

**The Effect of Affect Regulation on the Relationship between
Attachment and Internalizing/Externalizing Behavior Problems
in Male Adolescents who have Sexually Offended**

by

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Abstract

It is important to better understand those who perpetrate sexually; however, much of the available research has been conducted with adult sex offenders. Since research has found that these adults frequently report perpetrating sexual abuse for the first time during childhood/adolescence, this study examines adolescents who have committed a sexual offense. Findings have shown that adolescents who sexually offend are most often insecurely attached to caregivers, have difficulty regulating their emotions, and display numerous internalizing and externalizing behavior problems (in addition to sexual offending). Research has shown that attachment insecurity is highly related to internalizing/externalizing behaviors and poor affect regulation skills. However, no studies have examined the relationships among attachment, affect regulation, and internalizing/externalizing behaviors in the population of adolescents who sexually offend. The purpose of this study is to identify how affect regulation ability might mediate or possibly moderate the relationship between attachment and internalizing/externalizing behaviors in this population. Sixty-two incarcerated adolescents completed self-report questionnaires regarding demographic information, internalizing/externalizing behavior problems, attachment, and affect regulation. Path analysis was the chosen method of analysis. In addition, mediation and moderation hypotheses were tested. This study found that attachment was related to internalizing and externalizing behaviors, as well as, emotion regulation. Maladaptive affect regulation appeared to have a stronger influence on problem behaviors than adaptive affect regulation in this study. Affect regulation was not found to moderate the

relationship between attachment and internalizing and/or externalizing behaviors. Importantly, this study was the first to test and find that affect regulation ability mediated the relationship between attachment and externalizing behavior. The findings from this study might help professionals identify more successful therapeutic interventions for these adolescents and prevent later sexual offending and further negative, individual or societal outcomes.

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Introduction

Statement of the Problem

Until the 1980's, juveniles who committed sexual offenses were not subjects of research. Their sexual offense behavior was often explained or discounted as experimentation or developmental curiosity. The available research mainly focused on investigating deviant sexual behavior in adults (Becker, 1998; Veneziano & Veneziano, 2002). However, the research of the past few decades has indicated that adolescents who sexually offend account for a significant number of child sexual abuse perpetrators (Lowenstein, 2006). Crime reports and victim surveys have shown that adolescents are responsible for about 20% of rapes and 50% of cases of child sexual abuse (Davis & Leitenberg, 1987; Deisher, Wenet, Papemy, Clark, & Fehrenbach, 1982; Groth & Lored, 1981). According to Campbell (2000), one-third of sexual offenses in England and half of sexual offenses in the United States were committed by adolescents. Pithers and Gray (1998) noted that nearly 40% of all child sexual abuse is perpetrated by youths less than 20 years old, with 6-12 year old children being the source of 13-18% of all of the substantiated child sexual maltreatment. Estimates have suggested that more than 70,000 boys and 110,000 girls are victims of adolescent perpetrators each year (Ryan & Lane, 1997).

Another factor to consider is that these estimates might even be conservative due to the reluctance in reporting those adolescents who have sexually offended (Kempton & Forehand, 1992). Therefore, most likely these numbers underestimate the true number of adolescents who sexually offend, because many sexual abuse incidents go unreported and only a small number of reports result in an arrest (Groth & Lored, 1981). Males perpetrate the substantial majority of

reported sexual offenses and adolescent females only commit a reported 1%-8% of known offenses (Barbaree & Marshall, 2005; Federal Bureau of Investigation [FBI], 2001). Due to these statistics and the proposed distinctions between motivations and behaviors by male and female adolescent perpetrators (Barbaree & Marshall, 2005), this review will only focus on adolescent males who have committed a sexual offense. Some research on sexual offending adolescent males exists, yet much is still unknown.

The research literature indicates that adolescent males who sexually offend are a heterogeneous population with a number of diverse characteristics and treatment needs (Becker, Kaplan, & Tenke, 1992; Hunter & Becker, 1994; Hunter, Hazelwood, & Slesinger, 2000; Ryan & Lane, 1997; Veneziano et al., 2000). These adolescents vary in regards to the ages of their victims and whether their offenses involve psychological coercion, violence, or both, as well as, varying in terms of ethnicity, background, and personal life experience. Several studies (Bischof, Stith, & Whitney, 1995; Blaske, Borduin, Henggeler, & Mann, 1989; McCraw & Pegg-McNab, 1989; Oliver, Hall, & Neuhaus, 1993) showed no ethnic differences between sex offending and non-sex offending groups; however, Van Wijk et al. (2003) found that European-Americans were more common among the group who had committed a sex offense and that other ethnic groups were overrepresented in the violent group of individuals who had also committed a sex offense (Bullens, van Wijk, & Mali, 2006).

Significance of the Problem

In modern Western society, sexual abuse is a significant problem due to its prevalence, severity, and degree of harm to its victims. Victims may suffer negative outcomes such as anxiety, substance abuse, depression, suicide, antisocial behavior, or becoming a perpetrator of the sexual abuse cycle. Sexual abuse is considered to be one of the major societal ills along with

violent crimes, poverty, disease, and substance abuse (Barbaree & Marshall, 2005). It is not enough to study only victim outcomes. In order to contribute to societal change, it is essential to research those who perpetrate in order to understand how this problem begins and persists.

Another major problem is that most of the available research has been conducted only with adult sex offenders. It has been inferred that results for adult sexual offenders would be similar to results for adolescent sexual offenders; however, we cannot just assume this relationship. This must be tested. Also, many sex offenders report an early reliance on sexualized coping processes and report that their pattern of offenses began during their adolescence or even childhood years (Marshall & Marshall, 2000). Specifically, information indicates that approximately 50% of adult sex offenders report sexually perpetrating for the first time during adolescence (Groth, Longo, & McFadin, 1982).

Research is sparse in the area of juvenile sexual offending, perhaps because it has only recently been identified as a research area and/or because of the social stigma attached to sexuality, especially youth sexuality. This is an area in which an increase in our current knowledge would have huge potential societal benefits, especially considering that since sex-abusing behaviors often begin during childhood/adolescence that could mean a higher number of victims over an individual's lifetime if we do not begin to understand this phenomenon.

Prevalence rates and early onset of deviant sexual behavior make a strong case that further research needs to be conducted with this population. It would be negligent not to study these individuals at the earliest time possible, before a life-long pattern has developed. That is why this study will examine younger individuals who have committed sexual offense(s). In general, findings have suggested that those who have sexually offended are more likely to have an insecure attachment style (Barbaree & Marshall, 2005; Ward, Hudson, Marshall, & Siegert,

1995). Another general finding is that individuals with insecure attachment are more likely to have more internalizing and/or externalizing behaviors. Many adolescents who sexually offend have numerous internalizing and externalizing problems in addition to their sexual offending (Becker, Kaplan Tenke, & Tartaglini, 1991; Blaske et al., 1989; Kahn & Chambers, 1991; Kavoussi, Kaplan, & Becker, 1988; Langstrom & Lindblad, 2000). This study will look at attachment and internalizing/externalizing behaviors in a sample of adolescents who have sexually offended. Although not investigated often, adolescents who sexually offend usually show problems with their ability to regulate emotional arousal resulting in high levels of internalizing and externalizing problems (Burton, Cullen, Evans, Alarid, & Dunaway, 1998; Kavoussi et al., 1988; Marshall et al., 1993; Veneziano & Veneziano, 2002). There have been no studies of this population that has examined how affect regulation affects the relationship between attachment and internalizing and externalizing behavior problems. The present study will add to the research on affect regulation as it relates to attachment, internalizing behaviors, and externalizing behaviors in adolescent males who have sexually offended.

Perhaps if researchers can better identify contributing factors and difficulties in the lives of adolescents who have sexually offended, more successful therapeutic interventions can be initiated during adolescence that can help prevent further victimization. It might give professionals an increased chance to prevent juvenile sexual offending and later adult sexual offending, therefore lessening some of the negative, societal outcomes.

Review of the Literature

This review of the literature explores what is already known about affect regulation, attachment, externalizing and internalizing behaviors in the population of adolescents who have sexually offended. First, we will address how the literature defines this population. Then, we will examine the research on internalizing and externalizing behavior problems found in adolescents who have sexually offended.

Defining the Adolescent Sex Offender Population

Sexual offending is a legal term that is defined as any sexual contact that involves coercion, manipulation or power, or is committed against individuals who are unable to give their informed consent (Camp, Salazar, DiClemente, & Wingood, 2005). Therefore, people who sexually offend can be defined as individuals who have been convicted in a criminal court of a sexual crime (Barbaree & Marshall, 2005). Adolescents who have committed a sexual offense are under an age fixed by law (usually 18) at which they would be charged for a criminal act as an adult. In the majority of Western jurisdictions, including the U.S., a person would be considered a juvenile when he or she is under the age of eighteen. Ten states in the U.S. regard 17-year-olds as adults and three states regard 16-year-olds as adults (Barbaree & Marshall, 2005). In addition to this legal definition, there are different ways to divide the concept of sexual offenses.

Sexual behavior is considered to be deviant when the sexual behavior is outside the “norm” for the particular population. Therefore, sexual behavior can be determined as deviant if the sexual practices are not usual for the particular population in which the person is a member.

However, it is important to remember that there is a criminal act involved for individuals who commit a sexual offense and not merely socially undesirable or deviant behavior (Barbaree & Marshall, 2005).

In general, there are three identifiable groups of juveniles who have committed sex offenses: pedophilic juveniles whose victims were at least 3 years younger than they, sexually assaultive juveniles, and a mixed group that includes juveniles who perpetrated sex offenses in both of these classifications (Veneziano & Veneziano, 2002). However, there have yet to be any typologies that have been consistently used throughout the literature and classification can vary from study to study.

Internalizing/Externalizing Behaviors in Adolescents who have Sexually Offended

There are two broad categories of behavioral problems of youth: internalizing problem behaviors and externalizing problem behaviors. In general, delinquents have been found to have difficulties in both areas (Frame, Wierson, Forehand, Armistead, Kempton, DeVincentis & Neighbors, 1990; Freedman, Rosenthal, Donahoe, Schlundt & McFall, 1978). A few studies have found that individuals who sexually offend are also likely to have both personality and behavioral problems (Ford & Linney, 1995; Jacobs, Kennedy, Meyer, 1997; Jonson-Reid & Way, 2001; van Wijk, Loeber, et al., 2005; van Wijk, van Horn, Bullens, Bijleveld, & Doreleijers, 2005). Despite the fact that this is a heterogeneous population, there are some connecting factors consistently found in the literature. Many adolescents who sexually offend also have been diagnosed with externalizing and/or internalizing behavior problems.

Internalizing Behaviors in Adolescents who have Sexually Offended

Internalizing behavior problems can include depression, anxiety, inhibition, and withdrawal. The main internalizing behaviors included in this review are depression, anxiety, a

lack in social competence/social skills, social awkwardness or isolation, and poor peer relationships (relating to inhibition and withdrawal) (Campbell, Shaw, & Gilliam, 2000; Hinshaw, 1987).

Becker et al. (1991) assessed 246 male juvenile sex offenders (147 African-Americans; 62 Hispanics; 34 Caucasians; 3 unidentified) for symptoms of depression. All participants were referred to the Sexual Behavior Clinic (SBC), an outpatient evaluation and treatment clinic for sexual offenders, by either criminal justice or social service agencies. Prior to treatment, participants were given a structured clinical interview focusing on demographics, the sexual offense, and history of abuse. Subjects were divided according to their self-reports of having been sexually or physically abused. Participants completed the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) to assess depressive symptomatology. Their results showed values on the BDI that were twice those reported by Kaplan, Hong, and Weinhold, (1984) for a random sample of adolescents ($M = 6.0$, $SD = 5.8$). This indicates that adolescents who have sexually offended have an appreciably higher level of depressive symptomatology than would be expected of a random sample of adolescents (Kaplan et al., 1984). Becker et al. (1991) found that 42% attained scores above 15, which is indicative of major depression (Beck et al., 1961; Strober, Green, & Carlson, 1981). A history of sexual or physical abuse was associated with even higher BDI scores for these adolescents. Abused (either physically or sexually abused) participants had a median BDI of 15 ($M = 16.4$; $SD = 1.1$), compared to a median of 10 for unabused participants ($M = 12.3$; $SD = 3.7$).

Blaske et al. (1989) conducted a study examining the individual functioning, family relations, and peer relations of 60 father-absent male adolescents (ranging from 13 to 17 years old) and their mothers. The adolescent subjects were divided into four equally sized groups: sex

offenders, assaultive offenders, nonviolent offenders, and nondelinquent adolescents matched on variables such as age (within 1 year); mother age (within 3 years); race, social class (within one class level); family size (within two members); number of arrest (within one arrest); age of first arrest (within 1.5 years); type of father absence (all parents divorced and not remarried); and length of father absence (within 3 years). The mother and adolescent were interviewed and completed several self-report measures, including the Family Adaptability and Cohesion Evaluation Scales-II (FACES-II; Olson, Portner, & Bell, 1982) and the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983). Only mothers filled out the Missouri Peer Relations Inventory (MPRI; Borduin, Blaske, Treloar, & Mann, 1989) about their sons. The adolescents who sexually offend reported higher rates of anxiety and felt more estranged in their relations with others when compared to the assaultive offenders adolescents. These higher anxiety rates support the presence of internalizing behavior problems in this population. Their results showed that the emotional functioning and peer relations of the adolescents who sexually offend seemed relatively disturbed. The mothers of the adolescents who had sexually offended revealed that these adolescents appeared to have less emotional bonding (emotional warmth and closeness) to peers than did non-offending adolescents. These findings also support the presence of the internalizing problem of withdrawal by indicating the lack of social competence, and increased social isolation, and poor peer relationships in this population. Other areas possibly related to withdrawal, such as, social awkwardness and/or isolation have also been characteristics consistently found in adolescents who sexually offend (Veneziano & Veneziano, 2002). In general, these adolescents have inadequate social skills, poor peer relationships, and are socially isolated (Fehrenach et al., 1986; Katz, 1990; Miner & Crimmins, 1995). Katz (1990) did a study comparing psychosocial adjustments between adolescent child molesters ($n = 31$), non-sex

offending delinquents ($n = 34$), and 'normal' adolescents ($n = 71$) on standardized measures of social competence and psychological adjustment. Adolescent child molesters are usually considered adolescents who perpetrate against a child who was at least three years younger than they. The adolescent child molesters in this sample were drawn from a residential treatment program. In most cases, the molestation consisted of fondling, intercourse, and/or oral copulation and multiple occurrences were typically involved in their sample. The non-sex offending group was drawn from a boys' ranch for adjudicated delinquents and included adolescents who were adjudicated for crimes such as automobile theft, burglary, battery, and/or repeated probation violation. The 'normal' adolescent group was made up of mostly 10th and 11th graders who were obtained from a local high school. They used self-report measures, including, the Survey of Heterosocial Interactions (SHI; Twentyman, Boland, & McFall, 1981), the Social Anxiety and Distress Scale (SAD; Watson & Friend, 1969), the Revised UCLA Loneliness Scale (R-UCLA; Russell, Peplau, & Cutrona, 1980), and the Beck Depression Inventory (BDI; Beck et al., 1961). Adolescent child molesters reported being more anxious and distressed during social situations ($t = 1.42, p = .07$) and feeling more lonely and socially isolated than normal adolescents ($t = 2.86, p = .001$). Adolescent molesters were found to feel more social distress and perceive themselves as less socially competent than both normal adolescents ($t = 2.33, p = .01$) and delinquents ($t = 2.26, p = .01$). They were also found to be more depressed ($t = 2.23, p < .01$) and scored higher on withdrawal ($t = 1.99, p < .02$).

The review of adolescent sex offender research by Wijk, Vermeiren, Loeber, Doreleijers, and Bullens (2006) suggests that adolescents who sexually offend are more likely to display internalizing problems than comparison groups of other types of juvenile delinquents. Some studies have found that these characteristics might prevail more specifically in the subgroup of

child molesters (Hendriks & Bijleveld, 2004; Katz, 1990; van Wijk, van Horn, et al. 2005). For example, Katz (1990) found that adolescents who had committed child molestation offenses were more socially maladjusted when compared to juvenile delinquents who had not committed a sexual offense(s) or 'normal' adolescents in their sample, especially in the areas of social anxiety and fear of heterosexual interactions.

On the basis of these studies, we can infer that adolescents who sexually offend may exhibit more problems in peer relationships because of their experience of a higher degree of internalizing problems than those who do not sexually offend. Research has repeatedly shown that individuals in this population often have significant deficits in social competence (Blaske et al., 1989; Knight & Prentky, 1993). Adolescents who are having a difficult time meeting social tasks are thought to be at higher risk for sexual offending (Marshall, Hudson, & Hodgkinson, 1993). Emotional loneliness can lead to the desire to become close to others. If this need for emotional closeness exists in combination with sexual behavior, promiscuity, sexual preoccupation, and an increase in sexual deviancy may result as these adolescents escalate their attempts to achieve intimacy by having sexual contact (Marshall, 1989).

As reported, some information exists about the relationship of certain internalizing behaviors, such as depression, anxiety, and withdrawal related constructs with sexual offending. Surprisingly, a depth of knowledge about internalizing behavior problems in this population is lacking although it is likely that these young boys suffer from many internalizing problems.

Externalizing Behaviors in Adolescents who have Sexually Offended

Externalizing behavior problems consist of problems that are displayed in an individual's outward behavior. These reflect the child negatively acting on their environment. Externalizing

behaviors can include hyperactivity, inattentiveness, delinquency, disruptiveness, destructiveness, and aggressive behaviors (Campbell et al, 2000; Hinshaw, 1987).

Much of the current adolescent sex offense literature focuses on different externalizing behavior problems. The research describes a variety of ways in which those who sexually offend negatively act in their external environments. In fact, sexual offending itself can be described as an externalizing behavior problem. This review will focus on highlighting other types of externalizing behaviors that adolescents who sexually offend often show.

Some of externalizing behaviors include disruptive school behaviors, truancy, academic difficulties, and poor verbal IQ. Academic difficulties and behavior problems at school have been consistently found in the literature to be related to adolescents who sexually offend (Veneziano & Veneziano, 2002). These adolescents have generally shown difficulties in school settings, including disruptive behavior, truancy, and/or a learning disability (Bourke & Donohue, 1996; Fehrenbach et al., 1986; Kahn & Chambers, 1991). Kahn and Chambers (1991) conducted a retrospective evaluation of case data from a sample of 221 juvenile sexual offenders in one of ten treatment programs in Washington during 1984. The goal of their study was to discover risks for reoffending. They found that over 50% of the adolescents had experienced at least one of three kinds of difficulties with school: 53% had histories of disruptive behavior at school, nearly 30% had truancy histories, and 39% were considered learning disabled. Thirty seven percent (37%) were considered to have substance abuse problems. In summary, high percentages of juvenile sex offenders in this sample had exhibited externalizing behavioral problems (i.e., school problems, substance abuse, and previous criminal offenses).

Overall, learning disabilities have been overrepresented in this population (O'Callaghan, 1998). Similar to other groups of delinquents, studies have indicated that adolescents who

sexually offend have average IQ scores that tend to be in the lower average range (Ferrara & McDonald, 1996; Jacobs et al., 1997; Spaccarelli, Bowden, Coatsworth, & Kim, 1997). Also similar to delinquent groups in general, they are also found to score lower on verbal portions of the tests. Adolescents who sexually offend with lower IQ scores were shown to display significantly more inappropriate sexual behaviors than did those with higher scores (McCurry et al., 1998).

