Social Information Processing as a Mediator of Exposure to Community Violence and Reactive and Proactive Aggression

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Abstract

The relationship between exposure to violence and aggression has been examined by many researchers. It has been reported that physically abused children and children from violent communities have more aggressive behavior than non-abused peers or peers from non-violent communities (Dodge et al., 1990; Dodge, 1993; Miller et al., 1999). In addition, it has been reported that children who are physically abused have social information processing deficits. However, the relationship between community violence exposure and aggression has yet to be fully explored. The present study proposed an underlying mechanism (i.e., social information processing deficits) that could be mediating the relationship between exposure to community violence and subsequent aggressive behavior. This study also looked at aggression more specifically and categorized the sample into reactive and proactive aggression.

Thirty-nine children, aged 7-13 years, from a mostly rural setting were recruited to participate in this study. Self-report measures of community violence exposure, social information processing deficits (i.e., hostile or instrumental biases), and aggression (i.e., reactive or proactive) were included while controlling for child abuse potential and conflict in the home.

The hypotheses of this study were not supported. Instead, the results supported a relationship between child abuse potential, social information processing biases, and aggression. Child abuse potential remained significant throughout the analyses, which suggests that it plays a larger role in the manifestation of aggressive behavior in children than does community violence

exposure. Overall, the findings from this study are consistent with Dodge's work and has implications for treating children who are aggressive.

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Social Information Processing as a Mediator of Exposure to Community Violence and Reactive and Proactive Aggression

Many children are brought up in communities where the presence of violence is rampant. Community violence is defined as the presence of violence and violence-related events within an individual's proximal environment (i.e., home, school, and neighborhood) (Shahinfar, Fox, and Leavitt, 2000). These investigators estimated that approximately 61% of a sample of first-and second-grade children and 72% of fifth-and sixth-grade children in Washington, D.C. witnessed violence in their community (Shahinfar et al., 2000). In addition, Richters & Martinez (1993), found that 84% of children in first and second grades had witnessed community violence (e.g., shootings, stabbings, gang activity, and drug use), and 21%, according to parent reports, had been directly victimized themselves. Moreover, the rates of exposure to community violence increased with the child's age; 90% of children in fifth and sixth grades witnessed community violence and 35% were victimized, according to parental reports. A 1996 survey done by the National Center of Child Abuse and Neglect, reported that approximately 1,554,000 children (23.1 per 1000 children 18 years or younger) were found to be victims of physical or sexual abuse; and 879,000 (13.1 per 1000) were victims of neglect (Margolin & Gordis, 2000). In addition, children who are not victims of or directly witness community violence often hear about it within the community and may form their own mental imagery of the event (Margolin & Gordis, 2000).

Since community violence penetrates all ecological aspects of a child's life (i.e., school, playground, neighborhood, and home), it becomes a virtually inescapable threat. Shahinfar et al. (2000) also pointed out that the random nature of community violence presents a constant threat to the sense of safety felt by children and their parents. A child's experience of violence in

his/her community is also influenced by that child's developmental level. More specifically, the child's capacity to appraise, understand, respond to and subsequently cope with violence is often limited by their developmental level (Margolin & Gordis, 2000). This exposure to violence, in turn, affects the way a child develops. For example, it has been shown that exposure to community violence may affect how children process information about the environment, particularly how they process social information (Margolin & Gordis, 2000; Dodge et al., 1990). In addition, children exposed to violence are more likely to display behavioral, psychological, and cognitive problems than are their non-exposed peers (Shahinfar et al., 2000; Farver, Natera, and Frosch, 1999).

Early exposure to violence places children at greater risk for developing violent and antisocial behavior (Farver et al., 1999). For example, children exposed to domestic violence, children who were abused, and children who were both exposed to and were victims of abuse were more aggressive and had an increased amount of behavioral problems (Dawud-Noursi et al., 1998). In addition, community violence was associated with increased parental reporting of antisocial behavior in children aged 6-10 (Miller et al., 1999). Similar results were also found for a sample of inner-city African-American and Latino fifth- and seventh-grade boys (Gorman-Smith and Tolan, 1998).

Dodge (1993) stated that lasting patterns of processing social information are acquired through social experiences, especially during the first five years of life. Exposure to violence has been show to affect social information processing in children (e.g., Dodge, Bates, & Pettit, 1990). Additionally, Margolin and Gordis (2000) argue that both an abusive home environment and exposure to community violence may cause a child to interpret the world as unsafe. Taken together, this research indicated that abused children have more social information processing

deficits. In particular, they are reportedly less inter-personally sensitive, less attentive to social cues, less competent at social perspective taking, less able to identify others' emotional expressions, less able to understand complex social roles, more likely to attribute biased hostile intent to others, less able to generate competent solutions to problems and more likely to generate aggressive solutions to interpersonal problems.

Social Information Processing

According to Crick and Dodge's (1994) reformulated Social Information-Processing Model, children come to social situations with a set of biologically determined capabilities and a "database" of memories of past experiences. The child selectively attends to particular situational and internal cues and encodes them. The child then interprets the encoded cues using filters, causal analyses, and inferences about others' intent. After the child interprets the situation, he/she selects a goal or desired outcome (i.e., focused arousal state) for the situation. Goals are revised or changed as a result of immediate social stimuli. The next step involves recalling possible responses to the situation from past experiences; however, if the situation is novel, the child may construct new behaviors as a response to the social cues. The child then evaluates all possible responses based on outcome expectations and chooses a behavioral response.

According to this model, the child is constantly engaging in these steps in a perpetual loop. For example, the child mentally represents social behavior and its outcomes, and stores this information in memory, further adding to his/her general social knowledge, which will serve to guide future actions. This processing of social information is typically highly automated and occurs without the child's conscious awareness. In addition, the child often forms scripts or schemas about events and uses them to guide his/her behavior in social situations. A child's

reliance on particular schemes may be somewhat responsible for problematic social behavior and social maladjustment. For example, Crick and Dodge (1994) reported that aggressive children were more likely to base their interpretations on schemas (i.e., not on information that was part of the current social stimuli) than were their non-aggressive peers. As such, previous experience with violence may form part of the memories and resulting schemas from which biases in social information processing and later aggression arises.

Reactive and Proactive Aggression

Biased social information processing may be related to two different subtypes of aggressive behavior: reactive and proactive aggression. Reactive aggression occurs when a child reacts to another child aggressively with or without the presence of overt provocation and is described as an angry, defensive response to frustration or real or perceived provocation (Crick & Dodge, 1996). For example, a child may interpret another child's act as intentional and malicious and thus decide to retaliate with aggression (Dodge, 1993). As such, the reactive aggressive child is hypervigilant to cues that could be potentially aversive and often interprets cues, even ambiguous cues, as threatening or hostile. Dodge and Coie (1987) found that a hostile attributional bias (i.e., the interpretation of a peer's action as provocational or hostile) is the processing mechanism responsible for reactive aggression.

On the other hand, proactive aggression describes a child who uses aggression in order to gain something (e.g., a toy/object, enhanced status among peers) and does so in a methodical fashion (Dodge 1993). Proactive aggression is less driven by outbursts of anger; instead, it is more controlled, deliberate and goal-focused (Dodge & Coie, 1987). A proactive aggressive child is likely to evaluate the potential outcomes of his/her aggression as more favorable than other children and anticipates that his/her aggression will result in the desired or favorable

outcome; in other words, proactive aggressive children report more efficacy for enacting aggression than do non-proactive aggressive children (Crick & Dodge, 1996). It is the anticipation of a desired outcome that drives a child to behave in a proactively aggression manner (Dodge & Coie, 1987).

Dodge (1993) argued that any experience (e.g., abuse, community violence) that causes a child to view the world as hostile places that child at risk for becoming reactively aggressive. Proactive aggression, however, is the outcome of being socialized to expect that aggression will result in a favorable outcome. This can be the result of having aggressive models, an environment that endorses aggression, and the lack of competent, non-aggressive models.

