi, A., Dickson, N., Silva, P., & Stanton, W. (1996) Childhood-onset versus adolescent onset antisocial conduct problems in males: natural history from ages 3 to 19 years. *Development and Psychopathology, 8,* 299-424

Moffitt, T.E., & Caspi, A. (2001) Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development and Psychopathology, 13,* 255-375

Morrison, G. M., Furlong, M. J., D'Incau, B., & Morrison, R. L. (2004). The safe school: Integrating the school reform agenda to prevent disruption and violence at school. In J. C. Conoley & A. P. Goldstein (Eds.), School Violence intervention: A practical handbook, 256-296.

National Center for Education Statistics. (2015). The condition of education. Washington D. CL Institute of Education Sciences, E.S. Department of Education.

National Research Council and Institute of Medicine (2004). *Engaging schools: Fostering high school students' motivation to learn.* Committee on Increasing High School Students' Engagement and Motivation to Learn. Board on Children, Youth, and Families, Division of Behavioral and Social Science and Education. Washington, DC: The National Academy Press.

Offord, D. R., & Bennett, K. J. (1994). Conduct disorder: longitudinal outcomes and intervention effectiveness. *Journal of the American Academy of Child and Adolescent Psychiatry, 33, 8,* 1069-1078.

Olsen, S.F., Martin, P., & Halverson, C.F.J. (1999). Personality, marital relationship, and parenting in two generations of mother. *International Journal of Behavioral Development, 23:2*, 457-476

Pardini, D., Fite, P., Burke, J.D. (2008) Bidirectional associations between parenting practices and conduct problems in boys from childhood to

adolescence: The moderating effect of age and African-American ethnicity. *Journal of Abnormal Child Psychology 36*, 647-662

Patterson, G.R. (1982). Coercive family process. Eugene, OR: Castalia Press.

Patterson, G.R. (1986). Performance models for antisocial boys. *American Psychologist, 41*, 432-444.

Patterson, G.R., & Reid, J.B. (1984). Social interactional processes in the family: The study of the moment by moment family transactions in which human social development is embedded. *Journal of Applied Developmental Psychology, 5*, 237-262.

Pintrich, P. R., & De Groot, E. (1990). Motivated and self-regulated learning components of academic performance. *Journal of Educational Psychology*, 82,33-40.

Posthumus, J. A., Raaijmakers, M. J., Maassen, G. H., van Engeland, H., & Matthys, W. (2012). Sustained effects of Incredible Years as a preventive intervention in preschool children with conduct problems. *Journal Of Abnormal Child Psychology*, *40*(4), 487-500. doi:10.1007/s10802-011-9580-9.

Powell, N., Boxmeyer, C. L., Baden, R., Stromeyer, S., Minney, J. A., Mushtaw, A., & Lochman, J. E. (2011). Assessing and treating aggression and conduct problems in schools: Implications from the coping power program. *Psychology in the Schools*, 48, 233-242,

Raudino, A., Woodward, L.J.,Fergusson, D., Horwood, J.L. (2012). Childhood conduct problems are associated with increased partnership and

parenting difficulties in adulthood. *Journal of Abnormal Child Psychology, 40*, 251-263

Reid, MJ., Webster-Stratton, C., Baydar, N. (2004). Halting the development of conduct problems in head start children: the effects of parent training. *Journal of Clinical Child Adolescent Psychology. 33:* 279-291

Reschly, A. L. & Christenson, S. L. (2006). Prediction of dropout among students with mild disabilities: A case for the inclusion of student engagement variables. *Remedial and Special Education*, *27(5)*, 276-292.

Reynolds, C. R., & Kamphaus, R. W. (2004). *Behavior assessment system for children* (2nd ed.). Circle Pines, MN: American Guidance Service.

Roman, N. V., Davids, E. L., Moyo, A., Schilder, L., Lacante, M., & Lens, W. (2015). Parenting styles and psychological needs influences on adolescent life goals and aspirations in a South African setting. *Journal Of Psychology In Africa*, *25*(4), 305-312.

Rumberger, R. W. (1987). High school dropouts: A review of issues and evidence. *Review of Educational research*, 57, 101-121.

Shaw, D. S. (2013). Future directions for research on the development and prevention of early conduct problems. *Journal of Clinical Child & Adolescent Psychology, 42:3*, 418-428.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55(1),* 5-14.

Seligman, M. E. P. & Koocher, G. P. (1999). The APA 1998 Annual Report. *American Psychologist, 54(8),* 537-568.

Shaw, D.S., Bell, R. Q., Gilliom, M. (2000). A truly early starter model of antisocial behavior revisited. *Clinical Child and Family Psychology Review, 3,* 155-172.

Shelleby, E., Shaw, D.S. (2014). Outcomes of parenting interventions for child conduct problems: A review of differential effectiveness. *Child Psychiatry Human Development* DOI: 10.1007/s10587-013-0431-5.

Shelton, K. K., Frick, P. J., & Wooton, J. (1996). Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychiatry*, 25, 317-329.

Simons, L. G., Simons, R. L., & Su, X. (2013). Consequences of corporal punishment among African Americans: The importance of context and outcome. *Journal of Youth Adolescence*, 42, 1273-1285.

Sinclair, M. F., Christenson, S. L., Evelo, D. L., & Hurley, C. M. (1998). Dropout prevention for youth with disabilities: Efficacy of a sustained school engagement procedure. *Exceptional Children, 65(1),* 7-21.

Smokowski, P. R., Bacallao, M. L., Cotter, K. L., & Evans, C. B. R. (2015). The effects of positive and negative parenting practices on adolescent mental health outcomes in a multicultural sample of rural youth. *Child Psychiatry Human Development*, 46, 333-345.

Spanjers, D. M., Burns, M. K., & Wagner, A. R. (2008). Systematic direct observation of time on task as a measure of student engagement. *Assessment for Effective Intervention, 33(2),* 120-126.

Suldo, S. M., Huebner, E. S., Savage, J., & Thalji, A. (2010). Promoting subjective well-being. In M. A. Bray, T. J. Kehle, & P.E Nathan (Eds.), *The Oxford Handbook of School Psychology* (pp.504-522). Oxford University Press: New York.

Thompson, A., Hollis, C., & Richards, D. (2003). Authoritarian parenting attitudes as a risk for conduct problems: Results from a British national cohort study. *European Child & Adolescent Psychiatry*, *12*(2), 84-91. doi:10.1007/s00787-003-0324-4

Tremblay, R. E., Nagin, D. S., Séguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., et al. (2004). Physical aggression during early childhood: trajectories and predictors.Pediatrics, 114,43–50.

Trudeau, L., Mason, W.A., Randall, G.K., Spoth, R., Ralston, E. (2012). Effects of parenting and deviant peers on early to mid-adolescent conduct problems. *Journal of Abnormal Child Psychology 40*, 1249-1264

Webster-Stratton, C., & Hammond, M. (1988) Marital conflict management skills, parenting style, and early onset conduct problems: process and pathways. *Journal of Child Psychology and Psychiatry, 40*, 917-927

Webster-Stratton, C., & Taylor, T. (2001). Nipping early risk factors in the bud: preventing substance abuse, delinquency, and violence in adolescence through interventions targeted at young children (0 –8 years). *Prevention Science*, 2, 165–192.

Wehlage, G., Rutter, R., Smith, G., Lesko, N., & Fernandez, R. (1989). *Reducing the risk: Schools as communities of support*. London: Falmer.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25, 3-17.