Studies indicate that between 30% to 60% of adolescents who sexually offend displayed some attention deficit disorder symptoms (Ferrara & McDonald, 1996; Kavoussi, Kaplan, & Becker, 1988). Kavoussi et al. (1988) studied the psychiatric diagnoses of adolescent sex offenders by interviewing 58 13-18 year old outpatient male sexual offenders, using the Children's Schedule for Affective Disorders and Schizophrenia and the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders (DSM-III). Their results showed that Conduct Disorder, which is highly defined by externalizing behavior problems, was the most common diagnosis but high levels of Attention Deficit Hyperactivity Disorder were also present.

Several studies have found that adolescents who sexually offend have some similar characteristics to juvenile delinquents, boys from abusive and neglectful families, and socially isolated boys (Righthand & Welch, 2001). According to Van Wijk, Vermeiren, Loeber, Doreleijers, and Bullens (2006), a considerable number of those who sexually offend showed a history of other delinquent behavior but at a lower rate than juvenile delinquents.

Langstrom and Lindblad (2000) conducted a descriptive study based on a clinical file review of 56 young sexual offenders (15-20 years old) in Sweden during 1988-1995. In their study, 62% of their sample had problems with hyperactivity, attention, or concentration in

school; 45% had language problems (including difficulties in speech, reading, or writing). They found earlier antisocial activities similar to previous findings for juvenile delinquents in general. In their sample, 52% had previously been convicted of any offense: 41% of non-sexual crimes only, 4 % of sex crimes only, and 11% of non-sexual and sexual crimes combined. Twenty three percent had been convicted more than twice. The previous offenses mainly were destruction of property and theft, as well as, violent acts against others, such as assault. The findings from these studies support the hypothesis that members of this population frequently have externalizing behavior problems.

The studies reviewed above have examined certain aspects of internalizing behaviors or externalizing behaviors (i.e., depression, anxiety, delinquency, disruptiveness, etc.); however, researchers have seldom examined internalizing behaviors or externalizing behaviors together in this population. Yet, internalizing problems (i.e., anxiety) and externalizing disorders are often thought to be co-occurring in this population (and in general) (Russo & Beidel, 1994). Since internalizing and externalizing behavior problems are most likely highly related, it would be appropriate to examine these together in the same study with the same sample. This study will address how *both* internalizing and externalizing problems are related in this population.

Attachment in Adolescents who have Sexually Offended

Bowlby (1969) originally divided attachment into only two types of attachment, secure and insecure. Secure attachments were defined as essential to the development of a healthy self-reliance. Later, research by Ainsworth (1978) distinguished two subcategories of insecure attachment, making secure, anxious/ambivalent, and avoidant the most commonly accepted types of attachment.

During infancy, attachment develops as a way for the infant to survive with the help of a caregiver. Bowlby (1969) considered the attachment system to be the primary behavioral system whose purpose is to ensure individual and species survival. Interactions with the caregiver become the basis of the security of the infant. These interactions then become internalized in the form of “internal working models” of self and the world (Bowlby, 1969, p. 80). Attachment models suggest that early relationships provide internal representations of relationships and these affect expectations for relationships and self-image throughout the lifespan (Ryan, 1997). These internal working models are believed to regulate attachment-related thoughts, feelings, and behavior in all close relationships.

Bowlby’s theory of attachment (1969, 1975, 1980) proposed that one source of adult psychopathology may be the patterns of early interactions between a child and his/her caregiver. Secure attachment results from caregiving that is appropriately sensitive, affectionate, and responsive. Anxious/ambivalent attachment is seen as resulting from inconsistent responses from caregivers. Avoidant attachment is viewed as resulting from caregivers being unresponsive and detached from the infant (Ainsworth, 1978). Since Bowlby and Ainsworth developed these attachment patterns, they have been accepted and continuously supported by evidence (Burk & Burkhart, 2003; Hazan & Shaver, 1986; Main & Solomon, 1990; Smallbone & Dadds, 1998).

According to Bowlby (1980), the quality of interactions in the caregiver-child relationship affects the quality of attachment the child develops. The way in which attachment bonds are formed shows how essential it is to review the early backgrounds of individuals who have committed sex offenses. Disruptive childhood experiences with caregiver(s) can cause a child to be insecurely attached.

Attachment theory is thought to provide a unique conceptual perspective to examine possible motivation for some sexual offense behavior and at interpersonal and intrapersonal contexts that contribute to deviant sexual behaviors (Burk & Burkhart, 2003). Attachment theory is a widely used theoretical perspective in the area of sexual offending and a number of researchers have studied the concept of attachment in these individuals.

The literature provides information about the population of adolescents who sexually offend and their attachment. Some of the research on attachment processes in respect to maladaptive interpersonal outcomes/behaviors, such as sexual offending, mainly focuses on the distinction between secure and insecure attachment (Burk & Burkhart, 2003); whereas, some research focuses on the three distinctive attachment styles (Smallbone & Dadds, 2000); and others focus on a fourth category referred to as the disorganized attachment style (Baker, Beech, & Tyson, 2006).

There is a considerable amount of evidence that indicates a variety of disruptive experiences in the childhood of these offenders (Barbaree & Langton, 2005). Severe family problems have been consistently found in the literature for adolescents who sexually offend (Veneziano & Veneziano, 2002). Their family backgrounds have often been documented with drunkenness, inconsistency, emotional neglect or rejection, hostility, criminal activities, social isolation, and many other problematic circumstances (Marshall & Marshall, 2000). Smith and Israel (1987) conducted a descriptive study with the purpose of exploring the frequently observed dynamics distinctive to the families with sibling incest. The data is based on 25 families who were reported to the Boulder County Sexual Abuse Team in Boulder, Colorado. The families showed a pattern of common dynamics including: distant and inaccessible parents,

parental stimulation of sexual climate in the home, and family secrets (especially in regard to extramarital affairs).

Family factors such as family instability, disorganization, and violence have commonly been found among these adolescents (Bagley & Shewchuk-Dann, 1991; Kobayashi, Sales, Becker, Figueredo, & Kaplan, 1995; Morenz & Becker, 1995). Kobayshi et al. (1995) conducted a study using 117 juvenile male sexual offenders who had been referred from either criminal justice or social service agencies to a clinic that treated offenders. They studied a theoretical model including several family factors: perceived parental deviance (through physical violence or sexual deviance), child physical and sexual abuse history, and children's bonding to their parents. Each subject was interviewed by a psychologist using a structured clinical interview. They also completed a self-report measure, Adolescent Perception Survey (APS; Kobayashi et al., 1995), measuring how subjects perceive their parents' attitudes toward sexual and nonsexual deviant behaviors. This questionnaire was designed by the researchers and included seventeen deviant behaviors (11 sexual and 6 nonsexual). Five sexually deviant behaviors and three non-sexual, violent behaviors (murder, robbery/burglary, and battery) were selected to measure perceived parental deviant attitudes toward sexual aggression. Their results from regression analysis indicated that physical abuse by the father ($\beta = 3.070, p < .01$) and sexual abuse by males increased sexual aggression by the adolescents ($\beta = 3.833, p < .01$). Children's bonding to their mother was found to be related to lower sexual aggression since the path from bonding to mom to sexual aggression by juvenile was a negative, significant relationship ($\beta = -4.132, p < .01$).

Sexual, physical, and/or mental abuse are some of the other disruptive experiences that can be part of adolescent sex offender's childhood. Studies about what percentage of sexual

offenders have previously been victims of sexual abuse are somewhat inconsistent. For example, a study of young perpetrators proposed that at least 49% had been sexually abused (Johnson, 1988) and other studies have suggested rates of 50-80% of the adolescents suffered sexual victimization in their past (Friedrich & Luecke, 1988; Ryan, Lane, Davis, & Isaac, 1987). Some studies have found results as high as 90%. Veneziano et al. (2000) indicated that 92% of subjects had been sexually abused themselves before committing abuse. This, of course, is a major attachment disruption in these children's lives. Being sexually abused oneself during childhood is known to be associated with having a disrupted or insecure attachment style (McCormack, Hudson, & Ward, 2002). Also, neglect and/or physical abuse have been consistently found to be related to adolescents who sexually offend (Veneziano & Veneziano, 2002). The research suggests that 25-50% of adolescents who sexually offend have experienced physical abuse as children (Becker & Hunter, 1997).

Caputo, Frick, and Brodsky (1999) propose that the families of adolescents who sexually offend may be more disturbed than families of adolescent who do not offend; or family characteristics may play a role in the development of offending behavior in general rather than sexual behavior in particular. Early developmental trauma and familial dysfunction are found to be more common and severe in the adolescent's histories than in the histories of adults who sexually offend (Hunter & Becker, 1994). This is an interesting finding that implies some difference between individuals with earlier onsets of offending. This is another reason it is important to study these adolescents separately from the adult population.

Another family-of-origin theme found in the research on adolescents who sexually offend is about supervision. Adequate supervision appears to be lacking in the families of both juvenile offenders and violent offenders (Hunter & Figueredo, 1990). Frequent separation from parents

and often placement away from home has been a characteristic consistently found to be related to adolescents who sexually offend (Veneziano & Veneziano, 2002). In fact, several studies have shown that less than one third of adolescents who sexually offend lived with both birth parents before incarceration (Fehrenbach et al., 1986; Kahn & Chambers, 1991; Smith & Israel, 1987).

Baker, Tabacoff, Tornusciolo, and Eisenstadt (2003) found that families of sexually offending adolescents told more lies, had more family myths, and were more likely to be involved in taboo behavior. These early environments have been described as having high rates of parent-child conflict and a lack of positive involvement between parent and child. Obviously, these factors are associated with impaired parent-child attachment (Pithers & Gray, 1998) and these types of disruptions during childhood point to these individuals developing insecure attachment.

All of these environmental characteristics described are very frequently associated with insecure attachment. Judging from what is known about how different types of attachment bonds are formed and the family backgrounds of these individuals, it is clear to see the reasons why, in general, these adolescents have insecure attachment styles.

Relatively recently, insecure childhood attachment styles have been accepted as a significant theoretical consideration in the etiology of sexual offending behavior (Barbaree & Marshall, 2005; Marshall, 1989; Ward et al., 1995). It is widely accepted that individuals who have sexually offended are likely to be insecurely attached (Marshall et al., 1993). No matter how researchers are constructing attachment types, it has been found consistently that these individuals have insecure attachment.

Smallbone and Dadds (1998) compared 48 adult incarcerated sex offenders (16 adult rapists whose victims were unknown to them; 16 intrafamilial child molesters, and 16

extrafamilial child molesters) with 16 property offenders and 16 nonoffenders (custodial correctional officers) through self-report measures of childhood maternal and paternal attachment and adult attachment. Participants were recruited from three correctional centers in South East Queensland, Australia. A childhood attachment questionnaire (Hazan & Shaver, 1986, in Collins & Read, 1990) was used as a retrospective measure of childhood attachment. Responses on this questionnaire were completed in relation to the respondent's relationship with his mother and then with his father by ratings on Likert-type scales ranging from 1 (not at all like my mother/father) to 7 (very much like my mother/father). In order to measure adult attachment style, the Relationship Scales Questionnaire (RSQ) (Griffin & Bartholomew, 1994) was used. The RSQ contains 30 short statements (e.g., "It is very important for me to feel independent; ...My desire to get close often scares people away") rated on a scale from 1 (not at all like me) to 5 (very much like me). Both the childhood attachment scale and the RSQ provide measures of the same three attachment styles (secure, anxious, and avoidant). Their third attachment measure was an attachment history checklist, similar to one used by Hazan and Shaver (1987), in which the participants checked any of 19 adjectives (e.g., responsive, rejecting, inconsistent, violent) that described the attitudes, feelings, and behaviors of their mothers and fathers toward them. Their results revealed that sex offenders were found to be significantly less secure in their maternal childhood attachment than non-offenders [$F(1, 62) = 22.14, p < .001$], as well as, less securely attached to their fathers than were non-offenders [$F(1, 58) = 11.77, p < .001$]. Adult attachment was found to be significant with sex offenders being less secure in their orientation to adult intimate relationships than were non-offenders [$F(1, 61) = 6.49, p = .001$].

There is much information on the more recently identified style of disorganized attachment in this population. Main and Solomon (1990) developed the disorganized attachment

category to account for the children who did not easily fit into the other categories, but who shared an apparent lack of an organized strategy for achieving proximity. Children with disorganized attachment are believed to create multiple internal models of self in relation to others due to having frightened/frightening parenting (Main, 1991). Disorganized attachment is defined as occurring when individuals cannot consistently respond to their need for comfort and security when they are under stress. This disorganized attachment results in individuals having few reliable strategies that they can use to meet their attachment needs (Burk & Burkhart, 2005). Their behaviors contradict, such as being both calm and angry at the same time (Miller, 2002). For example, they might try to simultaneously push others away and completely unite with them.

Individuals with disorganized attachment style and individuals who sexually offend both tend to have a history of abuse (Marshall, 1989). Marshall, Hudson, and Hodkinson (1993) have shown that younger children with sexual behavior problems are “attachment disordered.” It has been argued that attachment problems, characterized by neglectful or rejecting parenting, lead to poor self-esteem, the inability to form attachments, and other influences that make youths susceptible to becoming sex offenders (Marshall et al., 1993; Marshall & Mazzucco, 1995). This indirect evidence supports a link between attachment disorganization and sexual offending.

Internalizing Behaviors and Attachment

The available research has indicated that those who sexually offend may be less able to establish and maintain emotional relationships with other individuals (Barbaree, Marshall, & Hudson, 1993). It has been frequently observed that adults who have sexually offended have difficulty establishing successful relationships in adulthood (Marshall, 1989; Marshall, 1993). Insecure attachment style is likely to be related to deficits in intimacy skills in adulthood (Marshall, 1989). This certainly is key during the years of adolescence when friendships and

peer groups are vital to development. In general, these adolescents do not have healthy relationship templates on which to base future relationships (Becker & Abel, 1985). Attachment insecurity leads to deficits in necessary skills for achieving intimacy in close relationships and this results in emotional loneliness and social isolation.

Social isolation is prominent in the environments in which these adolescents develop (Fehrenbach, Smith, Monastersky, & Deisher, 1986). In this study, I propose that internalizing behavior problems, such as, poor social skills and ability to maintain friendships is related with attachment style. Hudson and Ward (1997) proposed that lack of social competence and emotional loneliness (internalizing behaviors—withdrawal) frequently found in those who have sexually offended (adults) may be a function of their internal working models for romantic relationships (related to attachment style).

Externalizing Behaviors and Attachment

Proof exists that poor attachment is associated with several externalizing behavior problems. Marshall (1989) proposed that those who sexually offend seek intimacy through sexual activity and continued failure in intimacy results in an expansion of sexual activity range, eventually resulting in a sexual offense. Their seeking intimacy may be shown in externalizing behaviors. Baker, Beech, and Tyson (2006) wrote a conceptual paper on the theoretical nature of attachment disorganization. They argue that disorganized attachment style could account for some of the known features of sexual offenders, such as aggression and socio-affective problems. If children develop negative representations of self or the world then they may be more likely to develop psychological difficulties later on in life (Baker et al., 2006). Attachment is a perpetual influence on behavior and is why attachment is believed to be such a vital construct in studying those who have committed sexual offenses. Poor attachment bonds are

known to be related to numerous, negative outcomes, such as, sexual offending and other types of criminal behavior or substance abuse/use (Burk & Burkhart, 2003).

Smallbone and Dadds (2000) examined the relationships between childhood attachment and coercive sexual behavior in a sample of 162 male undergraduate students from a university in Brisbane, Australia. Again, childhood attachment was measured by using Hazan and Shaver's questionnaire (1986, in Collins & Read, 1990) and adult attachment was measured using the Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994). Aggression and antisociality were measured using respective subscales of the Millon Clinical Multiaxial Inventory, 3rd ed. (MCMI-III; Millon, Millon, & Davis, 1994) and the frequency of respondents' coercive sexual behaviors was measured through the Sexual Experiences Survey (SES; Koss & Oros, 1982). In this study, antisociality should be defined as relating to engagement in behavior that violates accepted norms or that shuns society, but not as diagnosis of psychopathy or sociopathic disorders. They found in their studied population that insecure attachment during childhood, especially paternal attachment, was associated with antisociality, aggression, and coercive sexual behavior. In fact, their results showed that childhood attachment independently predicted coercive sexual behavior even after controlling for antisociality and aggression [$F(1,43) = 2.16, p < .04$]. This study also found that maternal anxious attachment had a correlation with antisociality [$F(1, 141) = 7.49, p < .01$] and paternal avoidant attachment was associated with both antisocial [$F(1, 141) = 6.69, p < .02$] and coercive sexual behavior [$F(1, 141) = 16.25, p < .001$]. In other words, this means that a boy who has an avoidant attachment with his father and an anxious attachment with his mother might be vulnerable to disorganization (Smallbone & Dadds, 2000). They replicated this study in 2001 and found results consistent with these findings.

These findings would lead us to believe that a relationship exists between attachment and internalizing and externalizing behaviors in this population. Because no research has directly studied the relationship of attachment and internalizing/externalizing behaviors together in a sample of adolescent sexual offenders, this study will do just that. A relationship between attachment and internalizing/externalizing behaviors has been established in other research areas and needs to be investigated in this population.

Affect Regulation in Adolescents who have Sexually Offended

There is little available research on affect regulation processes in this population. Therefore, this literature review will discuss available findings on how affect regulation is thought to most likely occur in the families of these adolescents, related empathy research, and related areas of self-regulation. Affect regulation involves the awareness, expression, and control of the aspects of an affective experience (Garber & Dodge, 1991; Keiley, 2002; Keiley & Seery, 2001). Generally, affect regulation is used to decrease unfavorable and increase favorable conditions, which allows individuals to endure or tolerate their feelings (Tomkins, 1963). This toleration of affect then allows individuals to consider their experience and, as a result, competently make decisions. Affect regulation includes both internal (self-regulation) and external (social-regulation) relational processes which are first co-created with early caregivers as part of the attachment process (Cassidy, 1994). Different functions are served by these internal and external affect regulation processes (Keiley & Seery, 2001).

Affect regulation development begins during early childhood in relationships with caregivers but continues throughout life. Social, regulatory, and emotional impairments can compromise a child's development (Shonkoff & Phillips, 2000). Adolescents who have sexually

offended experience problems in the process of developing useful emotion regulation strategies (Burton et al., 1998). They often experience emotions as intrusive or overwhelming.

Being unable to regulate affect adequately promotes difficulties in establishing and maintaining effective peer relationships; whereas, being able to regulate affect well promotes future success in establishing and maintaining effective relationships with peers (Howes & Cicchetti, 1993). As previously noted, adolescents who sexually offend have difficulties with their peers; it is possible that these difficulties are related to their affect regulation skills. Affect-regulation is one of the earliest developmental tasks of childhood. It begins in the context of early family life; therefore, the way in which an individual's family regulates emotion will have an effect on how they regulate affect in the future.