Community Violence, Social Information Processing, and Aggression

Dodge et al. (1990) found that deficits in social information processing mediate the relationship between abuse and aggression. In particular, Dodge et al. (1990) found that abused children are likely to develop biased and dysfunctional patterns of processing social information, including failure to attend to relevant cues, a bias to attribute hostile intentions to others, and a lack of competent behavioral strategies to solve interpersonal problems. These biases, in turn, predicted later aggressive behavior. In a follow-up to this study, Dodge (1993) found support for the hypothesis that children who have been physically abused will form an internal model of hypervigilance to hostile cues, which leads the abused child to misinterpret the behavior of others and to respond with aggression. In particular, he found that physical harm during the first five years of life is related to the development of later school aggression at age five, and this relationship is mediated by the child's acquisition of social information processing styles. The current study aims to expand on Dodge's (1993) study by examining the relationship of exposure to community violence, instead of physical abuse, to the development of aggression.

Community violence has been shown to negatively impact a child's life and many children who are exposed to community violence are aggressive (e.g., Farver et al. 1999). In this study, the effects of community violence exposure are expected to impact aggression above and beyond the effects of abuse in the home.

Furthermore, in Dodge's (1993) study, aggression was measured more generally, and was not categorized according to proactive or reactive types. The current study will be expanded to assess for the presence of reactive and proactive aggression in relation to exposure to community violence. In particular, this study aims to provide further support for Dodge's notion that social information processing deficits mediate the relationship between community violence exposure and subsequent aggression. Moreover, certain aspects of social information processing (e.g., hostile attributions, instrumental biases) will be used as differential predictors for either proactive or reactive aggression.

Hypotheses

It is hypothesized that social information processing deficits will mediate the relationship between exposure to community violence and reactive and proactive aggression in school-age children. The following predictions are thus made, according to a mediational model (Baron & Kenny, 1986; Holmbeck, 1997). First, community violence exposure is predicted to be positively related to both reactive and proactive aggression. Second, community violence exposure is predicted to have a negative effect on social information processing. That is, children with higher rates of community violence exposure are expected to have more social information processing deficits. Third, deficits in social information processing that are related to hostile attributions will be related to increased levels of reactive aggression. Deficits in social information processing that are related to instrumental biases, on the other hand, are predicted to

account for increased levels of proactive aggression. Lastly, these specific social information biases will statistically account for (or significantly reduce) the initial relationship between community violence exposure and either reactive or proactive aggression. It is also predicted that these results will hold when controlling for child abuse and conflict in the home. In other words, it is predicted that community violence exposure and social information processing deficits will account for more of the variance than child abuse or family conflict.

It is also possible that social information processing deficits moderate the relationship between community violence exposure and aggression. In particular, exploratory analyses will be conducted with the prediction that increased levels of community violence exposure will be related to increased levels of social information processing biases, which in turn, result in aggressive behavior that is either reactive or proactive depending on the particular bias.

Method

Participants

The data presented in this study are a subset of information gathered as part of a larger study conducted in southwestern Virginia. Children were recruited from local schools and various community venues to participate in a study that examined biological correlates (e.g., skin conductance, heart rate variability), psychological functioning, social information processing, presence of aggressive symptoms (i.e., reactive and proactive aggression), and family functioning. The participants in this study consisted of 39 children (30 males, 9 females) who ranged in age from 7 to 13 ($M = 9.87$, $SD = 1.852$). The children were also identified by race, with 17.9% ($n = 7$) African-American, 79.5% ($n = 31$) Caucasian, and 2.6% ($n = 1$) classified as Other comprising the sample.

The sample was also classified in terms of DSM-IV diagnoses, with 41% (n = 16) not meeting any diagnostic criteria and 56.4% (n = 22) meeting diagnostic criteria for a disorder. Of those who met criteria for a disorder, 39.5% (n = 15) had comorbid diagnoses. The following are the prevalence rates for primary or secondary diagnoses: 17.9% (n = 7) Oppositional Defiant Disorder, 2.6% (n = 1) Conduct Disorder, 10.3% (n = 4) Attention Deficit-Hyperactivity Disorder (ADHD)-Inattentive Type, 2.6% (n = 1) ADHD-Hyperactive Impulsive Type, 17.9% (n = 7) ADHD-Combined Type, 2.6% (n = 1) Separation Anxiety Disorder, 2.6% (n = 1) for Obsessive Compulsive Disorder, 2.6% (n = 1) Dysthymia, 5.1% (n = 2) Major Depressive Disorder, 7.7% (n = 3) for Generalized Anxiety Disorder, 10.3% (n = 4) Social Anxiety Disorder, 15.4% (n = 6) Specific Phobia, and 7.7% (n = 3) met criteria for Post-Traumatic Stress Disorder. Children identified as having serious mental or psychological dysfunctions (e.g., mental retardation, psychosis) were excluded from the study.

Measures

Community Violence Exposure (CREV; Appendix A). Community violence exposure was measured using the Children's Report of Exposure to Violence (CREV), a 32-item checklist in which the respondent (child) reports the lifetime frequency of having directly experienced (been the victim), witnessed (in the community or in the media), or has heard reports about community violence from others (reports) (Cooley, Turner, and Beidel, 1995). Respondents are asked to report whether they have been exposed to situations or witnessed such acts as being chased or threatened with bodily harm, beaten up, robbed or mugged, shot, stabbed, or killed. It should be noted that the CREV does not assess for the presence of child abuse in the home. Each item was rated on a 5-point Likert scale, ranging from *no/never* (0) to *every day* (4). The responses to the items are summed to comprise a Media Exposure total, Witnessing total,

Reported total, Victim total, and a Direct Exposure total which consists of witnessed, reported and victim totals. Since a relationship with Media Exposure has not been predicted in this study, that scale will not be included in the analyses and only the Direct Exposure total will be included.

According to Cooley and colleagues (1995), the CREV has moderate to good reliability and validity, along with good test-retest reliability. Cronbach's alpha was used to determine the internal consistency of the CREV, with the Direct Exposure factor having an overall alpha of .93 and the Media Exposure factor resulting in an overall alpha of .75. The test-retest reliability of the CREV was determined using Pearson correlation coefficients and resulted in the following correlations: . 75 ($p < .001$) for the Total Score, .78 ($p < .001$) for the Direct Exposure factor and .52 ($p < .001$) for the Media Exposure factor.

Hostile Attributions and Instrumental Biases (Appendix B). Social information processing biases were assessed following a computerized "Pick-A-Number" game. During the game, the child has to guess which number the computer will show next and is told that he/she is competing with another child in a different building. The child also has the option of sending a blast of noise or taking away points from the "opponent, and occasionally receives a blast of noise or has his/her points taken away from the "opponent". Immediate feedback regarding the accuracy of the child's responses is provided on the computer screen. At the end of the game, the child is asked two questions about his/her reasons for choosing to give the opponent a blast of noise or removing the opponent's points (e.g., "what were you thinking when you sent a noise to the other child?"; "why did you decide to send the other child the noise?") and two questions about the possible reasons behind the opponent's choice of sending blasts or removing points

(e.g., “why do you think the other child took points away from you?”; “why do you think the other child sent you a noise?”).

The child’s answers were scored as instrumental for responses indicating a purposeful, goal-directed reason, demonstrating a clear intent to win the game, and responses indicating a mean, vindictive, or primarily retaliatory purpose for aggressive responding were coded as hostile. Interrater reliability for this measure has been assessed and is good, at .847 for percent hostile endorsed and .846 for percent instrumental endorsed.

Child Behavior Rating Scale (CBR; Appendix C). The CBR was used to assess for the presence of reactive and proactive aggression (Brown et al., 1996). This scale asks parents to rate the frequency of behaviors reflecting proactive (e.g., “takes things from others”, “has hurt others to win a game”) and reactive aggression (e.g., “gets mad when doesn’t get his/her way”, “blames others”). The scale is scored according to frequency on a scale of 0 = never to 2 = very often and items were summed to form scores for each type of aggression.