Regarding family communication, research has found that negative communication, such as aggressive statements and interruptions, is frequent while supportive communication and comments are limited in both the families of adolescents who sexually offend and violent offenders (Hunter & Figueredo, 1990). Difficulties in family communication is highly related to affect regulation; that is, often family members in this population cannot regulate their emotions to the extent that they become overwhelmed and unable to stop from becoming verbally aggressive with other family members. Other characteristics frequently found in families of adolescents who have sexually offended, such as, neglect and physical abuse, also may be related to affect regulation since their caregivers might react with intense pursuit (abuse) or withdrawal (neglect) to emotional experiences. In this study, the relationship between affect regulation and internalizing or externalizing problems will be investigated.

Blaske et al. (1989) found that youth who sexually offend come from families with increased negative affect and decreased positive affect. Some have rigid family boundaries,

which provide the youth with few ways to meet their emotional needs (Larson & Maddock, 1986). Often an approach and withdrawal pattern exists in these families that leaves these children with emotional needs; in addition, they are frequently denied healthy examples of how to handle affect and high arousal.

On a similar note, a lack of empathic modeling has been seen as a major factor in the family-of-origin backgrounds of those who sexually offend (Farr, Brown, & Beckett, 2004). A lack of empathic care during infancy and childhood is associated with individuals' formations of insecure attachment. These individuals have been shown not to experience this empathic care, which leads to them not having empathy or having low levels of empathy as they age. Empathy can be thought of as the ability to "put yourself in another person's shoes" and be able to tolerate and communicate that experience to the other. Basically, poor affect regulation can be thought of as an inability to tolerate intense emotions. Empathy deters abusive behavior (Ryan, 1999). In particular, problems with empathy have been established as a key feature of individuals who sexually offend (Geer, Estupinan, & Manguno-Mire, 2000). Theoretically, if a person has severe disruption of attachment and low levels of empathy for others, they are more likely to sexually offend (Burk & Burkhart, 2003).

Empathy deficits are common for this population and more difficulty recognizing and correctly identifying emotions in others (Farr, Brown, & Beckett, 2004; Geer et al., 2000; Knight & Prentky, 1993). Cognitive distortions, such as blaming the victim, have been shown to be present in this population (Kahn & Chambers, 1991; Ward et al., 1995). The quality of the primary attachment relationships will affect the extent to which interpersonal behavior is guided by cooperation and empathy instead of coercion and noncompliance (Smallbone & Dadds, 2000). Childhood attachment insecurity has been suggested as leading to disruptions in empathy

and the inability for intimacy in adolescence and adulthood (Marshall, 1989; Ward et al., 1995), which is thought to also contribute to sexually abusive behaviors (Smallbone & McCabe, 2003).

Self-regulation is thought to be a part of the internal processes of affect regulation. Due to this and to the fact that the literature on affect regulation in this population is quite sparse, this literature review also contains a short review of self-regulatory functions in this population. According to Shonkoff and Phillips (2000), self-regulation can be defined as the ability to manage one's emotions, physiological arousal, and attention, and such tasks including the acquisition of day-night, wake-sleep rhythms; regulation of crying; developing, understanding, and regulating emotions; and regulation of attention.

Two important aspects of self-regulation are delay of gratification and impulse control. These adolescents have a difficult time delaying gratification and they exhibit poor control over sexual and other impulses (Kavoussi, Kaplan, & Becker, 1988; Marshall et al., 1993). I propose that difficulty in delaying gratification can be thought of in terms of low tolerance for high levels of arousal and emotion. In other words, when an individual is highly emotionally aroused, they might have greater difficulty controlling this arousal and appear unable to make favorable decisions about their actions. This could be the case when adolescent males become highly sexual aroused and are seemingly unable to delay their sexual gratification, which can obviously be related to incidents of sexual offending. This is a similar situation to that of impulse control. If an individual is very angry then they might have difficulties controlling their impulses. For example, an adolescent might have an impulse to punch a peer in the face. If they are highly aroused with anger they will have a harder time controlling their impulse to fight. Impulse control problems could also be related to sexual offending or other delinquent behaviors (i.e., destruction of property, etc.).

These postulations are supported by research findings regarding self-regulation. Adolescents who sexually offend have been found to show poor impulse control, poor judgment, and poor problem-solving skills (Prentky, Harris, Frizell, & Righthand, 2000). Ferra and McDonald (1996) noted that the research literature indicates two common areas of impairment: difficulties with executive functions (planning skills and impulse control) and deficits with respect to verbal skills. It appears that deficits in verbal cognitive functioning, which can be seen indirectly in higher rates of impulsivity and poor judgment, might contribute to inappropriate sexual and other delinquent behaviors among adolescents (Veneziano & Veneziano, 2002). In a study, neuropsychological impairments were found at higher rates in groups of adolescents who had sexually offended when compared to adolescents who had not committed offenses. These neuropsychological difficulties are particularly related to the areas of planning and impulse control (Veneziano & Veneziano, 2002), which is relevant to this study because difficulty in controlling impulses is an aspect of affect regulation.

The research that is available in this area mainly focuses on some affective deficits in those who have sexually offended but with little information on their ability to regulate their affect. The literature in this area highlights outcomes that can result from poor affect regulation in this population; however, it reveals very few findings about how affect regulation actually exists in this population. This study will examine the extent of affect regulation abilities of these adolescents who sexually offend, thus adding a great deal to the extant literature.

Internalizing/Externalizing Behaviors and Affect Regulation

There is an obvious connection between lack of impulse control and lack of affect regulation, yet very little research exists on the construct of affect regulation in this population of adolescent sexual offenders. I propose that affect regulation deficits and having poor impulse

control and poor judgment and problem-solving skills can be viewed as an illustration of both internalizing/externalizing behavior problems through their relevance to affect regulation. One of the key components of affect regulation is the ability to self-control. Affect dysregulation can contribute to problem behaviors in this population. An exploratory, qualitative study from Keiley and Seery (2001) used semi-structured interviews with a sample of 20 participants (4 adjudicated adolescents and their parents; 6 non-adjudicated adolescents and their parents). It discusses what types of behaviors are common in relationship to affect regulation. When individuals successfully regulate their emotional experiences, they can make rational decisions (Keiley & Seery, 2001). Some less functional strategies for affective regulation include aggression, denial, the “silent treatment,” depression, phobic behavior, and violence (Garber & Dodge, 1991; Keiley & Seery, 2001). When individuals cannot manage to successfully regulate their internal affective experience, they may experience a loss of control (under control) or may shut down their affective experience (over control) (Keiley & Seery, 2001). I propose that it is possible to examine internalizing and externalizing behavior problems through these concepts of over (internalizing) and under (externalizing) control of affect and will do so in this study.

Internalizing Behaviors and Affect Regulation

An over control of emotion can leave individuals unable to solve the problems they face, and possibly avoid similar situations in the future (Tomkins, 1963). A more constricted or internalizing behavior may occur when affect is over-controlled. When affective experience is denied, avoided, or shut down, individuals may develop anxiety disorders, depression, or addictions (Keiley & Seery, 2001; Tomkins, 1963). For example, an individual may experience anxiety or depression symptoms if they attempt to control all of their emotions. These are all

types of internalizing behaviors that occur when an individual over-controls their emotions (Garber & Dodge, 1991).

Externalizing Behaviors and Affect Regulation

On the other hand, individuals who are not successful in regulating their affective experience may show a loss of control (under control) and react impulsively. Their impulsive reactions initiate external actions that may be violent or excessive, for example, physical fighting or extreme laughter (Keiley & Seery, 2001). Externalizing or out-of-control behaviors emerge when affect is under-controlled (Garber & Dodge, 1991). When individuals are unable to regulate their affect, they might become impulsive, aggressive, or criminally active (Keiley & Seery, 2001). These individuals would display more hyperactive and inattentive behavior since they have difficulty regulating and redirecting themselves. An example is that adolescents who are unable to regulate their emotions are more likely to act out aggressively or disruptively when they become emotionally aroused or overwhelmed by emotions. They would be more likely to perform delinquent acts than individuals who can self-regulate. These are all types of externalizing behaviors that occur when an individual under-controls their emotions.

It has been fairly well established that adolescents who have sexually offended often have both internalizing and externalizing behavior problems. However, no research has linked affect regulation with internalizing or externalizing behaviors. There is a lack of information regarding the mechanisms that underlie these internalizing and externalizing behavior problems in this population. I propose that affect regulation might be the substantial mechanism underlying expression of these behavior problems.

Affect Regulation and Attachment

In part, attachment is highly related to affect regulation (Hudson & Ward, 1997). In fact, attachment theory has been accepted as the origin of affect regulation beginning in infancy (Ainsworth, 1989; Ainsworth & Bowlby, 1991). Depending upon the quality of interactions in the caregiver-child relationship, children develop either secure or insecure attachment (Bowlby, 1980) and adaptive or maladaptive affect regulation strategies. During the attachment process in infancy, children learn strategies, including affect regulation strategies, to maintain the proximity of a caregiver, especially in stressful situations (Robinson, Emde, & Korfmacher, 1997).

Children develop secure attachment when their caregivers are responsive and available. These securely attached children are able to regulate their distress through using strategies that elicit comfort and support from caregivers (Ainsworth, Blehar, Waters, & Wall, 1978). Individuals who are insecurely attached are known to have high anxiety and attempt to suppress their anger (Bowlby, 1969). Children develop avoidant-insecure attachment when their caregivers are emotionally unavailable or rejecting during distressing times. This results in avoidant-insecure individuals having affect regulation strategies in which they attempt to avoid communicating distressing emotions, such as anger (Allen, Moore, & Kuperminc, 1997). Children develop anxious-insecure attachment when their caregivers are inconsistent during times of distress and the children are both fearful of and angry with their caregivers. This results in anxious-insecure individuals becoming hypervigilant to attachment experiences. These individuals have affect regulation strategies that actually heighten his or her distress (Allen et al., 1997).

When discussing affect dysregulation, Hudson and Ward (1997) found that there appeared to be a strong relationship between attachment style and affective dysregulation in

adult sexual offenders. The relationship between attachment and affect regulation appears to go in both directions. Some researchers have indicated that affect regulation plays a role in attachment relationships later in life such that when a child's affect regulation does not develop satisfactorily, there is likely to be disorganization in a child's ability to form later attachments with others (Burk & Burkhart, 2003; Cicchetti & Toth, 1995). There is documented evidence, described previously, that adolescents who have sexually offended have a difficult time forming relationships with others.

Attachment is believed to have a major effect on an individual's affect regulation; however, Burk and Burkhart (2003) appear to be the only researchers who have attempted to examine the relationship between attachment and self-regulation in the population of adolescents who have sexually offended. This conceptual paper on sexual offending by Burk and Burkhart (2003) reviews literature and proposes disorganized attachment as a diathesis for sexually deviant behavior. Disorganized attachment style has been seen often in the relational behaviors of children from extremely chaotic, abusive, or neglectful environments. These adolescents often come from inconsistent and confusing family environments. It is exactly these types of environmental characteristics that are frequently associated with insecure or disorganized attachment styles. These general findings of early childhood disruptive experiences in this population support the claims that adolescents who sexually offend are often from environments featuring trauma and that they often have insecure or disorganized attachment (Burk & Burkhart, 2003). These findings are consistent with what has usually been found in the family-of-origin environments of sexual offenders.

Internalizing/Externalizing Behaviors, Affect Regulation, and Attachment

Adolescents who have sexually offended are known most often to be insecurely attached, have a variety of internalizing and externalizing behavior problems, and have difficulties adequately regulating their affect. As previously discussed, early attachment quality influences the development of affect regulation or vice versa. Insecure attachment (or disorganized attachment) is believed to hinder an individual's ability to acquire critical self-regulatory skills, lead to less organized self-perceptions, and creates negative emotional states. These attachment styles are associated with individuals relying on externally based self-regulatory strategies (including strategies of interpersonal control) like sexual offending behavior (Burk & Burkhart, 2003). Therefore, they have the possibility of becoming more reliant on externally based ways of self-regulating. This can include affect regulation strategies and be shown through internalizing or externalizing behaviors, including sexual offending. Poor affect regulation strategies can lead to the development of numerous internalizing or externalizing behaviors, depending upon if the individual over or under regulates their affect. The current literature seems to support the hypothesis that this study proposes and this study seeks to build upon previous findings in these areas for the population of adolescent males who have sexually offended.

Gaps in the literature raise questions about the relationship among these constructs. Numerous studies exist that show an association between attachment style and externalizing/internalizing behavior problems. There is also information that suggests the relationship between affect regulation and specific externalizing/internalizing behavior problems. However, no research has been conducted examining the relationships between all of these

constructs (attachment, affect regulation, internalizing behaviors, and externalizing behaviors) within the incarcerated population of adolescents who have sexually offended in the same study.

Most importantly, no study has examined the possibility that affect regulation is a substantial mechanism that connects early attachment style to later externalizing/internalizing behaviors in this population. In addition, no study has examined the possibility that affect regulation is a moderator of the relationship between attachment security and internalizing/externalizing behaviors. As an exploratory part of this thesis, we will explore the option that the relationship between attachment and internalizing/externalizing behaviors will be different at different levels of affect regulation ability. We will examine these areas together, especially regarding whether affect regulation is a mediator or moderator of the relationship between attachment and internalizing/externalizing behaviors.

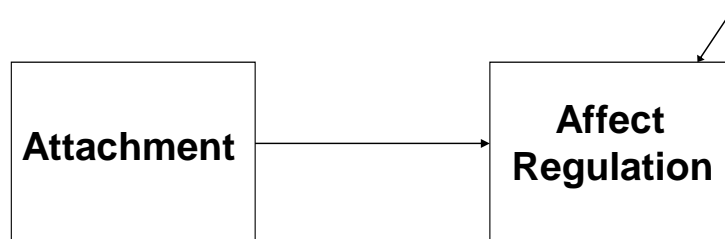
Research Questions

In the population of adolescents who have sexually offended, I present the following six research questions/hypotheses for this study:

Research Question 1: Is attachment related to affect regulation in the population of adolescents who have sexually offended?

Hypothesis 1: Quality of attachment is related to ability to regulate one's affect in this population: Adolescents who have sexually offended and have a *secure* quality of attachment will be more likely to have high adaptive affect regulation strategies and low maladaptive affect regulation strategies, while adolescents who have sexually offended and have *insecure* quality of attachment will be more likely to have low adaptive affect regulation strategies and high maladaptive affect regulation strategies.

Figure 1. Conceptual hypothesized model for attachment and affect regulation (Model 1).

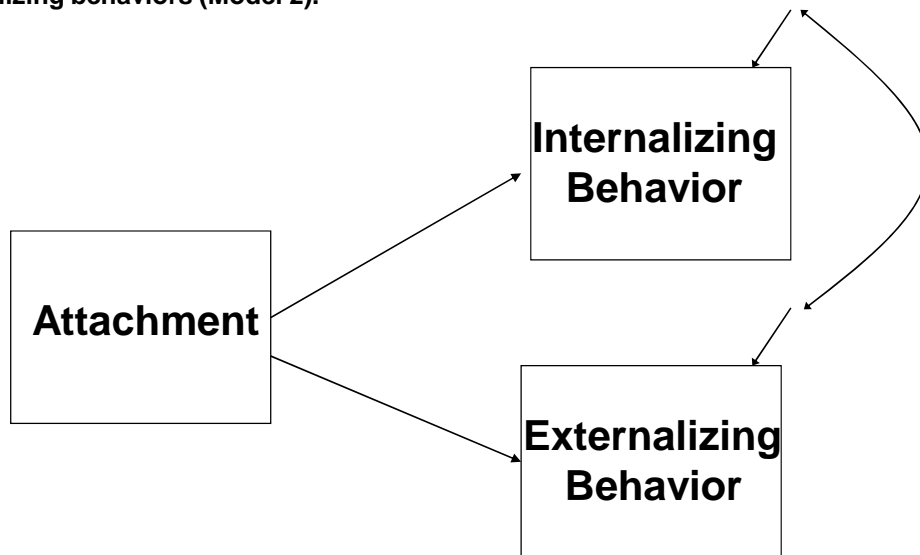


Research Question 2: Is attachment related to internalizing and/or externalizing behaviors in the population of adolescents who have sexually offended?

Hypothesis 2: Quality of attachment will be related to internalizing and externalizing behaviors.

Adolescents who have sexually offended and have *secure* attachment will be related to lower levels of internalizing behaviors and lower levels of externalizing behaviors; whereas, adolescents who have sexually offended and have *insecure* attachment will be related to higher levels of internalizing behaviors and higher levels of externalizing behaviors. Internalizing and externalizing behaviors, controlled for attachment, will be positively related.

Figure 2. Conceptual hypothesized model for attachment, internalizing behaviors, and externalizing behaviors (Model 2).

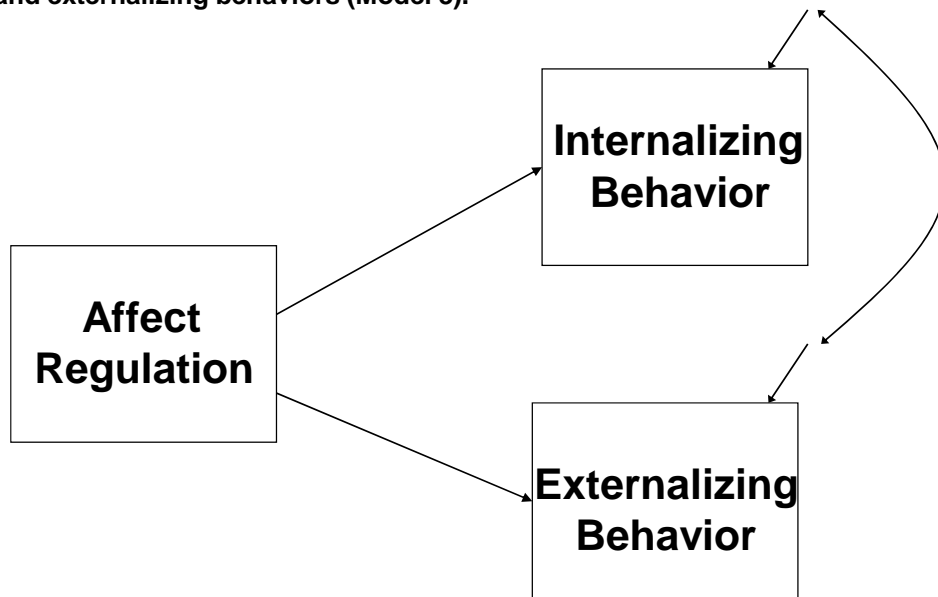


Research Question 3: Is affect regulation ability related to internalizing and/or externalizing behaviors in the population of adolescents who have sexually offended?

Hypothesis 3: Quality of affect regulation ability will predict internalizing and externalizing behavior problems. Adaptive affect regulation will be associated with lower levels of internalizing behaviors and externalizing behaviors; whereas, maladaptive affect regulation will be associated with higher levels of internalizing behaviors and externalizing behaviors.

Internalizing and externalizing behaviors, controlled for affect regulation, will be positively related.

Figure 3. Conceptual hypothesized model for affect regulation, internalizing behaviors, and externalizing behaviors (Model 3).

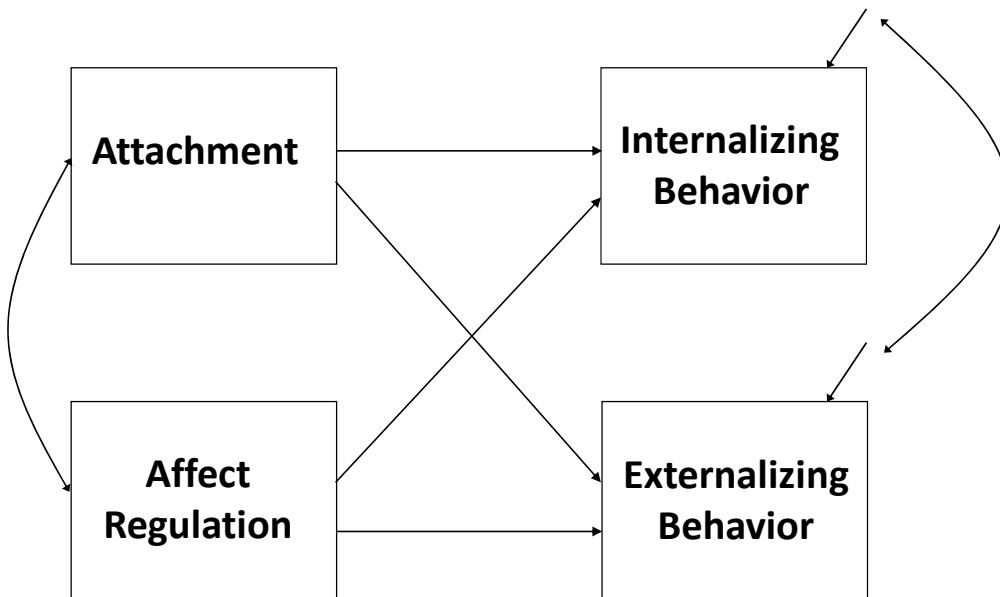


Research Question 4: Are both attachment and affect regulation ability related to internalizing and/or externalizing behaviors in the population of adolescents who have sexually offended?

Hypothesis 4: Both attachment and affect regulation together will be related to internalizing and externalizing behaviors. Adolescents who have sexually offended and have *secure* attachment and higher adaptive affect regulation will be related to lower levels of internalizing behaviors and lower levels of externalizing behaviors; whereas, adolescents who have sexually offended and have *insecure* attachment and higher maladaptive affect regulation strategies will be related to higher levels of internalizing behaviors and higher levels of externalizing behaviors.

Internalizing and externalizing behaviors, controlled for attachment and affect regulation, will be positively related.

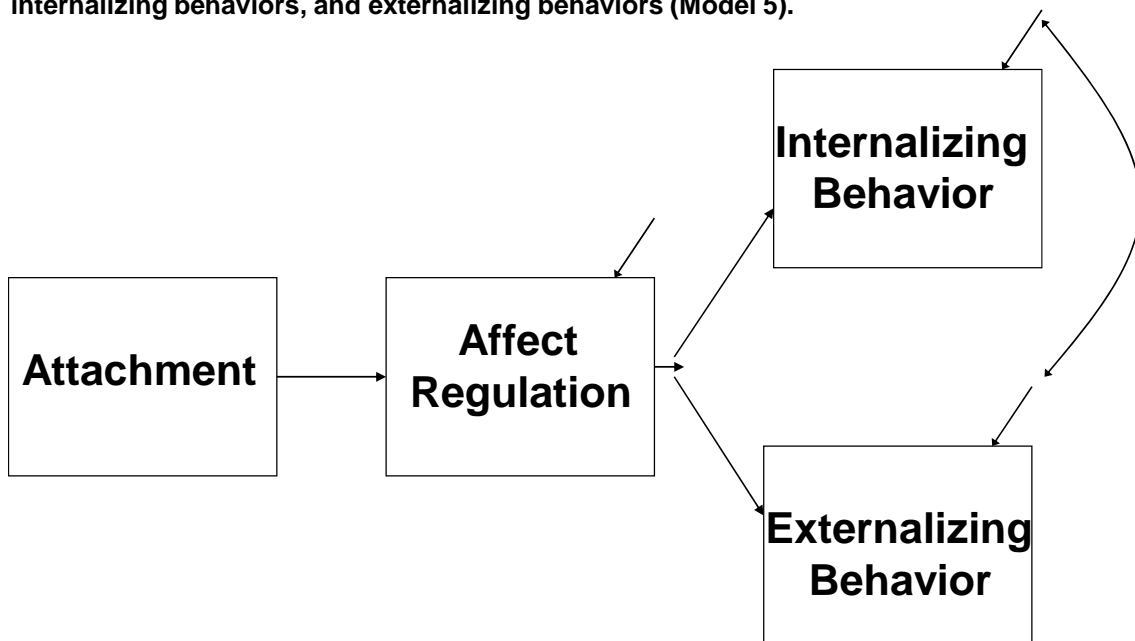
Figure 4. Conceptual hypothesized model for attachment, affect regulation, internalizing behaviors, and externalizing behaviors (Model 4).



Research Question 5: Is affect regulation ability a mediator of attachment quality's association with internalizing and/or externalizing behaviors in the population of adolescents who have sexually offended?

Hypothesis 5: Affect regulation is a mediator of attachment's association with internalizing and externalizing behaviors in this population. Internalizing and externalizing behaviors, controlled for attachment and affect regulation, will be positively related.

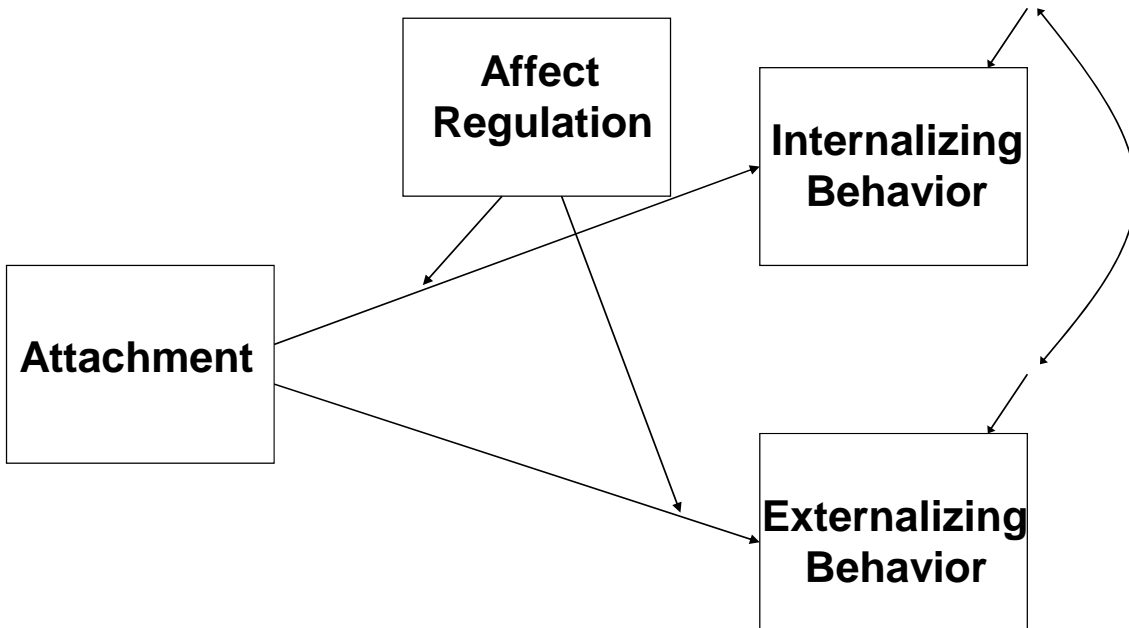
Figure 5. Conceptual proposed mediation paths for attachment, affect regulation, internalizing behaviors, and externalizing behaviors (Model 5).



Research Question 6: Is affect regulation ability a moderator of the association between attachment quality and/or internalizing behaviors, and between attachment and externalizing behavior, in the population of adolescents who have sexually offended?

Hypothesis 6: Affect regulation moderates the association between attachment quality and internalizing behaviors, and between attachment quality and externalizing behaviors, in this population. Internalizing and externalizing behaviors, controlled for attachment and affect regulation, will be positively related.

Figure 6. Conceptual proposed moderation paths for attachment, affect regulation, internalizing behaviors, and externalizing behaviors (Model 6).



Methods

Participants

The current study uses data collected from male adolescents who were adjudicated for committing a sexual offense(s) and were serving time in an Alabama Department of Youth Services (DYS) facility in Mt. Meigs, Alabama. All of the adolescents in this study were also involved in the Accountability Based Sex Offender Program (ABSOP) at DHS and were relatively soon to be released. Adolescents in the correctional facility and their family members were referred to a Multiple Family Group Intervention (MFGI) treatment program by their counselors, relatively near the end of their sentence at the facility. Adolescents were allowed to participate in the group, even if their parents/guardians refused or were unable to come. MFGI is an eight session psychoeducation program that addresses attachment and emotion regulation problems. The adolescents and family members (if attending sessions) completed self-report questionnaires at the beginning and at the end of their participation in the MFGI program (either with or without family members). They completed questionnaires that included measures of attachment, affect regulation, and internalizing/externalizing behaviors. For the purposes of this initial study, I will only be using data from the adolescent boys at Time 1.

The sample consists of 62 incarcerated adolescent males ranging from age 13 to 19 years old with a mean age of 15.8 (SD=1.72). The average grade level was around the 9th grade. Fifty six percent of the participants were European-American (34 participants), 31% were African-American (19), 8% were Hispanic (5), 3% were Native-American (2), and only one adolescent

characterized himself as “other.” In their family, 45% were the middle child, 34% were the oldest, 19% were the youngest, and only one did not have any siblings. Sixty eight percent of these adolescents lived with a single parent, either mother or father, before their incarceration. The majority had lived with their mother only (50%).

Qualities of these adolescents’ caregivers are also important to examine. These adolescents came from families with incomes that ranged from zero income to \$120,000 per year. The average income was around \$29,000 per year with a median of \$20,000. Sixty four percent of caregivers were employed. Around half of them owned his/her own home and around half rented. When considering highest education level reached by the caregiver(s), thirty one percent had not completed high school, 30% had completed high school or acquired their GED, 34% completed trade or technical school or attended some college without graduation, and 5% were college graduates. Forty five percent of the caregivers were married, 31% were separated or divorced, and 24% were single or living with his or her partner.

This study also reviews existing research on some specific behavior problems. Therefore, I present descriptive information about self-reported levels of certain behaviors from our sample. This information was attained through adolescents’ responses to the Child Behavior Checklist—Youth Self Report (Achenbach, 1991). Table 1 reveals how much of the sample was within the clinical range on each symptom scale. Eleven percent of these adolescents were in the clinical range for overall internalizing problems and 23% were in the clinical range for overall externalizing problems.

Table 1.

Univariate statistics for Child Behavior Checklist Subscales and descriptive statistics on clinical range for each symptom scale

Scale	<i>N</i>	<i>M</i>	Low-High	Clinical Range (subscale score)	<i>N</i> (%) within clinical range
Internalizing	61	17.53	0-52.00	> 33	7 (11%)
Withdrawal	60	4.73	0-10.50	> 9	7 (12%)
Somatic complaints	61	3.82	0-15.00	> 8	10 (16%)
Anxiety/ Depression	62	9.30	0-30.00	> 16	11 (18%)
Externalizing	60	21.92	1.00-55.00	> 39	14 (23%)
Aggressive behavior	60	14.28	1.00-36.00	> 21	12 (20%)
Delinquent behavior	60	7.62	0-19.00	> 10	17 (28%)
Other	N/A	N/A	N/A	N/A	N/A
Social problems	59	4.66	0-13.71	> 8	10 (17%)
Thought problems	61	3.27	0-14.00	> 7	12 (20%)
Attention problems	62	6.84	1.00-16.88	> 11	13 (21%)

This study also reviews much literature on attachment to parents and to the difficulty these adolescents often have with their peers; therefore, this study also examined different aspects of attachment as measured by the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). Univariate statistics for the IPPA (Table 10) and correlations for the IPPA (Table 11) are presented in the Appendix and will be described in the next section. Overall, it appears that these adolescents have a higher attachment to their peers than to their parents. On average, it appears that these adolescents trust their friends more than their parents, yet feel slightly more alienated from their friends than from their parents. Parent and peer attachment subscales are highly correlated for these adolescents. This study will use an overall attachment score as measured by the Attachment Scale (AS; Collins & Read, 1990) for the rest of the analysis since parent and peer attachment scores are so highly correlated.

This will be a relatively small sample size; however, it is a substantial number of participants when considering that this MFGI program can only be run two to three times per year with an average of eight adolescent boys in each group. Sample size is understandable when considering that this is a preliminary study on a very unstudied population and sample size is comparative to other studies on this population.

Measures

Demographic Questionnaire

The adolescents' questionnaire included a brief survey of demographic information including responses on age, race, current school grade, number of siblings, family position, and living arrangement (before adjudicated).

Internalizing/Externalizing Behavior

Internalizing and Externalizing Behaviors are measured by a version of the Child Behavior Checklist (CBCL; Achenbach, 1991), which is called the Youth Self-Report (YSR; Achenbach, 1991). It is a 112-item self-report scale where adolescents indicate if the 112 problem behaviors listed on the YSR are “not true” (0), “somewhat or sometimes true” (1), or “very true or often true” (2) for them. It is designed for use with adolescents between the ages of 12 and 18. The measure consists of eight sub-scales: withdrawal, somatic complaints, anxiety and depression, social problems, thought problems, attention problems, aggressive behavior, and delinquent behaviors. The internalizing behavior scale consists of three subscales: withdrawal, somatic complaints, and anxiety/depression. The externalizing behavior scale consists of two subscales: aggressive behavior and delinquent behavior. The remaining three subscales, social problems, thought problems, and attention problems, are categorized as neither internalizing nor externalizing behavior. The total problem scale is used to measure an overall behavioral and

emotional functioning score. Achenbach (1991) reported the mean 7-day test-retest reliability for the problem scales was .65 for 11 to 14-year olds and .83 for 15 to 18-year olds. Internal consistencies for symptom scales: alpha .68 for social problems, alpha .91 for internalizing problems, and alpha .89 for externalizing problems. The alphas for our sample include: alpha .94 for the entire scale, alpha .91 for internalizing problems, and alpha .92 for externalizing behaviors.

Attachment

Attachment will be measured through the Attachment Scale (AS; Collins & Read, 1990). The AS is an 18-item scale that measures attachment style dimensions: comfortable with closeness, feels he/she can depend on others, and is anxious or fearful about such things as being abandoned or unloved. Respondents use a 5-point Likert scale from 1 (Not at all like me) to 5 (Very much like me). Cronbach Alpha for the entire scale ranges from .69-.75 (Collins & Read, 1990). The alpha for the attachment scale is .71 in our sample.

In order to provide descriptive information on attachment to both parents and peers, respectively, attachment also was measured with the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). This is a 53-item measure that assesses affective and cognitive components of adolescents' attachment to parents and peers. This instrument consists of three parent and peer subscales (Trust, Communication, and Alienation). Respondents use a 5-point Likert scale from 1 (Almost Never or Never) to 5 (Almost Always or Always). Cronbach Alpha for the entire scale ranges from .80-.93 (Armsden & Greenberg, 1987). In our sample, the alpha for the parent attachment section is .94 and the alpha for the peer attachment section is .92.

Affect Regulation

Affect regulation is measured by the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). The ERC is a 24-item self-report measure completed on a 4-point Likert scale ranging from 1 (almost always) to 4 (never), according to the extent each item fits for the adolescent. There are two subscales: Lability-Negativity and Emotion Regulation. Lability-Negativity focuses on maladaptive regulation including mood lability, lack of flexibility, and dysregulated negative affect. Some of these items include: “Is prone to angry outbursts” and “Exhibits wide mood swings.” For the purposes of this study, ERC-Lability-Negativity will sometimes be referred to as maladaptive affect regulation (ERC-maladaptive). Emotion Regulation focuses on adaptive regulation including situationally-appropriate affective displays, emotional self-awareness, and empathy. Some of these items include: “Is a cheerful child;” “Can say when s/he is feeling sad, angry, or mad, fearful, or afraid.” For the purposes of this study, ERC-Emotion Regulation will sometimes be referred to as adaptive affect regulation (ERC-adaptive). Cronbach Alpha for the Lability-Negativity subscale is .96 and for the Emotion Regulation subscale is .83 (Shields & Cicchetti, 1997). In our sample, the entire scale has an alpha of .64, the Lability-Negativity subscale (maladaptive affect regulation) has an alpha of .78, and the Emotion Regulation subscale (adaptive affect regulation) has an alpha of .57.

Analysis

In order to predict the probable effects of the independent variables on the relationship between internalizing behavior, externalizing behavior, attachment, maladaptive affect regulation, and adaptive affect regulation in male adolescents who have sexually offended, path analysis was the chosen method of analysis. In addition, mediation and moderation hypotheses will be tested within the framework of path analysis.

Results

Univariate Analysis

I used the SAS program for my univariate analysis. Before beginning my analysis, I had to reverse score items from the CBCL, IPPA, and ERC. Then, I estimated the Cronbach alpha for all of my measures, the alphas ranged from mostly adequate to relatively high (Table 2).

Table 2

Estimated Cronbach Alphas for sample (N = 61)

Measure	Cronbach Alpha
Child Behavior Checklist (Youth Self-Report)	.94
Subscale: Internalizing	.91
Subscale: Externalizing	.92
Inventory of Parent and Peer Attachment (parent)	.94
Inventory of Parent and Peer Attachment (peer)	.92
Attachment Scale	.71
Emotion Regulation Checklist	.64
Subscale: Lability-Negativity (Maladaptive)	.78
Subscale: Emotion Regulation (Adaptive)	.57

A principal components analysis was conducted to examine the structure of the scales in this sample. The largest eigenvalues for each scale and the amount of variance that each eigenvalue accounts for is presented in Table 3 below. For example, the Child Behavior

Checklist-Internalizing Scale loaded on one component with an eigenvalue of 9.40 and contains 29% of the variance in the scale items. All of the eigenvalues and proportions can be similarly interpreted for each of the scales.

Table 3

Eigenvalues for variables

Scale	Eigenvalue	Proportion of Variance Contained
Child Behavior Checklist (Youth Self-Report)		
Subscale: Internalizing	9.40	.29
Subscale: Externalizing	9.87	.33
Inventory of Parent and Peer Attachment (parent)	11.23	.40
Attachment Scale	4.52	.25
	2.33	.13
Emotion Regulation Checklist		
Subscale: Lability-Negativity (Maladaptive)	4.75	.32
Subscale: Emotion Regulation (Adaptive)	2.72	.34
	1.48	.19

I created an average scale score for each scale by summing the items in each scale then dividing by the total number of items. Then, I examined the Wilkes-Shapiro statistics for normality of the distributions and obtained the basic univariate statistics (mean, SD, etc.). All of the measures (CBCL, IPPA, and ERC) appear to be normally distributed and each of the distributions appears to be symmetric enough. Univariate statistics are presented in Table 4.