Child Abuse Potential Inventory (CAPI; Appendix D). The CAPI was included as part of the measures in order to assess for the confound of child abuse potential. The CAPI is a 160-item measure completed by parents that assess for risk factors related to child abuse (Milner, 1986). Parents are instructed to report whether or not they agree with the statements on the measure. The Child Abuse subscale of the CAPI was used for this study and has reportedly good internal consistency (r = .92-.95) according to Milner (1994). The Child Abuse subscale consists of 77 questions that addresses parental distress, rigidity, unhappiness, problems with child/self, problems with family, and problems from others (e.g., “I am easily upset by my problems”; “children should be seen and not heard”; “children should always be neat”; “a child needs very strict rules”).

Family Environment Scale (FES; Appendix E). The FES, a 90-item measure that assesses family climate in terms of cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, organization, and control subscales, was added to assess for family conflict as a confound (Moos & Moos, 1981). Respondents (parents) are instructed to answer whether statements are true or false about their family (e.g., "someone usually gets upset if you complain in our family"; "rules are pretty inflexible in our household"). For the purposes of this study, only the factor score from the Conflict subscale of the FES was used. According to Moos & Moos (1981), the Conflict subscale assesses the amount of anger, aggression, and conflict that is openly expressed in a family. The internal consistency of the Conflict subscale is reported to be α=.75 (Moos & Moos, 1981). The Conflict subscale also has adequate test-retest reliability at 2-months (.85), 4-months (.66), and 12-months (.76).

Procedures

As previously mentioned, measures were administered to the participants of this study and their parents as part of a larger study. After obtaining consent from both the child and the parent, biological correlates, attentional capacity, psychological functioning, social information processing, presence of aggressive symptoms, and family functioning were assessed. Specifically, the parents were administered the ADIS-IV, a structured clinical interview about their child (Anxiety Disorders Interview Schedule-IV, Parent Version) and completed several self-report measures following the interview. While the parent was being interviewed in another room, the child was given computerized tasks and also completed self-report measures with the help of research assistants, if necessary. Computerized measures of attention were administered first, followed by self-report measures, and physiological measures were taken while the child

played the Pick a Number game. Following the Pick a Number game, the child was asked questions about their reasons for sending their opponent a blast of noise or removing points. In addition, the child was also asked about their opponent's actions and the potential reasons behind them.

Results

Descriptive and Correlational Statistics

Means and standard deviations for the sample are reported in Table 1 according to gender and race. No significant gender differences were found, as indicated by independent *t*-tests performed; however, some differences were found that were related to race (see Table 1). Specifically, race was found to be related to both hostile and instrumental biases. Pearson *r* correlations were computed to examine the relationships among all the measures included in this study (see Table 2). In particular, there was a positive relationship between the CAPI and hostile attribution bias, $r(33) = .495$, $p = .003$, and a negative relationship between the CAPI and instrumental bias, $r(33) = -.510$, $p = .002$. The CAPI correlated positively with the FES, $r(30) = .460$, $p = .009$, with CBR Proactive Aggression, $r(32) = .436$, $p = .011$ and with CBR Reactive Aggression, $r(32) = .324$, $p = .066$. Since the CAPI was correlated with the dependent variables (i.e., proactive and reactive aggression) either significantly or as a trend, it is considered a potential confound and was thus included during subsequent analyses. The FES was positively related to age $r(32) = .430$, $p = .014$, with an increase in age related to more conflict in the home. The CREV was significantly negatively correlated with instrumental biases $r(37) = -.337$, $p = .038$ and was positively related to hostile biases, $r(37) = .318$, $p = .052$. In addition, CBR Proactive Aggression and CBR Reactive Aggression were positively related ($r(36) = .481$, $p = .003$).

Prevalence Rates for CREV

The total frequencies for each subscale of the CREV (Reported, Witnessed, Victim) were calculated for this sample. For the Reported Total, 25.6% (n = 10) of this sample did not endorse hearing any reports of community violence, 7.7% (n = 3) endorsed hearing about community violence once, and 66.8% (n = 26) reported hearing about community violence more than once. In addition, 53.8% of this sample (n = 21) did not report witnessing any violence in their community, 10.3% (n = 4) reported witnessing community violence once, and 36% (n = 14) reported witnessing community violence more than once. Finally, 41% (n = 16) of this sample reported that they had not been victims of community violence, 25.6% (n = 10) reported that they had been victims of community violence once, and 33.4% (n = 13) reported that they had been victims of community violence more than once.

Sample Differences Based on Diagnosis Status

The sample was divided into two groups, one with diagnoses and one without any diagnoses. As mentioned previously, 41% of this sample did not meet diagnosis for any disorder and 56.4% met criteria for at least one diagnosis. Independent samples t-tests were conducted in order to determine whether any differences existed based on the presence or absence of a diagnosis[1]. Differences were found in relation to the CAPI at $t(31) = -2.732$, $p = .010$, CBR Reactive Aggression at $t(34) = -2.570$, $p = .015$, and there was a trend for the FES at $t(29) = -1.940$, $p = .062$. Overall, meeting criteria for a disorder was related to more child abuse potential (CAPI), more reactive aggression (CBR Reactive Aggression), and more family conflict (FES).

[1]All regression analyses were re-run with diagnostic status entered first into the equations as a control variable. All results remained unchanged.

Mediator Model

Multiple regression analyses were conducted separately for reactive and proactive aggression, and with or without the confound (CAPI) in order to assess for a mediating relationship between exposure to community violence and social information processing deficits. Specifically, it was predicted that instrumental biases would mediate the relationship between exposure to community violence and CBR Proactive Aggression. In addition, it was predicted that hostile biases would mediate the relationship between exposure to community violence and CBR Reactive Aggression. According to Holmbeck (1997, 2002) and Baron and Kenny (1986), four prerequisite conditions must be met to show that a mediating relationship exists. Criterion 1 states that a statistically significant relationship has to be established between the predictor (i.e., CREV) and criterion variables (i.e., presence of aggression). Criterion 2 states that a statistically significant relationship between the predictor (CREV) and mediator variables (i.e., hostile or instrumental biases) must be established. Criterion 3 states that a significant relationship between the mediator (hostile or instrumental biases) and criterion variable (presence of aggression) must also be established. Finally, Criterion 4 states that the relationship between the mediator and criterion must result in a significant reduction of the relationship between the predictor and the criterion.

Holmbeck (2002) suggests that the predictor variables (i.e., CREV and social information processing deficits) be centered prior to conducting the multiple regressions. This was done by subtracting the sample mean from all of the individual scores on the CREV and the percentage of biases endorsed. The resulting scores have a sample mean of 0, which reduces multicollinearity between the two predictors and the interaction term. Since the assumption of normality was not

met for the CAPI, all CAPI scores were converted to a z-score prior to being entered into the equations.

Regression Analysis Without Confound Entered

Criterion 1. The centered CREV scores were regressed using bivariate regression analysis with CBR Proactive Aggression (see Table 3) and Reactive (see Table 4). The standardized beta coefficient was non-significant at $t(35) = 1.397$, $p = .171$, for CBR Proactive Aggression and was also non-significant for CBR Reactive Aggression at $t(35) = 1.091$, $p = .283$, which does not fulfill Criterion 1.

Criterion 2. Using bivariate regression analysis, the centered CREV scores were regressed with the centered instrumental bias scores (see Table 3) and centered hostile bias scores (see Table 4). The standardized beta coefficient was significant at $t(36) = -2.149$, $p = .038$ for instrumental biases, and was also significant at $t(36) = 2.013$, $p = .052$ for hostile biases (see Table 3 and Table 4). These results fulfill Criterion 2.