Table 4

Univariate Statistics for Child Behavior Checklist (Youth Self-Report), Attachment, and Emotion Regulation Checklist

Scales	<i>N</i>	<i>M</i>	<i>SD</i>	Median	Skewness	Range	Kurtosis	W/S
CBCL_IN	61	.55	.34	.52	.68	0-1.6	.34	.96 ($p < .05$)
CBCL_EX	60	.73	.39	.64	.68	0-1.8	-.06	.95 ($p < .05$)
ATCH	61	3.24	.51	3.22	-.39	1.9-4.3	.32	.98 ($p = .29$)
ERC_IN	58	2.24	.45	2.27	-.29	1.27-3.07	-.71	.97 ($p = .17$)
ERC_ER	58	2.89	.45	2.88	.002	2.00-4.00	-.38	.98 ($p = .61$)

Bivariate Analysis

A bivariate analysis was conducted to examine the relationships that each variable has with the others to determine preliminarily how related the measures are with each other. The estimated correlations (Table 5) revealed that all of the relationships are significant except for the relationship between externalizing behavior and attachment. Besides that exception, these were the expected findings and support the plan for further analysis. It was expected that internalizing behaviors and externalizing behaviors would be positively related since they are both describing aspects of behavior problems. Also, it was expected that the ERC-maladaptive and the ERC-adaptive would be negatively related since they comprise two opposing dimensions of the same construct. These two findings support the hypothesized plan of action to allow internalizing and externalizing behavior to covary and ERC-maladaptive and ERC-adaptive to covary during multivariate analysis.

These preliminary correlations imply that internalizing behavior will be significantly, positively related to attachment and ERC-maladaptive and will be negatively related to ERC-adaptive. Similarly, it implies that externalizing behavior will be significantly, positively related

to ERC-maladaptive and significantly, negatively related to ERC-adaptive. It also implied that attachment would be significantly, negatively related to ERC-maladaptive and significantly, positively related to ERC-adaptive. These ideas will be tested when the path analyses are fit to the proposed models.

Table 5

Pearson Correlation Coefficients for Attachment Scale (ATCH), Affect Regulation (ERC_IN, ERC_ER), Internalizing Behavior (CBCL_IN), and Externalizing Behavior (CBCL_EX) (N = 61)

	CBCL_IN	CBCL_EX	ATCH	ERC_IN	ERC_ER
CBCL_IN	1.00				
CBCL_EX	.56***	1.00			
ATCH	-.63***	-.19 ^{NS}	1.00		
ERC_IN	.58***	.63***	-.42***	1.00	
ERC_ER	-.35**	-.33**	.41***	-.34***	1.00

*** $p < .001$, ** $p < .01$

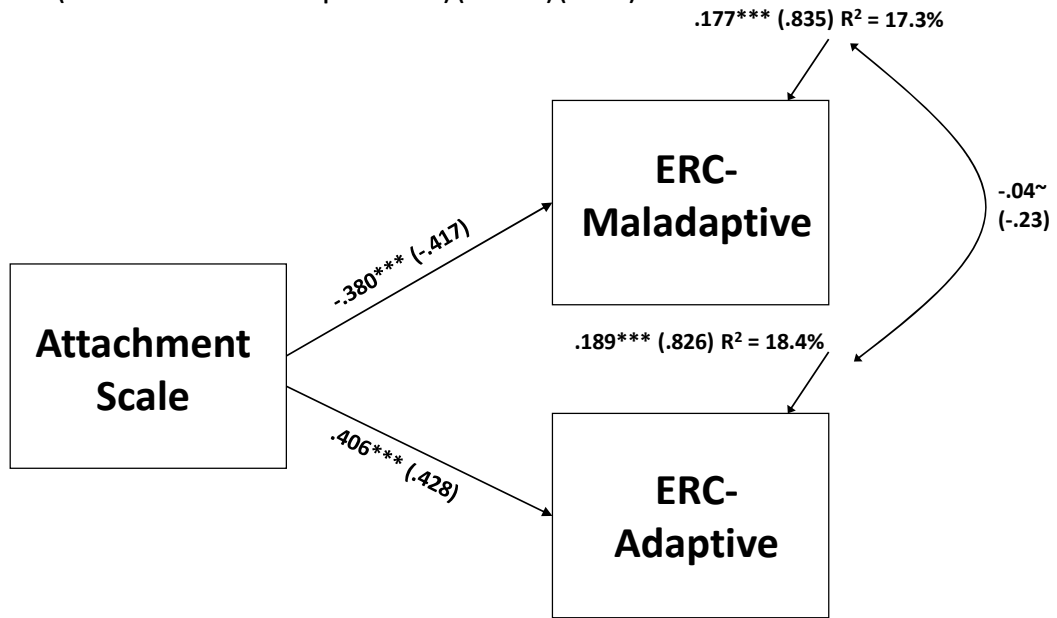
Multivariate Analysis

I used the MPlus program to fit my models using path analysis. This method allowed me to simultaneously estimate the relationships between multiple variables. In addition, using MPlus allows for Full Information Maximum Likelihood (FIML) estimation that will allow me to use all of the cases in the analysis even if they are missing some portion of data. I fit my six models, each corresponding to my six proposed conceptual models, but now using 2 observed variables for emotion regulation (maladaptive and adaptive). Fit indices for each model were examined and are presented alongside each of the respective fitted models.

Hypothesis 1

My first hypothesis is that affect regulation is predicted by attachment. More specifically, I hypothesized that attachment will be positively associated with adaptive affect regulation strategies. Now that I am using 2 observed variables for emotion regulation (adaptive and maladaptive affect regulation), I also hypothesized that attachment would be negatively associated with maladaptive affect regulation strategies. The two subscales of the emotion regulation checklist were simultaneously regressed on attachment (Figure 7). The results indicate that attachment has a significant, negative relationship with ERC-maladaptive ($\beta = -.380, p < .001$). Insecure attachment is associated with high levels of maladaptive affect regulation, controlling for adaptive affect regulation. Secure attachment is associated with low levels of maladaptive affect regulation, controlling for adaptive affect regulation. Furthermore, attachment has a significant, positive relationship with ERC-Adaptive ($\beta = .406, p < .001$). Secure attachment is associated with high levels of adaptive affect regulation and that insecure attachment is associated with lower levels of adaptive affect regulation, controlling for maladaptive affect regulation. The residual variances for maladaptive affect regulation and adaptive affect regulation have a marginally significant, negative association ($r = -.23, p < .10$). The variance remaining after predicting maladaptive affect regulation was negatively related to the remaining variance in adaptive affect regulation. Another predictor (that we have not included) that is related to both maladaptive affect regulation and adaptive affect regulation may be useful in predicting affect regulation. In this model, attachment accounted for 17.3% of the variance in maladaptive affect regulation and 18.4% of the variance in adaptive affect regulation.

Figure 7. Fitted path model with estimated regression coefficients for ERC-maladaptive and ERC-adaptive regressed on attachment (standardized estimates in parentheses) (Model 1) (N = 62).

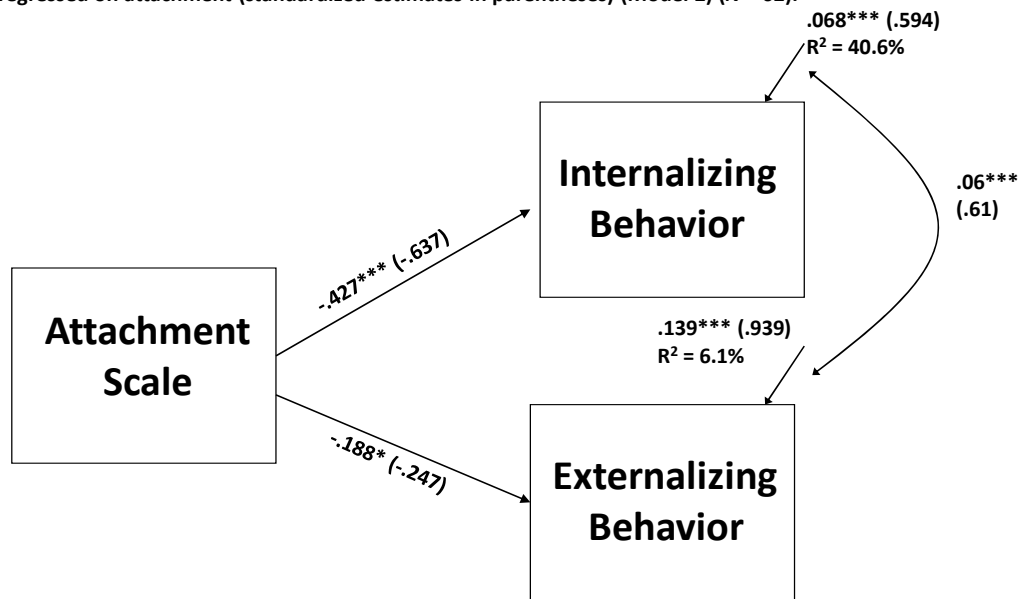


$\sim p < .10$
 $*** p < .001$
 $\chi^2 = 0, df = 0, p = .00$
 CFI = 1.00
 TLI = 1.00
 RMSEA = 0, $p = .00$

Hypothesis 2

It was hypothesized that attachment would be negatively associated with both internalizing and externalizing behavior problems. More specifically, the hypothesis was that insecure attachment would be associated with higher rates of both internalizing and externalizing behavior problems and that secure attachment would be associated with lower rates of both internalizing and externalizing behavior problems. Internalizing behavior and externalizing behavior were simultaneously regressed on attachment (Figure 8). The results indicated that attachment had a significant, negative relationship with internalizing behavior ($\beta = -.427, p < .001$) and a significant, negative relationship with externalizing behavior ($\beta = -.188, p < .05$). If adolescents were insecurely attached they had more internalizing and externalizing difficulties, while those who were securely attached did not. In this model, the residual variances for internalizing behavior and externalizing behavior were significantly, positively related ($r = .61, p < .001$). The remaining variance in internalizing behavior was related to the remaining variance in externalizing behavior. Another predictor that is related to both internalizing and externalizing behaviors may be useful in predicting these behaviors. Attachment accounted for 40.6% of the variance in internalizing behavior and 6.1% of the variance in externalizing behavior.

Figure 8. Fitted path model with estimated regression coefficients for internalizing behavior and externalizing behavior regressed on attachment (standardized estimates in parentheses) (Model 2) (N = 62).



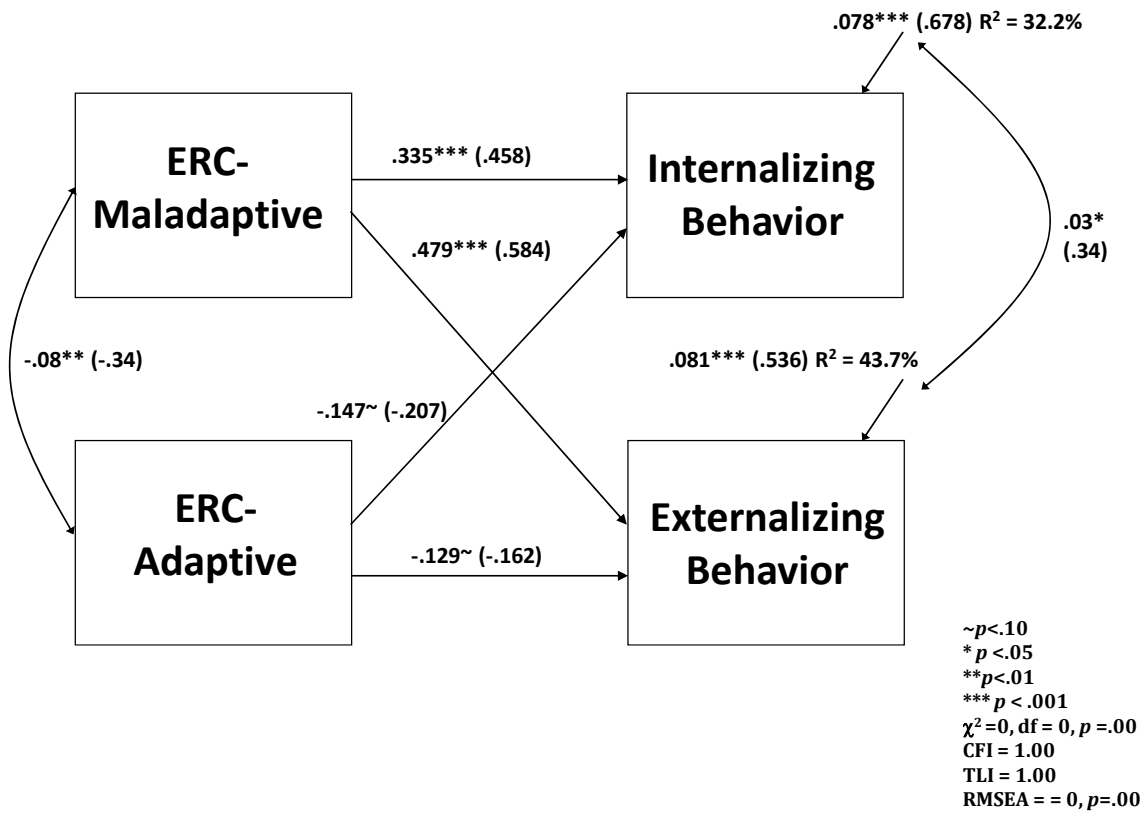
* $p < .05$
 *** $p < .001$
 $\chi^2 = 0, df = 0, p = .00$
 CFI = 1.00
 TLI = 1.00
 RMSEA = 0, $p = .00$

Hypothesis 3

I hypothesized that affect regulation would be related to both internalizing and externalizing behaviors. More specifically, I hypothesized that adaptive affect regulation is negatively associated with both internalizing and externalizing behavior problems and that maladaptive affect regulation is positively associated with both internalizing and externalizing behavior problems. In this model, internalizing behavior and externalizing behavior were simultaneously regressed on the affect regulation subscales, lability-negativity (maladaptive) and emotion regulation (adaptive) (Figure 9). The results show that internalizing behavior had a significant, positive relationship with maladaptive regulation ($\beta = .335, p < .001$) and a marginally significant, negative relationship with adaptive emotion regulation ($\beta = -.147, p < .10$). These results indicate that high incidence of internalizing behavior is associated with high levels of maladaptive affect regulation strategies and vice-versa, while high incidence of internalizing behavior is associated with low levels of adaptive affect regulation strategies and vice-versa. Also, the results show that externalizing behavior had a significant positive relationship with the lability-negativity (maladaptive) subscale ($\beta = .479, p < .001$) and a marginally significant, negative relationship with the emotion regulation (adaptive) subscale ($\beta = -.129, p < .10$). These results indicate that high incidence of externalizing behavior is associated with high levels of maladaptive affect regulation strategies and vice-versa, while high incidence of externalizing behavior is associated with low levels of adaptive affect regulation strategies and vice-versa. In this model, the emotion regulation subscales were allowed to covary and had a significant negative relationship with each other ($r = -.34, p < .01$). As expected, these variables were measuring opposite components of affect regulation. Again, the residual variances for internalizing behavior and externalizing behavior were significantly, positively related ($r = .34,$

$p < .05$). What was not predicted by affect regulation in internalizing and externalizing behavior was related, again meaning that another predictor could be useful in predicting both types of behavior. The affect regulation subscales accounted for 32.2% of the variance in internalizing behavior and 43.7% of the variance in externalizing behavior, controlling for all else in the model.

Figure 9. Fitted path model with estimated regression coefficients for internalizing and externalizing behavior regressed on ERC-maladaptive and ERC-adaptive (standardized estimates in parentheses) (Model 3) ($N = 62$).



Hypothesis 4

Hypothesis 4 posited that attachment and affect regulation together are related to internalizing and externalizing behaviors. More specifically, I hypothesized that insecure attachment combined with more maladaptive affect regulation strategies will be related to higher levels of internalizing and externalizing behaviors and that secure attachment combined with adaptive affect regulation strategies will be related to lower levels of internalizing and externalizing behaviors. In this model, internalizing behavior and externalizing behavior were simultaneously regressed on attachment and the affect regulation subscales, lability-negativity and emotion regulation (Figure 10). The results show that attachment and internalizing behavior have a significant, negative relationship ($\beta = -.321, p < .001$), when controlling for both affect regulation subscales; however, attachment and externalizing behaviors did not have a relationship when controlling for both affect regulation subscales. These results indicate that insecure attachment is associated with high incidence of internalizing behavior and that secure attachment is associated with low incidence of internalizing behavior, even while controlling for adaptive and maladaptive affect regulation. Any secure attachment, in the context of affect regulation, is not related to externalizing behaviors. Maladaptive affect regulation was significantly, positively related to internalizing behavior ($\beta = .226, p < .01$), when controlling for adaptive affect regulation and attachment and it was significantly, positive related to externalizing behavior ($\beta = .500, p < .001$), when controlling for adaptive affect regulation and attachment.

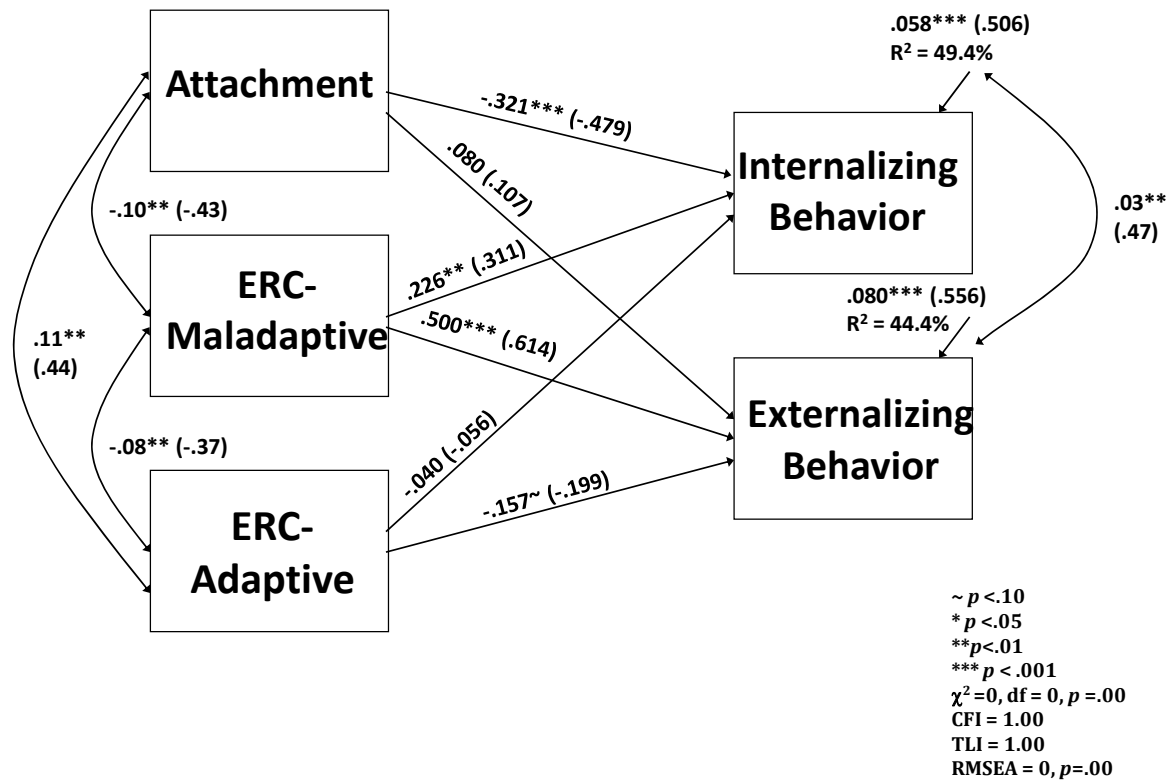
The findings indicate that an adolescent who is high on maladaptive affect regulation will have higher incidence of both internalizing and externalizing behaviors and that an adolescent who is low on maladaptive affect regulation will have lower incidence of both internalizing and

externalizing behaviors, while controlling for adaptive affect regulation and attachment. On the other hand, adaptive affect regulation was not related to internalizing behavior and was only marginally, negatively related to externalizing behavior, when controlling for maladaptive affect regulation and attachment. When taking into account maladaptive affect regulation and attachment, this indicates that adaptive affect regulation is not related to internalizing behavior at all in this population and is only marginally related to externalizing behavior. The residual variances for internalizing behavior and externalizing behavior were again significantly, positively related ($r = .03, p < .01$) meaning that the remaining variance in internalizing behavior was related to the remaining variance of externalizing behavior. Again, there is another predictor that has not been included, which might be helpful in the prediction of these behaviors. In this model, all of the predictors were allowed to covary. Attachment had a positive relationship with adaptive affect regulation ($r = .11, p < .01$) and a negative relationship with maladaptive affect regulation ($r = -.10, p < .01$). Also as expected, maladaptive affect regulation and adaptive affect regulation had a significant, negative relationship ($r = -.08, p < .01$). Attachment with affect regulation together accounted for 49.4% of the variance in internalizing behavior, controlling for all else in the model. Attachment with affect regulation together accounted for 44.4% of the variance in externalizing behavior, controlling for all else in the model.