Criterion 3. Again, using bivariate regression analysis, the centered instrumental bias scores were regressed with CBR (Proactive) and the standardized beta coefficient was non-significant at $t(34) = -.707$, $p = .484$ (see Table 3). In addition, using bivariate regression analysis, the centered hostile bias scores were regressed with CBR (Reactive) and were non-significant at $t(34) = .086$, $p = .932$ (see Table 4). Since both results were non-significant, the requirements for Criterion 3 were not met.

Criterion 4. In order to meet the requirements of Criterion 4, the effects of the independent variable (CREV) must become non-significant or substantially reduce in magnitude once the mediator (instrumental or hostile bias) is accounted for. As previously mentioned, this relationship was assessed using hierarchical regression analysis. During the first step, the

centered CREV scores were entered and the standardized beta coefficients were non-significant at $t(34) = 1.500$, $p = .143$ for proactive aggression (Table 5) and were non-significant at $t(34) = 1.330$, $p = .193$ for reactive aggression (Table 6). During the second step, the CREV was entered along with the biases. The standardized beta coefficients for the CREV were non-significant at $t(33) = 1.323$, $p = .195$ for proactive aggression and were non-significant at $t(33) = 1.346$, $p = .188$ for reactive aggression. In terms of the biases, the standardized beta coefficient for instrumental bias was found to be non-significant at $t(33) = -.266$, $p = .792$ when regressed with proactive aggression (Table 5) and the standardized beta coefficient for hostile bias was also found to be non-significant when regressed with reactive aggression at $t(33) = -.312$, $p = .757$ (Table 6). During step three, the CREV and bias terms were entered, along with an interaction term (CREV x bias) that assessed for moderation. Again, the findings were non-significant for all terms entered, which does not provide support for Criterion 4. The standardized beta coefficients for the CREV were non-significant at $t(32) = .598$, $p = .554$ for proactive aggression (see Table 6) and at $t(32) = .991$, $p = .329$ for reactive aggression (see Table 7). The standardized beta coefficient for instrumental bias was non-significant at $t(32) = -.492$, $p = .626$ for proactive aggression and the standardized beta coefficient for hostile bias was non-significant at $t(32) = -.275$, $p = .785$ for reactive aggression. The interaction terms were non-significant for reactive aggression (CREV x hostile bias) at $t(32) = .039$, $p = .969$ and for proactive aggression (CREV x instrumental bias) at $t(32) = -.544$, $p = .590$. Taken together, these findings do not support a mediating or moderating relationship between social information processing deficits, community violence exposure, and reactive and proactive aggression when the confounds are not entered into the regression equations.

Regression Analyses With Confound Entered

Criterion 1. The CAPI and centered CREV scores were regressed using bivariate regression analysis with CBR Proactive Aggression (see Table 7) and Reactive (see Table 8). The standardized beta coefficient for the CAPI was significant at $t(31) = 2.699$, $p = .011$, for CBR Proactive Aggression and was a trend for CBR Reactive Aggression at $t(31) = 1908$, $p = .066$. The standardized beta coefficient for the CREV was non-significant at $t(30) = .974$, $p = .338$ for CBR Proactive Aggression and was also non-significant for CBR Reactive Aggression at $t(30) = .824$, $p = .417$, which does not fulfill Criterion 1.

Criterion 2. Using bivariate regression analysis, the CAPI and centered CREV scores were regressed with the centered instrumental bias scores (see Table 7) and centered hostile bias scores (see Table 8). The standardized beta coefficient for the CAPI was significant at $t(32) = -3.352$, $p = .002$ for instrumental biases, and was also significant at $t(32) = 3.226$, $p = .003$ for hostile biases (see Table 7 and Table 8). The centered CREV scores were also regressed with instrumental and hostile biases and were found to be non-significant at $t(31) = -1.347$, $p = .188$ for instrumental biases and at $t(31) = 1.484$, $p = .148$ for hostile biases. With the addition of the confound, Criterion 2 is not met for the CREV and instrumental and hostile biases.

Criterion 3. Again, using bivariate regression analysis, the centered instrumental bias scores were regressed with CBR (Proactive) and was non-significant at $t(34) = -.707$, $p = .484$ (see Table 7). In addition, using bivariate regression analysis, the centered hostile bias scores were regressed with CBR (Reactive) and were non-significant at $t(34) = .086$, $p = .932$ (see Table 8). Since both results were non-significant, the requirements for Criterion 3 were not met.

Criterion 4. The effects of the independent variable (CREV) must become non-significant or substantially reduce in magnitude once the mediator (instrumental bias or hostile bias) is accounted for in order to fulfill Criterion 4. Again, this relationship was assessed using

hierarchical regression analysis (see Table 9). For CBR Proactive Aggression, when the confound (CAPI) was entered alone into Step 1, the standardized beta coefficient was significant at $t(31) = 2.699$, $p = .011$. When the CREV was entered into Step 2 for CBR Proactive Aggression, the standardized beta coefficient was non-significant at $t(30) = .974$, $p = .338$. The CAPI remained significant at Step 2, at $t(30) = 2.346$, $p = .026$. Neither the CREV or the instrumental bias scores were significant when entered into Step 3; however, the CAPI's standardized beta coefficient was significant at $t(29) = 2.721$, $p = .011$. For Step 4, the standardized beta coefficient for the CAPI also remained significant at $t(28) = 2.672$, $p = .012$, but no other measure was significant, including the interaction term between the CREV and instrumental bias (see Table 9). Overall, these results do not support Criterion 4. Since the predicted results were non-significant, there is no support for a mediating or moderating relationship between instrumental biases and the CREV for CBR Proactive Aggression.

Results for CBR Reactive Aggression also do not support a mediating or moderating relationship between Hostile Bias and the CREV when controlling for the effects of the CAPI. Specifically, in Step 1, the standardized beta coefficient for the CAPI was almost significant at $t(31) = 1.908$, $p = .066$. In Step 2, both standardized beta coefficients for the CAPI and the CREV were non-significant at $t(30) = 1.615$, $p = .117$ and $t(30) = .824$, $p = .417$, respectively (see Table 10). In Step 3, the CAPI was significant at $t(29) = 2.223$, $p = .034$, but the CREV and Hostile Bias scores were non-significant at $t(29) = 1.132$, $p = .267$ and $t(29) = -1.528$, $p = .137$, respectively (see Table 10). The CAPI remained significant at Step 4 at $t(28) = 2.180$, $p = .038$; however, the standardized beta coefficients for the remaining terms were non-significant. In particular, the CREV was non-significant at $t(28) = .671$, $p = .508$, hostile bias was non-significant at $t(28) = -1.334$, $p = .193$, and the interaction term (CREV x hostile bias) was also

non-significant at $t(28) = .144$, $p = .887$. Taken together, these findings do not support a mediating or moderating relationship between hostile bias and the CREV for CBR Reactive Aggression.

Supplemental Analyses

Multiple regression analyses were conducted separately for the subscales of the CREV (i.e., Total Reported, Total Witnessed, Total Victim) in order to see if they contributed to the relationship between exposure to community violence, social information processing deficits, and aggression. For the Reported subscale of the CREV, the standardized beta coefficients were non-significant when entered with hostile bias and reactive aggression, and when entered with instrumental bias and proactive aggression. When the Witnessed subscale of the CREV was regressed with proactive aggression, there was a trend for the beta coefficient at $t(34) = 1.879$, $p = .069$ and the beta coefficient remained a trend at $t(33) = 1.719$, $p = .095$ when entered with instrumental bias. Instrumental bias, however, was non-significant in this model. The Witnessed subscale of the CREV was non-significant when entered with reactive aggression and with hostile bias. Finally, the standardized beta coefficients of the Victim subscale were non-significant when entered with hostile bias and reactive aggression, and with instrumental bias and proactive aggression. Overall, only moderate findings were found for the CREV subscales, with the Witnessed subscale accounting for some of the variance when regressed with instrumental bias and proactive aggression.

Discussion

The link between child abuse, social information processing biases, and aggression has been studied by Dodge and his colleagues. Specifically, they have found support for increased aggression in children that have been physically abused. The increased aggression has been

associated with information processing deficits such as hostile and instrumental biases (Dodge et al., 1990; Dodge, 1993). In addition to physical abuse, some children are also exposed to violence in their communities and violence within their home environment. Children who are exposed to violence in their community and violence in the home also have increased levels of aggression when compared to peers who are not exposed to community or home violence (Miller et al., 1999). The nature of the link between community violence exposure and aggression has yet to be fully explored. The present study attempted to find an underlying mechanism (i.e., social information processing deficits) that could be mediating this relationship.

The primary goal of this study was to look at the relationship between exposure to community violence, social information processing biases, and reactive and proactive aggression. Specifically, it was predicted that instrumental biases would mediate the relationship between community violence exposure and proactive aggression. It was also predicted that hostile biases would mediate the relationship between community violence exposure and reactive aggression. Moreover, it was expected that these predictions would hold when controlling for child abuse potential and conflict in the home.

Overall, the hypotheses of this study were not supported. Instead, support was found for a relationship between child abuse potential, social information processing biases and aggression. Analyses were conducted with and without child abuse potential (CAPI) as a confound. Again, it is important to note that the CAPI is only a measure of abuse potential and not actual abuse. When the data were analyzed without the CAPI, the only significant findings were for a relationship between community violence exposure (CREV) and attribution biases (instrumental and hostile). In particular, there was a negative relationship between the CREV and instrumental biases, and a positive relationship between the CREV and hostile biases. These

results are consistent with previous findings that community violence exposure is related to social information processing deficits (e.g., Margolin & Gordis, 2000; Shahinfar et al., 2000; Dodge et al., 1990). Additionally, the community violence exposure is more related to hostile biases than instrumental biases. However, there was no support for a mediating or moderating relationship between community violence exposure, social information processing deficits and reactive and proactive aggression as had been predicted.

When the data were analyzed with the CAPI, only the CAPI was significant and was related to both types of aggression (reactive and proactive) and both types of biases (hostile and instrumental). Specifically, the CAPI was positively related to both types of aggression and hostile biases, but was negatively related to instrumental biases. Such findings suggest that child abuse potential plays a larger role in the development of information processing deficits (i.e., hostile biases) and aggression than does community violence exposure per se. Interestingly, researchers examining the link between type of neighborhood and child abuse reported that parents from impoverished neighborhoods have fewer resources and support, which is related to higher incidents of child maltreatment (Coulton, Korbin, and Su, 1999).

Although this study did not explore a mediating relationship between community violence exposure, child abuse potential, and aggression, the results are partially consistent with Dodge's research dealing with child abuse, social information processing deficits, and aggression (Dodge et al., 1990). Specifically, Dodge and colleagues reported that physical abuse during early childhood is a risk factor for the development of subsequent aggressive behavior. Children who had been physically abused were also more likely to have social information processing biases, which was predictive of aggressive behavior (Dodge et al., 1990). They further reported that this relationship is not related to other family factors such as low socioeconomic status,

having a single parent, divorce, or marital violence. In the present study, child abuse potential was found to be significantly related to social information processing biases and aggression (i.e., reactive and proactive). Thus, the impact of physical abuse appears to be more detrimental and pervasive than other societal factors.

Limitations of the Current Study

There are several limitations related to the findings of the current investigation that should be acknowledged. First, the sample included in this study was relatively small and consisted of 39 children. The lack of significant findings could be due to the small sample size. This was assessed by examining the effect size for this study. The effect size was calculated by dividing the between-samples sum of squares by the total sum of squares. The effect size for the relationship between the CAPI, CREV, instrumental biases, and CBR Proactive Aggression was .27, while the effect size was .19 for the CAPI, CREV, hostile biases, and CBR Reactive Aggression. Both of these effect sizes are small, according to Cohen (1988), and would require a larger sample in order to detect such a small effect. Therefore, it could be expected that with a larger sample size, the hypothesized mediational relationship may have been significant.

A second limitation to this study is the nature of the self-report measures used. Self-report measures are subject to inaccuracies such as poor recall, inaccuracy of reports, and lack of knowledge. For example, the CREV was completed by children in this sample, and could be inaccurate depending on their cognitive ability or understanding of the questions. Although research assistants were available to assist the children when completing the measures, it is unknown whether they were responding in an accurate manner. In addition, the measure of social information processing biases (i.e., post-game questions) is not a standardized measure. Although the interrater reliability for this measure was high, it is not a commonly used measure

and is a possible limitation to this study. Another issue is that of social desirability (i.e., responding in a socially appropriate manner), which could also contribute to unreliable or inaccurate responses. In addition, behavioral observations or cross-informant measures could have been included in this study, as a means of counteracting any potential self-report bias.

There are also uncertainties related to the definition and assessment of aggression. Some researchers are narrow in their definition of aggression and include only physical harm towards others as aggression. On the other hand, other researchers are broader and may also include non-physical acts (i.e., relational/interactional patterns) as aggression. In this study, aggression was assessed in terms of proactive and reactive styles. It should be noted that the CBR was not specific in terms of assessing aggressive behavior, as it did not ask for reports of actual aggressive acts; instead, it was more related to a particular style of interaction. It is difficult to state whether the CBR adequately addressed the notion of aggression, and a more behavioral measure such as the Child Behavior Checklist may have been more appropriate since it asks for specific instances of aggressive behavior. The issue of defining aggression and consistently incorporating that definition into a measure is an area where further research is still needed.

Another limitation to this study was that the majority of the sample consisted of Caucasian children from a relatively small community. It would be useful to conduct a similar study that assessed the impact of community violence exposure in a variety of different communities (e.g., rural, suburban, urban). Despite these limitations, the current study provides useful information about the impact of child abuse potential. It is more related to aggression and social information processing deficits than is community violence exposure. Additionally, such findings have implications for treatment with children and could help explain the underlying reasons why some children are aggressive. Since a relationship was found between child abuse

potential, information processing deficits, and aggression, it is important to assess for each component when working with and treating children who are aggression. Essentially, a clinician could trace the child's aggressive behavior to information processing deficits, and to a family environment that has the potential for being abusive. All of these issues could be brought forth when working with the child and the family. Since the role of the family is implicated in these findings, they should be included in the treatment process.

Generally, the results of this study are somewhat consistent with Dodge's previous work that examined the role of child abuse on subsequent information processing deficits and aggressive behavior. In particular, the present study found that child abuse potential is related to hostile biases and reactive and proactive aggression. Community violence exposure, on the other hand, was only found to be positively related to hostile biases. Contrary to the initial predictions of this study, there was no support for a mediating relationship between community violence exposure, instrumental biases, and proactive aggression. There was also no support for a mediating relationship between community violence exposure, hostile biases, and proactive aggression. Child abuse potential had a stronger overall relationship between information processing deficits and aggression, which suggests that further research is needed in this area to examine the specific mechanism underlying such a relationship.

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Table 1

Means and Standard Deviations by Gender and Race

Scale	Mean	SD	N	t	df	Significance (Two-Tailed)
BIAS (H)	39.4737	30.55322	38			
Male	38.3333	29.89445	30	-.441	36	.662
Female	43.7500	34.71825	8			
Black	8.3333	12.90994	6	-2.923	35	.006*
White	44.3548	29.37521	31			
BIAS (I)	58.5526	30.35617	38			
Male	60.0000	29.06592	30	.564	36	.576
Female	53.1250	36.44345	8			
Black	83.3333	20.41241	6	2.225	35	.033*
White	54.8387	29.87429	31			
CAPI	104.38	93.026	34			
Male	106.00	98.885	26	.180	32	.858
Female	99.13	76.581	8			
Black	52.75	23.768	4	-1.122	31	.270
White	108.10	96.975	29			
CBR (Proactive)	12.2973	2.47055	37			
Male	12.2857	2.50713	28	-.050	35	.961
Female	12.3333	2.50000	9			
Black	12.2857	2.05866	7	.075	34	.941
White	12.2069	2.58262	29			
CBR (Reactive)	10.8378	2.68239	37			
Male	10.8214	2.81601	28	-.065	35	.949
Female	10.8889	2.36878	9			
Black	10.8571	2.47848	7	-.004	34	.997
White	10.8621	2.81227	29			

Note: BIAS (H) = Hostile attribution bias; BIAS (I) = Instrumental Bias; CAPI = Child Abuse Potential Inventory; CBR = Child Behavior Rating. *$p \leq .05$.