In Model 3, maladaptive affect regulation and adaptive affect regulation explained 32% of the variance in internalizing behavior and 44% of the variance in externalizing behavior. When attachment was added into the model (Model 4), more of the variance was explained for both outcomes. Attachment and affect regulation when considered together explained 44% of the variance in internalizing behavior and 49% of the variance in externalizing behavior. One possible reason for this increase could be because attachment and affect regulation ability are so

highly correlated. As research has shown, affect regulation develops as part of attachment development during infancy (Ainsworth & Bowlby, 1991). Another possible reason for the increase in variance explained could be because attachment and affect regulation explain different parts/aspects of both internalizing and externalizing behavior.

Figure 10. Final fitted path model with estimated regression coefficients for attachment, maladaptive affect regulation, adaptive affect regulation, internalizing behavior, and externalizing behavior (standardized estimates in parentheses) (Model 4) ($N = 62$).



Hypothesis 5

Hypothesis 5 posited that affect regulation mediated the relationship between attachment and internalizing and externalizing behaviors. In other words, it was hypothesized that when affect regulation was taken into account an association between attachment and internalizing behavior or between attachment and externalizing behavior would no longer exist. A mediation path model was fit (Figure 11).

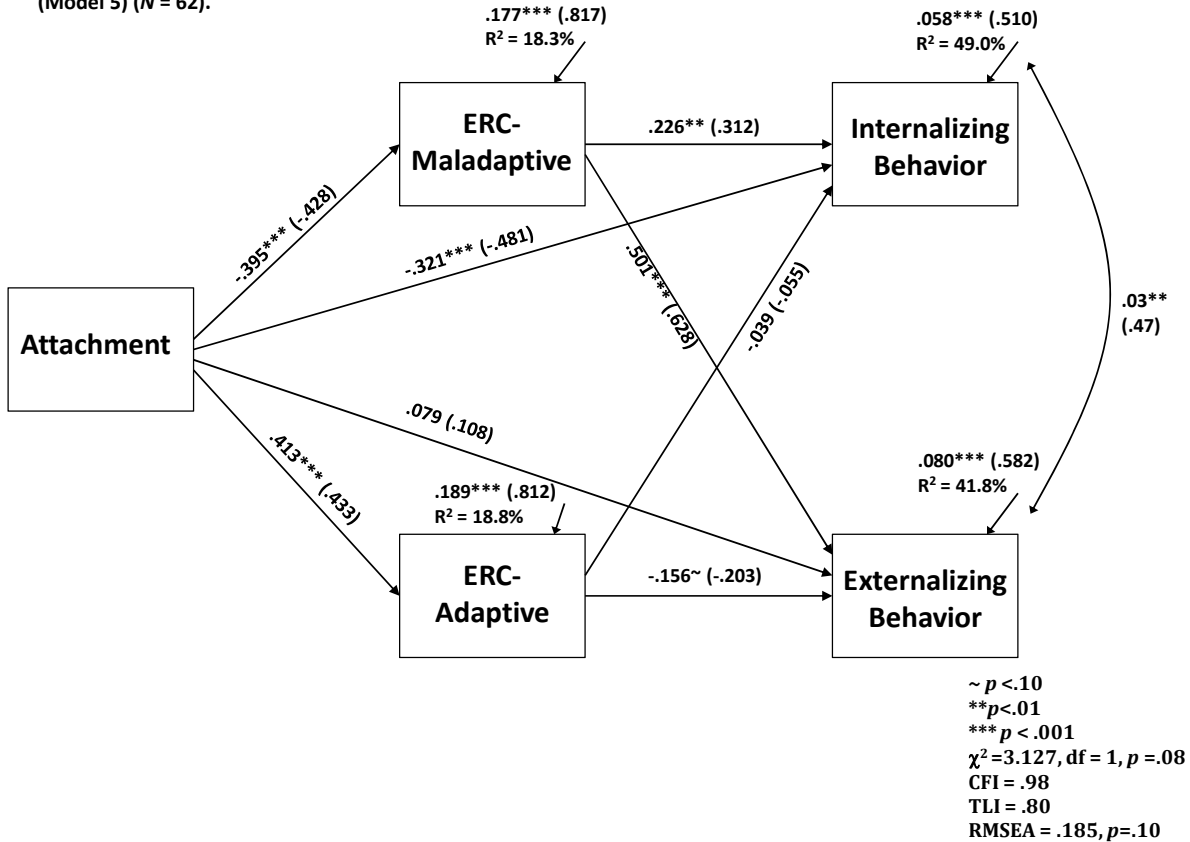
According to the rules for mediation hypotheses testing proposed by Baron and Kenny (1986), there are four different models that need to be fit to prove mediation. First, the predictor needs to explain some variance in the mediator. Figure 7 illustrated that attachment explains 17.3% of the variance in maladaptive affect regulation and 18.4% of the variance in adaptive affect regulation. Next, the mediator needs to explain variance in the outcome. Figure 8 illustrated that attachment explains 40.6% of the variance in internalizing and 6.1% of the variance in externalizing behavior. Thirdly, the predictor has to explain variance in the outcome. Figure 9 illustrated that both maladaptive affect regulation and adaptive affect regulation explain 32.2% of the variance in internalizing and 43.7% in externalizing behaviors. Lastly, when the mediator is included in the model, the predictor should no longer explain variance in the outcome. As Figure 11 illustrates, attachment appears to no longer explain variance in one of the outcomes (externalizing behavior) when emotion regulation is added into this model.

Again, the residual variances between internalizing and externalizing behavior had a significant, positive relationship ($r = .03, p < .01$), reminding us that other predictors, not contained in this data set, but related to both types of problem behaviors might be useful in predicting them. The results indicate that internalizing behavior was significantly, positively related to maladaptive affect regulation ($\beta = .226, p < .01$) and was not related to adaptive affect

regulation, meaning that, on average, high incidence of internalizing behavior was associated with high maladaptive affect regulation and vice versa. Externalizing behavior had a significant, positive relationship with maladaptive affect regulation ($\beta = .501, p < .001$) and a marginally significant, negative relationship with adaptive affect regulation ($\beta = -.156, p < .05$), meaning that high incidence of externalizing behavior was, on average, associated with high levels of maladaptive affect regulation and low levels of adaptive emotion regulation and vice-versa. This model accounted for 49% of the variance in internalizing behavior and 41.8% of the variance in externalizing behavior. As previously found in the models, attachment had a significant, negative relationship with maladaptive affect regulation ($\beta = -.395, p < .001$) and a significant, positive relationship with adaptive affect regulation ($\beta = .413, p < .001$), meaning that insecure attachment is associated with high levels of maladaptive affect regulation and that insecure attachment is associated with low levels of adaptive affect regulation and vice-versa, even when controlling for internalizing and externalizing behaviors. The model accounted for 18.3% of the variance in maladaptive affect regulation and 18.8% of the variance in adaptive affect regulation.

Since we were testing mediation, it was expected that attachment would no longer have an association with either internalizing or externalizing behavior. This was true for only one of the outcomes. Attachment still had a significant, negative relationship with internalizing behaviors ($\beta = -.321, p < .001$), meaning again that high incidence of internalizing behaviors is associated with insecure attachment and low incidence of internalizing behaviors are associated with secure attachment. However, when accounting for affect regulation, attachment no longer had an association with externalizing behavior in this model.

Figure 11. Fitted path model with estimated regression coefficients for affect regulation as a mediator of attachment and its effect on internalizing and externalizing behavior (standardized estimates in parentheses) (Model 5) (N = 62).



Hypothesis 5 was that affect regulation (maladaptive and adaptive) mediated the relationship between attachment and both internalizing and externalizing behaviors. Therefore, it was essential to examine whether or not the paths from attachment to internalizing behavior and from attachment to externalizing behavior were both equal to zero (non-significant) in the population. In order to test mediation, I fit another path model (Model 5a) in which I constrained these paths to zero simultaneously. Then to determine if there was mediation, a delta chi-square test was conducted and results are presented in Table 6.

Table 6

Delta Chi-Square Test to determine mediation for affect regulation as a mediator of attachment's effect on internalizing and externalizing behaviors (N=62)

Model	Constraint Imposed	χ^2	df
5	None	3.127	1
5a	H ₀ : Internalizing Behavior ON Attachment and Externalizing Behavior ON Attachment = 0, simultaneously in the population (controlling for all else in the model)	28.825	3

From the results of the $\Delta\chi^2$ test, we can reject the null hypothesis that the relationship between both internalizing and externalizing behavior and attachment is zero simultaneously in the population, controlling for all else in the model [$\Delta\chi^2 = 25.698$, $\Delta df = 2$; $\chi^2_{\text{crit}} (\alpha = .05, df = 2) = 5.99$; $25.698 > 5.99$]. This finding indicates that there is an association between both internalizing and externalizing behavior and attachment in this population when taking into account affect regulation. In other words, affect regulation does not mediate the relationship between attachment and both internalizing/externalizing behaviors for this population. Therefore, our hypothesis is not supported. However, the Model 5 results did indicate that the relationship between attachment and externalizing behavior might be zero when taking into account affect regulation. Therefore, another test was conducted.

In order to determine whether the path between attachment and externalizing behavior is truly zero in the population when affect regulation is involved in the equation, I fit another path model (Model 5b) in which I constrained only that path to zero (Figure 12). Then to determine mediation, a delta chi-square test was conducted and results are presented in Table 7.

Figure 12. Final fitted path model with estimated regression coefficients for affect regulation as a mediator of attachment and its effect on internalizing behavior and externalizing behavior (standardized estimates in parentheses) with externalizing behavior on attachment constrained to 0 (Model 5b) (N = 62).

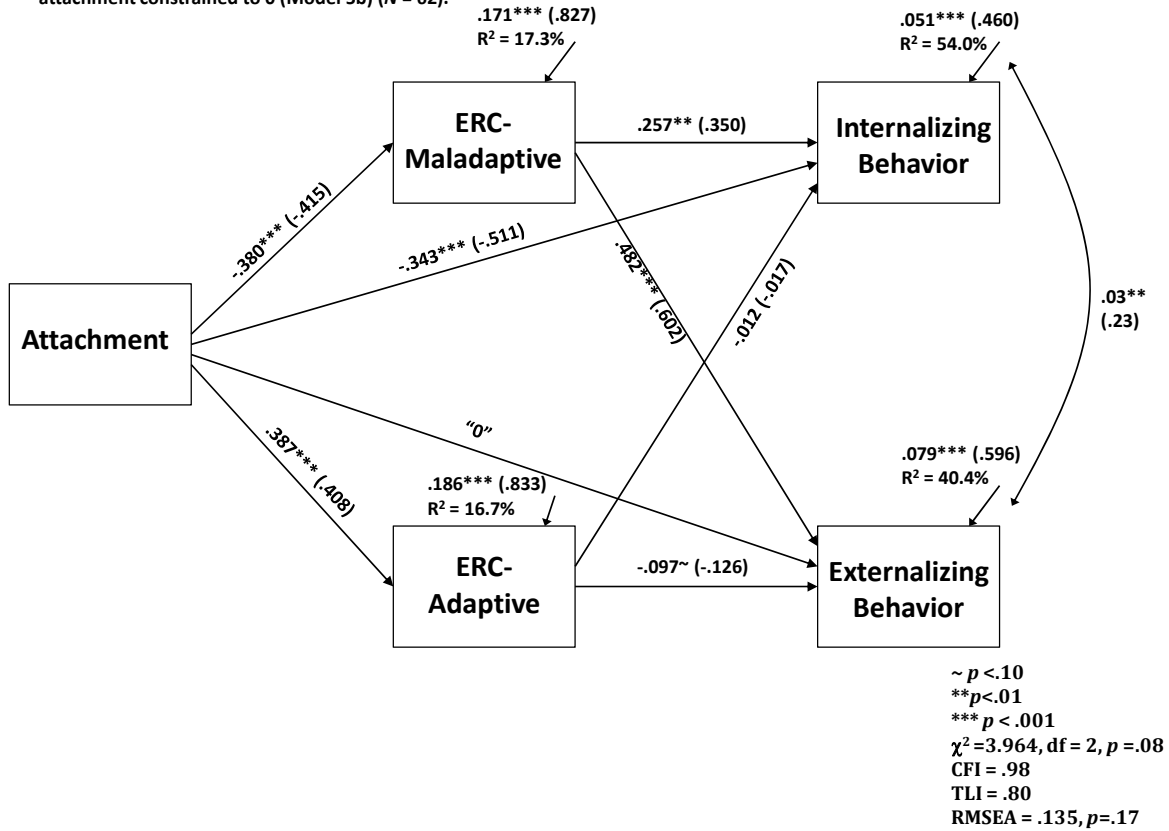


Table 7

Delta Chi-Square Test to determine mediation for affect regulation as a mediator of attachment's effect on externalizing behaviors (N=62)

Model	Constraint Imposed	χ^2	df
5	None	3.127	1
5b	H ₀ : Externalizing Behavior ON Attachment = 0, in the population (controlling for all else in the model)	3.964	2

From the results of the $\Delta\chi^2$ test, we cannot reject the null hypothesis that the relationship between externalizing behavior and attachment is zero in the population, controlling for all else in the model [$\Delta\chi^2 = .837, \Delta df = 1; \chi^2_{\text{crit}}(\alpha = .05, df = 1) = 3.84; .837 < 3.84$]. This finding indicates that there is not an association between externalizing behavior and attachment in this

population when taking into account affect regulation. Therefore, Model 5b (Figure 12) is our chosen mediation model because the path from attachment to externalizing behavior is actually already equal to zero in the population (non-significant). Therefore, Model 5 is in partial support of the hypothesis. Adaptive affect regulation mediates the relationship between attachment and externalizing behavior for this population when controlling for all else in the model.

Hypothesis 6

Hypothesis 6 posited that the associations between attachment and internalizing and externalizing behaviors are moderated by affect regulation (Figure 13). This was merely an exploratory hypothesis because it had never been tested or proposed before for this population. Reasoning to test the moderation model is built upon by findings from the earlier models. Figure 8 showed that attachment and internalizing behavior had a significant, negative relationship ($\beta = -.427, p < .001$) and that attachment and externalizing behavior had a significant, negative relationship ($\beta = -.188, p < .05$). Figure 10 showed that attachment still had a significant, negative relationship with internalizing behavior but no longer had a significant relationship with externalizing behavior, when controlling for maladaptive and adaptive affect regulation. Maladaptive affect regulation had a significant, positive relationships with both internalizing behaviors ($\beta = .226, p < .01$) and externalizing behaviors ($\beta = .500, p < .001$), when controlling for attachment and adaptive affect regulation. Adaptive affect regulation had a moderately significant, negative relationship with externalizing behavior ($\beta = -.157, p < .10$) but no relationship with internalizing behavior. After this model was examined, a moderation model was fit (Figure 13).

The results indicate a few significant relationships. Again, the residual variances between internalizing and externalizing behavior had a significant, positive relationship ($r = .03$,

$p < .01$), reminding us that other predictors, not accounted for in the model, but related to both types of problem behaviors might be useful in predicting them. In this model, all of the predictors were allowed to covary and the results are presented in Table 8. In the moderation model, the previously significant relationships between maladaptive affect regulation and the outcomes become non-significant relationships, when controlling for all else in the model. Internalizing behavior has a significant, negative relationship with attachment ($\beta = -1.058, p < .05$), a significant, negative relationship with adaptive affect regulation ($\beta = -.794, p < .05$), and a significant, positive relationship with the interaction term (attachment*adaptive affect regulation) ($\beta = .234^*, p < .05$), controlling for all else in the model. Attachment and adaptive affect regulation were again associated with internalizing behavior in the expected way. Externalizing behavior had no significant relationships with any of the variables or the interaction terms when the interactions were entered into the model. This moderation model accounted for 53.1% of the variance in internalizing behavior and 44.5% of the variance in externalizing behavior.

Figure 13. Fitted path model with estimated regression coefficients for affect regulation as a moderator of attachment and its effect on internalizing and externalizing behavior (standardized estimates in parentheses) (Model 6) ($N = 62$).

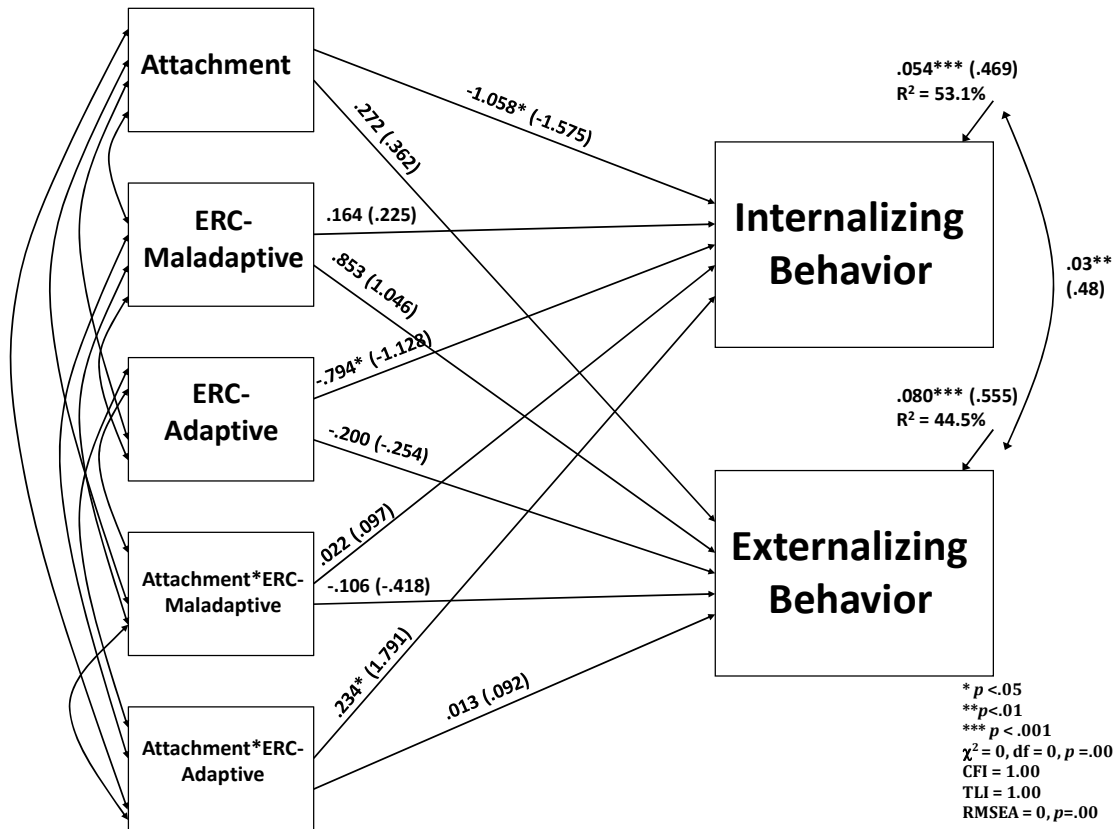


Table 8

Estimated correlations of attachment, affect regulation subscales, and their interaction terms for Figure 13 (N = 62)

	Standardized Estimate
Attachment	
ERC-Maladaptive	-.42**
ERC-Adaptive	.41**
Attachment*ERC-Maladaptive	.31*
Attachment*ERC-Adaptive	.83***
ERC-Maladaptive	
ERC-emotion regulation	-.35**
Attachment*ERC-Maladaptive	.72***
Attachment*ERC-Adaptive	-.46***
ERC-emotion regulation	
Attachment*ERC-Maladaptive	-.05 ^{ns}
Attachment*ERC-Adaptive	.84***

Hypothesis 6 was that affect regulation (maladaptive and adaptive) moderated the relationship between attachment and both internalizing and externalizing behaviors. Model 6 added two interaction terms (Attachment*ERC-Maladaptive and ERC-Adaptive) and four paths to the outcomes at the same time. Therefore, when trying to determine whether or not moderation occurred, I had to fit another path model (Model 6a) in which I constrained all four of the paths to zero simultaneously. Then to determine if there was moderation, a delta chi-square test was conducted and results are presented in Table 9.