Table 1, Continued

Means and Standard Deviations by Gender and Race

Scale		Mean	SD	N	t	df	Significance (Two-Tailed)
CREV		7.1538	6.26409	39			
	Male	7.1333	6.74528	30	-.037	37	.971
	Female	7.2222	4.63081	9			
	Black	5.7143	3.98808	7	-.559	36	.580
	White	7.1613	6.54266	31			
FES		46.8125	8.84431	32			
	Male	47.6667	9.00563	24	.945	30	.352
	Female	44.2500	8.36233	8			
	Black	48.3333	10.50397	3	.308	30	.760
	White	46.6552	8.85710	29			

Note: CREV = Children's Report of Exposure to Violence; FES = Family Environment Scale, Conflict Score.

Table 2

Correlations Among Measures

Scale	CAPI	FES	CREV Direct	CREV Reported	CREV Witnessed	CREV Victim	BIAS(H)	BIAS(I)	Proactive	Reactive
CAPI	1	.460**	.201	.070	.314+	.015	.495**	-.510**	.436*	.324+
FES	.460**	1	.203	.103	.264	.032	.321	-.271	.259	.160
CREV Direct	.201	.203	1	.867**	.815**	.537**	.318*	-.337*	.230	.181
CREV Reported	.070	.103	.867**	1	.515**	.503**	.242	-.238	.069	.150
CREV Witnessed	.314+	.264	.815**	.515**	1	.372*	.255	-.296+	.280+	.163
CREV Victim	.015	.032	.537**	.503**	.372*	1	-.003	-.011	-.033	.035
BIAS(H)	.495**	.321+	.318	.242	.255	-.003	1	-.957**	.139	.015
BIAS(I)	-.510**	-.271	-.337*	-.238	-.296+	-.011	-.957**	1	-.120	-.025
Proactive	.436*	.259	.230	.069	.280+	-.033	.139	.139	1	.481**
Reactive	.324+	.160	.181	.150	.163	.035	.015	-.025	.481**	1
Age	.004	.430**	.176	.253	-.032	.004	-.018	.060	.270	.140

Note: CAPI = Child Abuse Potential Inventory; BIAS (H) = Hostile attribution bias; BIAS (I) = Instrumental Bias; FES = Family Environment Scale Conflict Score; CREV Direct = Children's Report of Exposure to Violence, Direct Exposure Total;

Table 2, Continued

Note: CREV Reported = CREV Reported Total; CREV Witnessed = CREV Witnessed Total; CREV Victim = CREV Victim Total; Proactive = Child Behavior Rating of Proactive Aggression; Reactive = Child Behavior Rating of Reactive Aggression. *$p \leq .05$. **$p \leq .01$. +$p \leq .10$. (2-tailed significance)

Table 3

Bivariate Regression Results for Community Violence Exposure, Instrumental Biases, and Proactive Aggression Without Confound Entered (N=37).

Criterion	Path	ß	*R*	ΔR^2	*F*
1	CREV → CBR (Proactive)	.230	.230	.053	1.952
2	CREV → Instrumental Biases	-.337	.337	.114	4.619*
3	Instrumental Biases → CBR (Proactive)	-.120	.120	.014	.500

Note: CBR = Children's Behavior Report; CREV = Children's Report of Exposure to Violence.

*$p \leq .05$.

Table 4

Bivariate Regression Results for Community Violence Exposure, Hostile Biases, and Reactive Aggression Without Confound Entered (N=37).

Criterion	Path	ß	*R*	ΔR^2	*F*
1	CREV → CBR (Reactive)	.181	.181	.033	1.191
2	CREV → Hostile Biases	.318	.318	.101	4.052*
3	Hostile Biases → CBR (Reactive)	.015	.015	.000	.007

Note: CBR = Children's Behavior Report; CREV = Children's Report of Exposure to Violence.

*$p \leq .05$.

Table 5

Summary of Hierarchical Regression Analyses for Community Violence Exposure, Instrumental Biases, and Proactive Aggression Without Confound Entered (n = 36).

Variable	B	SE B	β
Step 1			
CREV	.03892	.026	.249
Step 2			
CREV	.03662	.028	.234
BIAS (I)	-.01562	.006	-.047
Step 3			
CREV	.02268	.038	.145
BIAS(I)	-.00332	.007	-.100
CREV X BIAS(I)	-.00074	.001	-.128

Note: BIAS (I) = Instrumental attribution bias; CREV = Children's Report of Exposure to Violence. R^2=.062 for Step 1 (*ns*); ΔR^2=.064 for Step 2 (*ns*); ΔR^2=.073 for Step 3 (*ns*).

Table 6

Summary of Hierarchical Regression Analyses for Community Violence Exposure, Hostile Biases, and Reactive Aggression Without Confound Entered (n = 36).

Variable	B	SE B	β
Step 1			
CREV	.03349	.025	.222
Step 2			
CREV	.03593	.027	.239
BIAS (H)	-.00175	.006	-.055
Step 3			
CREV	.03504	.035	.233
BIAS(H)	-.00167	.006	-.053
CREV X BIAS(H)	.000047	.001	.009

Note: BIAS (H) = Hostile attribution bias; CREV = Children's Report of Exposure to Violence.

R^2=.049 for Step 1 (*ns*); ΔR^2=.003 for Step 2 (*ns*); ΔR^2=.000 for Step 3 (*ns*).

Table 7

Bivariate Regression Results for Community Violence Exposure, Instrumental Biases, and Proactive Aggression With Confound Entered (N=33).

Criterion	Path	ß	*R*	ΔR^2	*F*
1	CAPI → CBR (Proactive)	.436	.436	.190	7.287**
	CREV → CBR (Proactive)	.163	.464	.025	4.111
2	CAPI → Instrumental Biases	.-.510	.510	.260	11.239*
	CREV → Instrumental Biases	-.207	.549	.041	6.670
3	Instrumental Biases → CBR (Proactive)	-.120	.120	.014	.500

Note: CBR = Children's Behavior Report; CREV = Children's Report of Exposure to Violence.

*$p \leq .05$. **$p \leq .01$.

Table 8

Bivariate Regression Results for Community Violence Exposure, Hostile Biases, and Reactive Aggression With Confound Entered (N=33).

Criterion	Path	ß	*R*	ΔR^2	*F*
1	CAPI → CBR (Reactive)	.324	.324	.105	3.641+
	CREV → CBR (Reactive)	.146	.353	.020	2.141
2	CAPI → Hostile Biases	.495	.495	.245	10.408**
	CREV → Hostile Biases	.228	.544	.050	6.501
3	Hostile Biases → CBR (Reactive)	.015	.015	.000	.007

Note: CBR = Children's Behavior Report; CREV = Children's Report of Exposure to Violence.

**$p \leq .01$. +$p \leq .10$.

Table 9

Summary of Hierarchical Regression Analyses for Community Violence Exposure, Instrumental Biases, and Proactive Aggression With Confound Entered (n = 33).

Variable	B	SE B	β
Step 1			
CAPI	.491	.182	.436**
Step 2			
CAPI	.443	.189	.393*
CREV	.0259	.027	.163
Step 3			
CAPI	.621	.228	.552**
CREV	.0322	.027	.203
BIAS(I)	.0094	.007	.276
Step 4			
CAPI	.619	.232	.550**
CREV	.0214	.037	.135
BIAS(I)	.0082	.008	.240
CREV X BIAS(I)	-.0006	.001	-.096

Note: BIAS (I) = Instrumental attribution bias; CAPI = Child Abuse Potential Inventory; CREV = Children's Report of Exposure to Violence. ΔR^2=.190 for Step 1 ($p = .011$); ΔR^2=.025 for Step 2 (*ns*); ΔR^2=.046 for Step 3 (*ns*); ΔR^2=.005 for Step 4 (*ns*). *$p \leq .05$. **$p \leq .01$.

Table 10

Summary of Hierarchical Regression Analyses for Community Violence Exposure, Hostile Biases, and Reactive Aggression With Confound Entered (n = 36).

Variable	B	SE B	β
Step 1			
CAPI	.351	.184	.324+
Step 2			
CAPI	.310	.192	.286
CREV	.0223	.027	.146
Step 3			
CAPI	.503	.226	.464*
CREV	.0306	.027	.200
BIAS(H)	-.0108	.007	-.324
Step 4			
CAPI	.502	.230	.463*
CREV	.0265	.040	.173
BIAS(H)	-.0104	.008	-.311
CREV X BIAS(H)	.0002	.001	.035

Note: BIAS (H) = Hostile attribution bias; CAPI = Child Abuse Potential Inventory; CREV = Children's Report of Exposure to Violence. ΔR^2=.105 for Step 1 (*p = .066*); ΔR^2=.020 for Step 2 (*ns*); ΔR^2=.065 for Step 3 (*ns*); ΔR^2=.001 for Step 4 (*ns*). *$p \leq .05$. +$p \leq .10$

Appendix A

CREV

Developed by M.R. Cooley, S.M. Turner and D.C. Beidel

NAME_____ DATE_____

Directions:

These questions ask about **VIOLENC**E. Violence is when somebody attacks or hurts another person. The questions are about things that may have happened at home, school, or in your neighborhood. Make sure you answer each question by putting a **circle** around the phrase that is most true for you. Raise your hand if you do not understand a question.

Some questions ask about violence that you **watched on TV** or in the **movie**s. This means that it did **not** happen in real life.

Some questions ask about violence that you **heard** happened to someone else. This means that somebody **told** you this happened in real life.

Other questions ask about violence that you **saw** happening to someone else. This means that you were there and saw it happening in real life.

And more questions ask about violence that happened to **yo**u. This means that it happened to you in real life.

Here is a practice question:

Sample: Have you ever eaten ice cream?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

THESE QUESTIONS ASK ABOUT VIOLENCE AGAINST A STRANGER. A STRANGER IS SOMEBODY YOU DON'T KNOW.

Has a stranger (anyone you didn't know) been beaten up (or slapped, kicked, bitten, hit, punched)?

1. Have you ever **watched** somebody being **beaten up** on TV or in the movies?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

2. Has anyone ever **told** you that a **stranger** was **beaten up**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

3. Have you ever **seen** a **stranger** being **beaten up**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (anyone you didn't know) been chased (had somebody come after them to hurt them) or threatened (or warned) to have their bodies badly or seriously hurt?

4. Have you ever **watched** somebody being **chased** or seriously **threatened** on TV or in the movies?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

5. Has anyone ever **told** you that a **stranger** was **chased** or seriously **threatened**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

6. Have you ever **seen** a **stranger** being **chased** or seriously **threatene**d?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (anyone you didn't know) been robbed (or held up) or mugged?

7. Have you ever **watched** somebody being **robbed** or **mugged** on TV or in the movies?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

8. Has anyone ever **told** you that a **stranger** was **robbed** or **mugged**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

9. Did you **see** a **stranger** being **robbed** or **mugged**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (somebody you didn't know) been shot (or hit with a bullet from a gun) or stabbed with a knife?

10. Have you ever **watched** somebody being **shot** or **stabbed** on TV or in the movies?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

11. Has anyone ever **told** you that a **stranger** was **shot** or **stabbed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

12. Have you ever **seen** a **stranger** being **shot** or **stabbe**d?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (anyone you didn't know) been killed (shot, stabbed, or beaten to death)?

13. Have you ever **watched** somebody being **killed** on TV or in the movies?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

14. Has anyone ever **told** you about a **stranger** being **killed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

15. Have you ever **seen** a **stranger** being **killed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

These questions ask about violence against familiar people. Familiar people are people you know, like friends, classmates, relatives, cousins, sisters, brothers, and parents.
Has anyone you know (like a friend, relative, parent) been beaten up (slapped, kicked bitten, hit, punched)?

16. Has anyone ever **told** you about somebody **you know** being **beaten up**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

17. Have you ever **seen** somebody **you know** being **beaten up**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has anyone you know (a friend, relative, parent) been chased (had somebody come after them to hurt them) or threatened (or warned) to

have their bodies badly or seriously hurt?

18. Has anyone ever **told** you that somebody **you know** was **chased** or seriously **threatened**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

19. Have you ever **seen** somebody **you know** being **chased** or seriously **threatened**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a person you know (a friend, relative, parent) been robbed (or held up) or mugged?

20. Has anyone ever **told** you about somebody **you know** being **robbed** or **mugged**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

21. Have you **seen** somebody **you know** being **robbed** or **mugged**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has anyone you know (a friend, relative, parent) been shot (hit with a bullet from a gun) or stabbed with a knife?

22. Has anyone ever **told** you about somebody **you know** being **shot** or **stabbed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

23. Have you ever **seen** somebody **you know** being **shot** or **stabbed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has anyone you know (a friend, relative, parent) been killed (shot, stabbed, or beaten to death)?

24. Has anyone ever **told** you about somebody **you know being killed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

25. Have you ever **seen** somebody **you know** being **killed**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

These questions ask about violence that has happened to you.

26. Have **you** ever been **beaten up** (slapped, kicked, bitten, hit, punched)?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

27. Have **you** ever been **chased** (had somebody come after you to hurt you) or **threatened** (or warned) to have your body badly or seriously hurt?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

28. Have you ever been **robbed** (or held up) or **mugged**?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

29. Have **you** ever been **shot** (hit with a bullet from a gun or **stabbed** with a knife?

No, Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Appendix B

Post-Game Deception Interview Questions
(Developed by Angela Scarpa)

1. Why do you think the other child took points away from you?

    Instrumental Hostile

2. Why do you think the other child sent you a noise?

    Instrumental Hostile

3. What were you thinking when you took points away from the other child? Why did you take points away from the other child?

    Instrumental Hostile

4. What were you thinking when you sent a noise to the other child? Why did you send a noise to the other child?

    Instrumental Hostile

Questions 1-4 will be scored as **Instrumental** for responses indicating a purposeful, goal-directed quality and which demonstrate clear intent to win the game, and as **Hostile** for responses indicating a mean, vindictive, or primarily retaliatory purpose for aggressive responding.

Appendix C

Child Behavior Rating Form

Instructions: Listed below are a series of statements describing behaviors that your children may show. For each statement, please enter the number which best describes how often this child shows that behavior.

This child does _____ this often: 1 = Never, 2 = Sometimes, 3 = Very often

1. Has a good sense of humor.
2. Gets mad when corrected.
3. Deliberately plays mean tricks on other children.
4. Misbehaves when the parent's back is turned.
5. Takes things from other children without their knowledge.
6. Needs to be the leader all the time.
7. Picks on kids smaller than he or she.
8. Is a leader of playground games.
9. Causes trouble but doesn't get caught.
10. Blames others when he or she gets in trouble.
11. Gets mad when he or she doesn't get his or her own way.
12. Says mean things about other children behind their back.
13. Invites playmates to join games or activities.
14. Fights with other children for no good reason.
15. Changes the rules of the game to help him or her win.
16. Stays calm when little things go wrong.
17. Gets mad for no good reason.
18. Does sneaky things.
19. Has hurt others to win a game or contest.
20. Is a poor loser.
21. Gets others to gang up on children.
22. Volunteers to help other children.
23. Shares things with others.
24. Tells people things that aren't true.
25. Writes things on the walls.
26. Won't admit that anything is ever his or her fault.
27. Threatens others.
28. Makes friends easily.