Table 9

Delta Chi-Square Test for Moderation (N=62)

Model	Constraint Imposed	χ^2	df
6	None	0	0
6a	H ₀ : All regression paths with interaction terms = 0 simultaneously in the population, controlling for all else in the model	5.569	4

From the results of the $\Delta\chi^2$ test, we cannot reject the null hypothesis that paths from the interaction terms to the outcomes are zero simultaneously in the population, controlling for all else in the model [$\Delta\chi^2 = 5.569$, $\Delta df = 4$; $\chi^2_{\text{crit}} (\alpha = .05, df = 4) = 9.49$; $5.569 < 9.49$]. This means that there are not significant associations between the interaction terms and the outcomes, controlling for all else in the model. This finding indicates that the regression paths for the interaction terms to the outcomes are zero in this population when being predicted by attachment, affect regulation, and the interaction terms. Model 6 (Figure 13) can be used as the moderation model because the paths are zero in the population (non-significant). There was no proof of moderation, so no further examinations were necessary.

Discussion

Summary of Results

Hypothesis 1: Attachment is related to ability to regulate one's affect in this population: Adolescents who have sexually offended and have a secure quality of attachment will be more likely to have high adaptive affect regulation strategies and low maladaptive affect regulation strategies, while adolescents who have sexually offended and have insecure quality of attachment will be more likely to have low adaptive affect regulation strategies and high maladaptive affect regulation strategies. Results from Model 1 indicate that this hypothesis was fully supported. These findings were expected since affect regulation develops as part of attachment development during infancy (Ainsworth, 1989; Ainsworth & Bowlby, 1991). These results support previous empirical findings and conceptual work that have suggested attachment to be positively associated to affect regulation and to be negatively associated to affect dysregulation (Burk & Burkhart, 2003; Cicchetti & Toth, 1995; Hudson & Ward, 1997). Insecure individuals often have more anxiety and more affect lability (affect dysregulation) (Bowlby, 1969). The conceptual paper by Burk and Burkhart (2003) is the only paper to propose that there is a significant relationship between attachment and self-regulation (some aspects of affect regulation) in the population of adolescents who have sexually offended. The finding from this study was able to support their conceptual framework through empirical analysis.

Hypothesis 2: Attachment will be related to internalizing and externalizing behaviors. Adolescents who have sexually offended and have secure attachment will be related to lower levels of internalizing and externalizing behavior; whereas, adolescents who have sexually offended and have insecure attachment will be related to higher levels of internalizing and/or externalizing behavior problems. Internalizing and externalizing behaviors, controlled for attachment, will be positively related. As with Hypothesis 1, this hypothesis was fully supported. Attachment was, in fact, related to both internalizing and externalizing behaviors as hypothesized. It seems that attachment does a much better job of predicting internalizing behavior (40.6%) than externalizing behavior (6.1%) for this population. A possible reason for this finding could be that attachment security might have more to do with problems like withdrawal, anxiety, and depression than it does with problems like delinquency or aggression. An adolescent who is insecurely attached feels as if they cannot trust or depend upon others, this is likely more related to being depressed, withdrawn, and/or anxious around others than to physically acting out on others or on their environment. For example, a male who is securely attached might be similarly as likely to get into delinquent type troubles during their adolescence due to other factors, such as, association with delinquent peers, boredom, or attempts to “fit in” or “be tough.”

Even though attachment predicts less of externalizing behavior than it does internalizing behavior, both relationships are significant. The findings from this model are consistent with previous research. This finding supports previous research that attachment is associated with internalizing problems like withdrawal (Hudson & Ward, 1997; Marshall, 1989). It also supports previous research that attachment is associated with aggressive and delinquent behaviors (Baker, Beech, & Tyson, 2006; Smallbone & Dadds, 2000).

Hypothesis 3: Quality of affect regulation ability will predict internalizing and/or externalizing behavior problems. Adaptive affect regulation will be associated with lower levels of internalizing behaviors and externalizing behaviors; whereas, maladaptive affect regulation will be associated with higher levels of internalizing behaviors and externalizing behaviors. Internalizing and externalizing behaviors, controlled for affect regulation, will be positively related. Results from Model 3 indicate that this hypothesis was fully supported. This finding provides support for the proposed theory that internalizing behaviors are related to an over-control of affect and that externalizing behavior are related to an under-control of affect (Garber & Dodge, 1991; Keiley and Seery, 2001; Tomkins, 1963). When individuals cannot manage to successfully regulate their emotions, they can experience either this loss of control or shut-down of their affective experience (Keiley & Seery, 2001). When individuals are able to regulate their affect, they are able to make more rational decisions (Keiley & Seery, 2001). Specifically, these results indicate that an adolescent who cannot manage his affect could be likely to hide his distress (internalizing) or lash out at others (externalizing). However, if an adolescent had a more functional ability to regulate his affect he might not have to internalize emotional difficulties or act out on his environment or others.

Hypothesis 4: Attachment and affect regulation together will be related to internalizing and externalizing behaviors. Adolescents who have sexually offended and have secure attachment and higher adaptive affect regulation will be related to lower levels of internalizing behaviors and externalizing behaviors; whereas, adolescents who have sexually offended and have insecure attachment and higher maladaptive affect regulation strategies will be related to higher levels of internalizing behaviors and externalizing behaviors. Internalizing and externalizing behaviors, controlled for attachment and affect

regulation, will be related. There had previously not been any studies conducted that examined both attachment and affect regulation as predicting problem behaviors in this population. This was mostly an exploratory question to determine if moderation would be logical to test for this study. This hypothesis was partially supported. Since there were some significant paths, moderation was later tested.

In this model, attachment was no longer related to externalizing behavior, when controlling for internalizing behavior, maladaptive affect regulation, and adaptive affect regulation. This could suggest that when taking into account emotion regulation, attachment might have less impact on the incidents of externalizing behavior problems. This is a surprising finding considering that there was a stronger argument for the relationship between attachment and externalizing behaviors in previous research (Baker et al., 2006; Smallbone & Dadds, 2000; Smallbone & Dadds, 2001). Another interesting finding is that maladaptive affect regulation appears to do a better job of predicting problem behaviors, especially internalizing behaviors, than adaptive affect regulation does. In order to have more positive behavioral outcomes in the future, this finding could possibly mean that these adolescents do not have to be particularly great at affect regulation but they just do not need to be particularly bad at affect regulation. These speculations were further tested in the moderation model.

Hypothesis 5: Affect regulation is a mediator of attachment's association with internalizing and externalizing behaviors in this population. Internalizing and externalizing behaviors, controlled for attachment and affect regulation, will be related.

This mediation hypothesis is partially supported. Since the study followed the steps set by Baron and Kenny (1986), we can be confident in our results about mediation. The results indicate that adaptive affect regulation ability mediates the effect that attachment has on externalizing

behavior but not the effect that attachment has on internalizing behavior. In other words, affect regulation may be an important mechanism by which attachment affects externalizing behavior for adolescents who have sexually offended. This could mean that even though it appears like an adolescent's attachment style has an effect on externalizing behaviors in adolescence, this relationship is actually better explained through their affect regulation ability. Contrary to what was hypothesized, affect regulation was not an important mechanism for internalizing behaviors. Attachment is funneled through adaptive affect regulation in its effect on externalizing behaviors, but adaptive affect regulation has no effect on internalizing behaviors. There could be a few reasons for this differential finding. As discussed with the findings from Model 2, perhaps attachment security has more to do with internalizing behaviors (anxiety, depression, and/or withdrawal) than it does with externalizing behaviors (aggression and/or delinquency) in this population. Therefore, when testing mediation, we could guess that affect regulation ability might play a bigger role predicting for externalizing behavior than it does for internalizing behavior in Model 5. An important concept to consider is that of the over- vs. under-controlling of emotions. Attachment might explain more about the over-control of emotions (internalizing behaviors) than it does about the under control of emotions (externalizing behaviors). For instance, an insecurely attached adolescent might be more likely to display more internalizing behavior problems even when controlling for affect regulation ability. However, if this insecurely attached adolescent is able to regulate their emotions well, they are more likely to be able to display less externalizing behavior problems. The ability to tolerate intense emotional arousal would allow the adolescent to make rational decisions that might buffer them more from acting out impulsively in their environment (getting into fights, destroying property, etc). The ability to think while aroused could have an effect for externalizing behavior but might not help

keep them from feeling depressed and/or anxious. This could be an explanation for why the findings indicate that attachment could better explain internalizing behavior problems than affect regulation ability can. This model is accounting for a substantial amount of variance in internalizing and externalizing behaviors. This is a substantial finding since this is the first study to examine the relationships among these constructs in the same study with a sample of incarcerated adolescents who have sexually offended. This finding should have significant implications for future research.

Hypothesis 6: Affect regulation moderates the association between attachment quality and internalizing behaviors, and between attachment quality and externalizing behaviors in this population. Internalizing and externalizing behaviors, controlled for attachment and affect regulation, will be related. There was no support for this hypothesis.

When the interaction terms were added to the model, there was no change in the sign or strength of the effect that attachment had on internalizing and/or externalizing behavior. More specifically, when the interaction terms were added into the model, the previously significant, negative relationship between attachment and internalizing behavior remained significant and negative and the previously non-significant relationship between attachment and externalizing behavior remained non-significant. This finding was not necessarily surprising due to the fact that this hypothesis was made for the purpose of exploratory analysis. No previous studies have examined the constructs of internalizing behavior, externalizing behavior, adaptive affect regulation, maladaptive affect regulation, and attachment all in the same study of adolescents who have sexually offended, so these results cannot be compared to any previous findings.

Overall:

The major findings from all of the fitted models indicate that these adolescents' difficulties are very related to their internalizing problems. Even their externalizing behavior problems have a lot to do with their internalizing problems. For example, attachment and externalizing behavior are not significantly related when considered alone; however, when taking into account internalizing behavior, the relationship between attachment and externalizing behavior becomes significant. When affect regulation is then included even more variance in externalizing behavior is explained. Affect regulation does a much better job of explaining externalizing behavior (44%) than attachment does (6%). It is actually poor affect regulation and low self-control that explain externalizing behavior problems for these adolescents. An inability to tolerate high emotional arousal makes it more likely that they will act out in their environment (i.e., fighting, destruction, etc.) regardless of attachment style.

On the other hand, attachment does a better job of explaining internalizing behavior problems (41%) than affect regulation does for these adolescents (32%). Problems, such as anxiety or depression, always seem to be a substantial factor for these adolescents, especially when considering their attachment style. Affect regulation ability can have an impact on their level of internalizing behavior problems; however, even if they have high adaptive affect regulation ability, they are still quite likely to have internalizing behavior problems. This makes a lot of sense when considering the types of environmental backgrounds from which these adolescents often come. Even if they have found a way to be less violent and/or destructive (adaptive affect regulation ability), it seems they find it difficult not to experience anxiety, depression, and/or withdrawal symptoms.

In many ways, adolescents who sexually offend appear to be substantially different from other types of juvenile offenders. These young men seem overwhelmingly internally preoccupied, to the extent that it appears to affect many areas of their life. They may be experiencing negative affect about their offense(s) and/or emotional turmoil from their background environments. This study cannot explain the cause for their high internalizing behaviors, but it does illustrate that these adolescents have unique characteristics that should be taken into consideration during their rehabilitation.

Conclusions

In conclusion, more knowledge was gained in regard to adolescents who have sexually offended. Attachment was found to be related to emotion regulation, as well as, internalizing and externalizing behaviors in this sample. Also, affect regulation was found to be related to both internalizing and externalizing behaviors. These findings were to be expected based on the previously available scant research in this area. An interesting finding was that it appeared that maladaptive affect regulation seemed to have a stronger influence on problem behaviors than adaptive affect regulation. This should be examined through further analysis in the future to see if it is true in another sample of adolescents who have sexually offended. This study adds significantly to several gaps in the literature by examining internalizing and externalizing behaviors together, analyzing the relationship between attachment and internalizing/externalizing behaviors, and investigating affect regulation and its connection to internalizing/externalizing behaviors in this population. Most importantly, no study has ever examined the possibility that affect regulation is a substantial mechanism that connects early attachment style to later externalizing/internalizing behaviors or that it is a moderator between that relationship, in this population. The findings from the mediation model are extremely important as they suggest that

the effect of attachment on externalizing behavior problems may be accounted for by affect regulation ability. No other study to date has used these constructs in a mediation model for this population, making this the first study to use a mediation model and find mediation when investigating these constructs. Due to the fact that affect regulation skills are considered much more modifiable than attachment style, this finding could be groundbreaking and encouraging for the clinical treatment of adolescents who sexually offend. These adolescents could be helped through the development of adaptive affect regulation strategies. While this study found mediation and no moderation, future research is needed to replicate these findings within a larger sample of adolescents who have sexually offended. This study helped to shed light on this infrequently studied population that is potentially harmful to society and is in need of improved professional treatment.

Implication of Research Findings

Sexuality, especially of children and/or adolescents, is an area that is all too often ignored. In many ways, Western culture expects children to be sexually naïve up until the point of adulthood. However, this is unrealistic and problematic. In many instances, this attitude is so detrimental that some children do not know what sexual behavior is appropriate and sexual abuse may occur. The general public needs to stop ignoring this area and researchers need to continue shedding more light on these vulnerable children. An increased understanding of this population could have a positive impact on our ability to help these children and future children from being further victimized.

Considering previous findings that would suggest that these relationships exist, the findings from this study help shed light on factors, including attachment, adaptive affect regulation, maladaptive affect regulation, internalizing behavior problems, and externalizing

behavior problems. Most importantly this study helps shed light on how these constructs are related to one another. Both attachment and affect regulation were relevant in helping explain much of the variance in internalizing and externalizing behavior for these boys. The findings from the mediation model take this a step further to show that affect regulation is an important factor in the lives of these adolescents to the extent that it may be more revealing in what is happening for these adolescents than even their attachment style. As we gain a better understanding of the ways that these constructs interact with one another, we will be able to more effectively treat and prevent children developing sexual behavior problems.

Strengths

Since adolescents who have sexually offended are a highly underrepresented population in the literature, the major strengths of this study are the contributions that these findings add to the current scant literature in this area. I focused on different aspects that had not been examined before for these adolescents. For example, this study was the first to examine composite scores for both internalizing and externalizing behaviors simultaneously in this population. Also, there were many relationships that were found to be significant in this study that have never been examined in this population before now. For example, a relationship that had previously been established between attachment and internalizing/externalizing behaviors in other populations has now been found to be true for this population. Also, this study found significant, negative relationships between attachment and both internalizing and externalizing behaviors.

This study also adds to scholarly knowledge by examining how affect regulation appears in this population. An important contribution is that we examined both maladaptive and adaptive affect regulation as separate constructs and not on a continuum from good to bad. This allowed us to find differential results that might not have otherwise been detected. By examining affect

regulation as two separate constructs, we found that maladaptive affect regulation seemed to have more to do with problem behaviors than adaptive affect regulation in this sample. Results also indicated that affect regulation and internalizing behavior were associated for these adolescents. Also, this study is the first to examine the possibility that affect regulation is a substantial mechanism that connects attachment to internalizing/externalizing behaviors in this population and/or that affect regulation might moderate this relationship. Most importantly, this study had a mediation finding that implies that the inclusion of affect regulation may better explain the relationship between attachment and externalizing behaviors. This could open up a new avenue for research in this area studying the relationships among attachment, affect regulation, internalizing behaviors, and externalizing behaviors. This finding could have numerous implications for clinical treatment when working with adolescents or children who have sexually offended.

Another notable strength from this study includes the fairly large percentages of variance explained by many of the path models. For example, in the model where internalizing and externalizing behavior was predicted by adaptive affect regulation and maladaptive affect regulation and indirectly by attachment, the model explains 49% of the variance in internalizing behavior and 41.8% of the variance in externalizing behavior. Almost all of the R^2 values in my study are fairly large and provide solid support for my hypotheses.

Limitations

The major limitation of this study concerns the small sample size. This study had enough power to test hypotheses, yet it would have been optimal to have more participants. Another noteworthy limitation is that these individuals are nearing the end of their criminal sentence and their treatment for sexually offending. It would be expected that treatment at DYS might have

some influence on the adolescents' behavior problems, affect regulation ability, and/or report of attachment. Stronger or arguably more useful findings might be present if the data was collected near the beginning of their time at DYS. In addition, it might have been interesting to know what type of sexual offense each of the participants had committed. Another limitation is that the results might only be generalizable for adolescent males who have sexually offended and have been incarcerated for their offense(s).

There were some measurement limitations that reduced effectiveness. Alphas for some of the measures were moderate at best, such as the attachment scale and both subscales of the emotion regulation checklist. All measures were self-report so there might be measurement error related to self-report and/or there might be a somewhat increased correlation between these constructs. Additionally, since this is a cross-sectional analysis, we cannot predict causal effects of variables in our sample. In other words, it is equally possible that affect regulation predicts attachment or that affect regulation actually mediates the relationship between externalizing behaviors on attachment style.

Future Research

Future research on the relationships among internalizing/externalizing behaviors, attachment, and affect regulation in this population needs to address the limitations concerning the sample, the size, and the measurements. For example, future studies should include more participants, use more than one measurement for each construct, and perhaps collect data soon after the adolescents have been incarcerated for their offense(s). Since many of the models had relatively high R^2 's, future research should attempt to replicate these findings and reexamine these questions within another sample of adolescent males who have sexually offended. Future research on this population should utilize longitudinal data in order to examine if there is a "true"

mediation of the relationship between attachment and externalizing behavior by affect regulation ability. Also, since no mediation was found between attachment and internalizing behavior, future studies should test to see if it might be found in a similar but larger sample. A longitudinal analysis could also assess if and how these relationships might change over time in this population.

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Appendix A

Univariate Statistics for the IPPA

Table 10

Univariate Statistics for Inventory of Parent and Peer Attachment (IPPA) and the Subscales for Parent (P_Trust, P_Communication, P_Alienation) and the Subscales for Peers (F_Trust, F_Communication, F_Alienation) (N=60).

Scales	<i>M</i>	<i>SD</i>	Range
IPPA_Parent	3.53	.73	1.46-4.96
P_Trust	3.78	.88	1.38-5.00
P_Communication	3.56	.92	1.00-5.00
P_Alienation	3.28	.83	1.38-5.00
IPPA_Peer	3.71	.69	1.80-4.96
F_Trust	3.86	.91	1.00-5.00
F_Communication	3.51	.87	1.25-5.00
F_Alienation	3.69	.63	2.43-5.00

Appendix B

Correlations for the IPPA

Table 11

Pearson Correlation Coefficients for Inventory of Parent and Peer Attachment (IPPA) and the Subscales for Parent (P_Trust, P_Comm, P_Alien) and the Subscales for Peers (F_Trust, F_Comm, F_Alien) (N=62).

	IPPA Parent	P_Trust	P_Comm	P_Alien	IPPA Peer	F_Trust	F_Comm	F_Alien
IPPA Parent	1.00							
P_Trust	.91, <i>p</i> <.0001	1.00						
P_Comm	.87, <i>p</i> <.0001	.82, <i>p</i> <.0001	1.00					
P_Alien	.85, <i>p</i> <.0001	.64, <i>p</i> <.0001	.58, <i>p</i> <.0001	1.00				
IPPA Peer	.02, <i>p</i> =.87	-.04, <i>p</i> =.79	.003, <i>p</i> =.98	.16, <i>p</i> =.22	1.00			
F_Trust	.09, <i>p</i> =.47	.08, <i>p</i> =.55	.05, <i>p</i> =.73	.17, <i>p</i> =.16	.95, <i>p</i> <.0001	1.00		
F_Comm	-.06, <i>p</i> =.66	-.07, <i>p</i> =.60	.07, <i>p</i> =.60	.01, <i>p</i> =.94	.89, <i>p</i> <.0001	.83, <i>p</i> <.0001	1.00	
F_Alien	-.03, <i>p</i> =.80	-.21, <i>p</i> =.11	-.17, <i>p</i> =.19	.21, <i>p</i> =.11	.62, <i>p</i> <.0001	.43, <i>p</i> <.0001	.31, <i>p</i> =.02	1.00

Appendix C

Demographic Information Questionnaire-Parent

DIRECTIONS: For each question please circle the number of your answer, unless instructed otherwise.

Unique Identifier:

1st Initial of your first name ____

1st Initial of your last name ____

Last 4 digits of your social security # _____

1. Today's Month _____ Day __ Year _ _ _ _
2. Are you filling out this questionnaire at:
 - a. the start of the group (pre-test)
 - b. the end of the group (post-test)
3. Location of the group?
 - a. Mt. Meigs
 - b. Family Children Services
4. How old are you? _____ (years)
5. Are you male or female?
 - a. Male
 - b. Female
6. What is your racial or ethnic background?
 - a. African American
 - b. Asian
 - c. Cape Verdean
 - d. Haitian
 - e. Hispanic
 - f. Jamaican
 - g. Native American
 - h. Caucasian
 - i. Other _____

7. Do you own or rent the house or apartment that you currently live in?
- a. own
 - b. rent
 - c. other _____
8. What is the highest level of education you have achieved?
- a. Less than 8th grade
 - b. Less than 12th grade
 - c. High school graduation/GED
 - d. Trade or technical school (such as, mechanic training, clerical or secretarial school, etc.)
 - e. Some college
 - f. College graduation
 - g. Graduate degree (such as masters degree or Ph.D., etc.)
9. Are you presently working?
- a. Yes
 - b. No
10. If you have a job what sort of work are you doing?
- _____
11. What is your approximate household income (before taxes) per year? _____
12. Martial Status
- a. Married
 - b. Separated
 - c. Divorced
 - d. Single, never married
 - e. Living with a partner
13. How many children do you have?
- a. Number of sons _____
 - b. Number of daughters _____
 - c. Number of step-sons _____
 - d. Number of step-daughters _____
 - e. Number of foster children _____

Appendix D

Demographic Information Questionnaire-Adolescent

DIRECTIONS: For each question please circle the number of your answer, unless instructed otherwise.

Unique Identifier:

1st Initial of your first name ____

1st Initial of your last name ____

Last 4 digits of your social security # _____

1. Today's Month _____ Day __ Year _ _ _ _

2. Are you filling out this questionnaire at:

- a. the start of the group (pre-test)
- b. the end of the group (post-test)

3. Location of the group?

- a. Mt. Meigs
- b. Family Children Services

4. How old are you? _____ (years)

5. Are you male or female?

- a. Male
- b. Female

6. What is your racial or ethnic background?

- a. African American
- b. Asian
- c. Cape Verdean
- d. Haitian
- e. Hispanic
- f. Jamaican
- g. Native American
- h. Caucasian
- i. Other _____

7. What grade are you currently in?
- a. 6th
 - b. 7th
 - c. 8th
 - d. 9th
 - e. 10th
 - f. 11th
 - g. 12th
8. How many brothers or sisters do you have? In each case write how many
- a. Number of brothers _____
 - b. Number of sisters _____
 - c. Number of step-brothers _____
 - d. Number of step-sisters _____
 - e. Number of half-brothers _____
 - f. Number of half-sisters _____
 - g. Number of foster brothers _____
 - h. Number of foster sisters _____
9. In your family, are you
- a. The oldest child
 - b. A middle child
 - c. The youngest child
 - d. An only child
10. Who do you live with? (for most of the time)
- a. Mother and father
 - b. Mother
 - c. Father
 - d. Foster parent
 - e. Step-parent
 - f. A relative (please write in who you live with) _____
 - g. Other _____

Appendix E

Child Behavior Checklist (Youth Self-Report)

Below is a list of items that describe kids. For each item that describes you *now or within the past 6 months*, please circle the 2 if the item is *very true or often true* of you. Circle the 1 if the item is *somewhat or sometimes true* of you. If the item is *not true* of you, circle the 0.

Please Print 0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

- | | | | |
|---|---|---|--|
| 0 | 1 | 2 | 1. I act too young for my age |
| 0 | 1 | 2 | 2. I have an allergy (describe): _____ |
| 0 | 1 | 2 | 3. I argue a lot |
| 0 | 1 | 2 | 4. I have asthma |
| 0 | 1 | 2 | 5. I act like the opposite sex |
| 0 | 1 | 2 | 6. I like animals |
| 0 | 1 | 2 | 7. I brag |
| 0 | 1 | 2 | 8. I have trouble concentrating or paying attention |
| 0 | 1 | 2 | 9. I can't get my mind off certain thoughts (describe): _____ |
| 0 | 1 | 2 | 10. I have trouble sitting still |
| 0 | 1 | 2 | 11. I'm too dependent on adults |
| 0 | 1 | 2 | 12. I feel lonely |
| 0 | 1 | 2 | 13. I feel confused or in a fog |
| 0 | 1 | 2 | 14. I cry a lot |
| 0 | 1 | 2 | 15. I am pretty honest |
| 0 | 1 | 2 | 16. I am mean to others |
| 0 | 1 | 2 | 17. I daydream a lot |
| 0 | 1 | 2 | 18. I deliberately try to hurt or kill myself |
| 0 | 1 | 2 | 19. I try to get a lot of attention |
| 0 | 1 | 2 | 20. I destroy my own things |
| 0 | 1 | 2 | 21. I destroy things belonging to others |
| 0 | 1 | 2 | 22. I disobey my parents |
| 0 | 1 | 2 | 23. I disobey at school |
| 0 | 1 | 2 | 24. I don't eat as well as I should |
| 0 | 1 | 2 | 25. I don't get along with other kids |
| 0 | 1 | 2 | 26. I don't feel guilty after doing something I shouldn't |
| 0 | 1 | 2 | 27. I am jealous of other |
| 0 | 1 | 2 | 28. I am willing to help others when they need help |
| 0 | 1 | 2 | 29. I am afraid of certain animals, situations, or places, other than school
(describe) _____ |
| 0 | 1 | 2 | 30. I am afraid of going to school |

- 0 1 2 31. I am afraid I might think or do something bad
- 0 1 2 32. I feel that I have to be perfect
- 0 1 2 33. I feel that no one loves me
- 0 1 2 34. I feel that others are out to get me
- 0 1 2 35. I feel worthless or inferior
- 0 1 2 36. I accidentally get hurt a lot
- 0 1 2 37. I get in many fights
- 0 1 2 38. I get teased a lot
- 0 1 2 39. I hang around with kids who get in trouble
- 0 1 2 40. I hear sounds or voices that other people think aren't there (describe): _____
-
- 0 1 2 41. I act without stopping to think
- 0 1 2 42. I would rather be alone than with others
- 0 1 2 43. I lie or cheat
- 0 1 2 44. I bite my fingernails
- 0 1 2 45. I am nervous or tense
- 0 1 2 46. Parts of my body twitch or make nervous movements (describe): _____
-
- 0 1 2 47. I have nightmares
- 0 1 2 48. I am not liked by other kids
- 0 1 2 49. I can do certain things better than most kids
- 0 1 2 50. I am too fearful or anxious
- 0 1 2 51. I feel dizzy
- 0 1 2 52. I feel too guilty
- 0 1 2 53. I eat too much
- 0 1 2 54. I feel overweight
- 0 1 2 55. I am overweight
56. Physical problems *without known medical cause*:
- 0 1 2 a. Aches or pains (*not* stomach or headaches)
- 0 1 2 b. Headaches
- 0 1 2 c. Nausea, feel sick
- 0 1 2 d. Problems with eyes (*not* if corrected by glasses) (describe): _____
-
- 0 1 2 e. Rashes or other skin problems
- 0 1 2 f. Stomachaches or cramps
- 0 1 2 g. Vomiting, throwing up
- 0 1 2 h. Other (describe): _____
- 0 1 2 57. I physically attack people
- 0 1 2 58. I pick my skin or other parts of my body (describe): _____
- 0 1 2 59. I can be pretty friendly
- 0 1 2 60. I like to try new things
- 0 1 2 61. My school work is poor
- 0 1 2 62. I am poorly coordinated or clumsy
- 0 1 2 63. I would rather be with older kids than with kids my own age
- 0 1 2 64. I would rather be with younger kids than with kids my own age
- 0 1 2 65. I refuse to talk

- 0 1 2 66. I repeat certain acts over and over (describe): _____
- 0 1 2 67. I run away from home
- 0 1 2 68. I scream a lot
- 0 1 2 69. I am secretive or keep things to myself
- 0 1 2 70. I see things that other people think aren't there (describe): _____
-
- 0 1 2 71. I am self-conscious or easily embarrassed
- 0 1 2 72. I set fires
- 0 1 2 73. I can work well with my hands
- 0 1 2 74. I show off or clown
- 0 1 2 75. I am shy
- 0 1 2 76. I sleep less than most kids
- 0 1 2 77. I sleep more than most kids during day and/or night (describe): _____
-
- 0 1 2 78. I have a good imagination
- 0 1 2 79. I have a speech problem (describe): _____
- 0 1 2 80. I stand up for my rights
- 0 1 2 81. I steal at home
- 0 1 2 82. I steal from places other than home
- 0 1 2 83. I store up things I don't need (describe): _____
- 0 1 2 84. I do things other people think are strange (describe): _____
-
- 0 1 2 85. I have thoughts that other people would think are strange (describe): _____
-
- 0 1 2 86. I am stubborn
- 0 1 2 87. My moods or feelings change suddenly
- 0 1 2 88. I enjoy being with other people
- 0 1 2 89. I am suspicious
- 0 1 2 90. I swear or use dirty language
- 0 1 2 91. I think about killing myself
- 0 1 2 92. I like to make others laugh
- 0 1 2 93. I talk too much
- 0 1 2 94. I tease others a lot
- 0 1 2 95. I have a hot temper
- 0 1 2 96. I think about sex too much
- 0 1 2 97. I threaten to hurt people
- 0 1 2 98. I like to help others
- 0 1 2 99. I am too concerned about being neat or clean
- 0 1 2 100. I have trouble sleeping (describe): _____
- 0 1 2 101. I cut classes or skip school
- 0 1 2 102. I don't have much energy
- 0 1 2 103. I am unhappy, sad, or depressed
- 0 1 2 104. I am louder than other kids
- 0 1 2 105. I use alcohol or drugs for nonmedical purposes (describe): _____
-
- 0 1 2 106. I try to be fair to others

- 0 1 2 107. I enjoy a good joke
 - 0 1 2 108. I like to take life easy
 - 0 1 2 109. I try to help other people when I can
 - 0 1 2 110. I wish I were of the opposite sex
 - 0 1 2 111. I keep from getting involved with others
 - 0 1 2 112. I worry a lot
-

Please write down anything else that describes your feelings, behavior, or interests

Appendix F

Inventory of Parent and Peer Attachment (Parent Section)

Please circle the answer that best describes your feelings or beliefs about each of these statements:

Section I

1. My parents respect my feelings.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

2. I feel my parents are successful as parents.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

3. I wish I had different parents.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

4. My parents accept me as I am.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

5. I have to rely on myself when I have a problem to solve.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

6. I like to get my parents' point of view on things I'm concerned about.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

7. I feel it's no use letting my feelings show.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

8. My parents sense when I'm upset about something.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

9. Talking over my problems with my parents makes me feel ashamed or foolish.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

10. My parents expect too much from me.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

11. I get upset easily at home.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

12. I get upset a lot more than my parents know about.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

13. When we discuss things, my parents consider my point of view.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

14. My parents trust my judgment.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

15. My parents have their own problems, so I don't bother them with mine.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

16. My parents help me to understand myself better.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

17. I tell my parents about my problems and troubles.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

18. I feel angry with my parents.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

19. I don't get much attention at home.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

20. My parents encourage me to talk about my difficulties.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

21. My parents understand me.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

22. I don't know whom I can depend on these days.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

23. When I am angry about something, my parents try to be understanding.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

24. I trust my parents.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

25. My parents don't understand what I'm going through these days.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

26. I can count on my parents when I need to get something off my chest.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

27. I feel that no one understands me.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

28. If my parents know something is bothering me, they ask me about it.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

Appendix G

Inventory of Parent and Peer Attachment (Peer Section)

Please circle the answer that best describes your feelings or beliefs about each of these statements:

Section II

1. I like to get my friends' point of view on things I'm concerned about.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

2. My friends sense when I'm upset about something.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

3. When we discuss things, my friends consider my point of view.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

4. Talking over my problems with my friends makes me feel ashamed or foolish.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

5. I wish I had different friends.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

6. My friends understand me.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

7. My friends encourage me to talk about my difficulties.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

8. My friends accept me as I am.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

9. I feel the need to be in touch with my friends more often.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

10. My friends don't understand what I'm going through these days.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

11. I feel alone or apart when I am with my friends.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

12. My friends listen to what I have to say.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

13. I feel my friends are good friends.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

14. My friends are fairly easy to talk to.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

15. When I am angry about something, my friends try to be understanding.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

16. My friends help me to understand myself better.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

17. My friends are concerned about my well-being.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

18. I feel angry with my friends.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

19. I can count on my friends when I need to get something off my chest.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

20. I trust my friends.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

21. My friends respect my feelings.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

22. I get upset a lot more than my friends know about.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

23. It seems as if my friends are irritated with me for no reason.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

24. I tell my friends about my problems and troubles.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

25. If my friends know something is bothering me, they ask me about it.

1	2	3	4	5
Almost always or always true.	Often true.	Sometimes true.	Seldom true.	Almost never or never true.

Appendix H

Attachment Scale

Please circle the answer that best describes your feelings or beliefs about each of these statements:

1. I find it difficult to allow myself to depend on others.

1	2	3	4	5
Not at all like me				Very much like me

2. People are never there when you need them.

1	2	3	4	5
Not at all like me				Very much like me

3. I am comfortable depending on others.

1	2	3	4	5
Not at all like me				Very much like me

4. I know that others will be there when I need them.

1	2	3	4	5
Not at all like me				Very much like me

5. I find it difficult to trust others completely.

1	2	3	4	5
Not at all like me				Very much like me

6. I am not sure that I can always depend on others to be there when I need them.

1	2	3	4	5
Not at all like me				Very much like me

7. I do not often worry about being abandoned.

1	2	3	4	5
Not at all like me				Very much like me

8. I often worry that my parents do not really love me.

1	2	3	4	5
Not at all like me				Very much like me

9. I find others are reluctant to get as close as I would like.

1	2	3	4	5
Not at all like me				Very much like me

10. I often worry my friends and partners will not want to stay with me.

1	2	3	4	5
Not at all like me				Very much like me

11. I want to merge completely with another person.

1	2	3	4	5
Not at all like me				Very much like me

12. My desire to merge sometimes scares people away.

1	2	3	4	5
Not at all like me				Very much like me

13. I find it relatively easy to get close to others.

1	2	3	4	5
Not at all like me				Very much like me

14. I do not often worry about someone getting too close to me.

1	2	3	4	5
Not at all like me				Very much like me

15. I am somewhat uncomfortable being close to others.

1	2	3	4	5
Not at all like me				Very much like me

16. I am nervous when anyone gets too close.

1	2	3	4	5
Not at all like me				Very much like me

17. I am comfortable having others depend on me.

1	2	3	4	5
Not at all like me				Very much like me

18. Often, friends and partners want me to be more intimate than I feel comfortable being.

1	2	3	4	5
Not at all like me				Very much like me

Appendix I

Emotion Regulation Checklist

The following statements describe how people respond to different situations. Please circle the number that best describes how you respond. Be sure you give an answer for all of the statements.

1. I am a cheerful child.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

2. I move quickly from a good mood to a bad mood.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

3. I respond well (positively) to adults when they act friendly or neutral to me.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

4. I don't get angry, worried, distressed, upset, or worked up when changing from one thing to another. I shift well from one activity to another.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

5. When I am emotionally upset or frustrated by something that happens, I start to feel better pretty quickly (I don't stay sad or worried for a long time).

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

6. I am easily frustrated.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

7. I respond well (positively) when friends act friendly or neutral to me.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

8. It is easy for me to have an angry outburst or temper tantrums when I get angry.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

9. I can wait to get something I really want.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

10. I like it when other people are upset (for example, I like teasing others or I laugh when another person gets hurt or punished).

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

11. I don't get carried away during exciting situations or too excited at the wrong time or place.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

12. I am whiny or clingy with adults.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

13. I often bother other people because I am too active or too excited about something.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

14. I get angry when adults set limits (tell me that I cannot do something).

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

15. I can say when I am feeling sad, angry or mad, fearful or afraid.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

16. I feel sad or I have no energy.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

17. I get too excited when trying to get other people to play or do things with me.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

18. I show very little feeling. People think I don't have feelings.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

19. I act negatively (I get scared or speak to friends in an angry tone of voice) when my friends are acting neutral or trying to be friendly.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

20. I do things without first thinking them through.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

21. I show concern and understanding when others are upset or distressed.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

22. My excitement bothers other people.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

23. When friends are mean to me or treat me badly, I have normal negative feelings such as anger, fear, or frustration.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4

24. I show negative feelings (anger, fear, or frustration) when I try to get someone to play or do something with me.

Rarely/Never	Sometimes	Often	Almost Always
1	2	3	4