Scoring:

For *reactive* aggression, add items: 2, 10, 11, 17, 20, and 26

For *proactive* aggression, add items: 3, 4, 5, 7, 12, 18, 19, 21, 24, and 27.

Appendix D

Child Abuse Potential Inventory
CAP INVENTORY FORM VI

Joel S. Milner, PhD

Name: _____ Date: _____ ID #: _____
Age:_____ Gender: Male__Female__ Marital Status: Sin__Mar__Div__Wid__
Race: Black___White__Latino__Am. Indian___ Number of Children at Home _____
Asian Am.____Other(specify)_____ Highest Grade completed_____

Instructions: The following questionnaire includes a series of statements, which may be applied to yourself. Read each of the statements and determine if you **AGREE** or **DISAGREE** with the statement. If you agree with a statement, circle **A** for agree. If you disagree with a statement, circle **DA** for disagree. Be honest when giving your answers. Remember to read each statement; it is important not to skip any statements.

---

1. I never feel sorry for others……	A	DA
2. I enjoy having pets……	A	DA
3. I have always been strong and healthy……		DA
4. I like most people……	A	DA
5. I am a confused person……	A	DA
6. I do not trust most people……..	A	DA
7. People expect too much from me……	A	DA
8. Children should never be bad……	A	DA
9. I am often mixed up……	A	DA
10. Spanking that only bruises children is okay……	A	DA
11. I always try to check on my child when it's crying……	A	DA
12. I sometimes act without thinking……	A	DA
13. You cannot depend on others……..	A	DA
14. I am a happy person……..	A	DA
15. I like to do things with my family……	A	DA
16. Teenage girls need to be protected……..	A	DA
17. I am often angry inside……	A	DA
18. Sometimes I feel all alone in the world……	A	DA
19. Everything in a home should always be in its place…….	A	DA
20. I sometimes worry that I cannot meet the needs of a child……..	A	DA
21. Knives are dangerous for children……	A	DA

22. I often feel rejected……..	A	DA
23. I often feel rejected…….	A	DA
24. Little boys should never learn sissy games…….	A	DA
25. I often feel very frustrated……..	A	DA
26. Children should never disobey……..	A	DA
27. I love all children…….	A	DA
28. Sometimes I feel I will lose control of myself…….	A	DA
29. I sometimes wish that my father would have loved me more……	A	DA
30. I have a child who is clumsy……..	A	DA
31. I know what is the right and wrong way to act…….	A	DA
32. My telephone number is unlisted…….	A	DA
33. The birth of a child will usually cause problems in a marriage….	A	DA
34. I am always a good person…….	A	DA
35. I never worry about my health……..	A	DA
36. I sometimes worry that I will not have enough to eat……..	A	DA
37. I have never wanted to hurt someone else…….	A	DA
38. I am an unlucky person…….	A	DA
39. I am usually a quiet person……..	A	DA
40. Children are pests……..	A	DA
41. Things have usually gone against me in life……..	A	DA
42. Picking up a baby whenever he cries spoils him…….	A	DA
43. I sometimes am very quiet……	A	DA
44. I sometimes lose my temper…….	A	DA
45. I have a child who is bad……..	A	DA
46. I sometimes think of myself first…….	A	DA
47. I sometimes feel worthless…….	A	DA
48. My parents did not really care about me……	A	DA
49. I am sometimes very sad…….	A	DA
50. Children are really little adults……	A	DA
51. I have a child who breaks things……	A	DA
52. Sometimes I have bad thoughts…….	A	DA
53. It is okay to let a child stay in dirty diapers for a while…….	A	DA
54. A child should never talk back……..	A	DA
55. Sometimes my behavior is childish……..	A	DA
56. I am often easily upset…….	A	DA
57. Sometimes I have bad thoughts……..	A	DA
58. Everyone must think of himself first……..	A	DA
59. A crying child will never be happy……	A	DA
60. I have never hated another person…….	A	DA

61. Children should not learn how to swim…… A DA
62. I always do what is right……. A DA
63. I am often worried inside…….. A DA
64. I have a child who is sick a lot…… A DA
65. Sometimes I do not like the way I act…….. A DA

66. I sometimes fail to keep all of my promises…….. A DA
67. People have cause me a lot of pain…… A DA
68. Children should stay clean……. A DA
69. I have a child who gets into trouble a lot……. A DA
70. I never get mad at others……. A DA

71. I always get along with others…….. A DA
72. I often think about what I have to do…… A DA
73. I find it hard to relax……. A DA
74. These days a person doesn't really know on whom one can count…. A DA
75. My life is happy…….. A DA

76. I have a physical handicap……. A DA
77. Children should have play clothes and good clothes…… A DA
78. Other people do not understand how I feel…… A DA
79. A five year old who wets his bed is bad…….. A DA
80. Children should be quiet and listen…….. A DA

81. I have several close friends in my neighborhood…….. A DA
82. The school is primarily responsible for educating the child……. A DA
83. My family fights a lot…….. A DA
84. I have headaches…….. A DA
85. As a child I was abused…….. A DA

86. Spanking is the best punishment……. A DA
87. I do not like to be touched by others…….. A DA
88. People who ask for help are weak…… A DA
89. Children should be washed before bed……. A DA
90. I do not laugh very much…….. A DA

91. I have several close friends…….. A DA
92. People should take care of their own needs…… A DA
93. I have fears no one knows about……. A DA
94. My family has problems getting along…… A DA
95. Life often seems useless to me……. A DA

96. A child should be potty trained by the time he's one year old…. A DA
97. A child in a mud puddle is a happy sight…….. A DA
98. People do not understand me…… A DA
99. I often feel worthless…….. A DA

100. Other people have made my life unhappy…… A DA

101. I am always a kind person……. A DA
102. Sometimes I do not know why I act as I do…… A DA
103. I have many personal problems…….. A DA
104. I have a child who often hurts himself…… A DA
105. I often feel very upset……. A DA

106. People sometimes take advantage of me……. A DA
107. My life is good…… A DA
108. A home should be spotless……. A DA
109. I am easily upset by my problems……. A DA
110. I never listen to gossip…… A DA

111. My parents do not understand me……. A DA
112. Many things in my life make me angry……. A DA
113. My child has special problems……. A DA
114. I do not like most children…….. A DA
115. Children should be seen and not heard…….. A DA

116. Most children are alike…… A DA
117. It is important for children to read……. A DA
118. I am often depressed…….. A DA
119. Children should occasionally be thoughtful of their parents……. A DA
120. I am often upset…….. A DA

121. People don't get along with me…….. A DA
122. A good child keeps his toys and clothes neat and orderly…… A DA
123. Children should always make their parents happy…… A DA
124. It is natural for a child to sometimes talk back…….. A DA
125. I am never unfair to others……. A DA

126. Occasionally, I enjoy not having to take care of my child…… A DA
127. Children should always be neat……. A DA
128. I have a child who is slow…….. A DA
129. A parent must use punishment if he wants to control a child's behavior…A DA
130. Children should never cause trouble……. A DA

131. I usually punish my child when it is crying……. A DA
132. A child needs very strict rules…….. A DA
133. Children should never go against their parents…… A DA
134. I often feel better than others…….. A DA
135. Children sometimes get on my nerves……. A DA

136. As a child I was often afraid……. A DA
137. Children should always be quiet and polite……. A DA

138. I am often upset and do not know why……..	A	DA
139. My daily work upsets me…….	A	DA
140. I sometimes fear that my children will not love me……..	A	DA
141. I have a good sex life……..	A	DA
142. I have read articles and books on child rearing……	A	DA
143. I often feel very alone…….	A	DA
144. People should not show anger……..	A	DA
145. I often feel alone……	A	DA
146. I sometimes say bad words…….	A	DA
147. Right now I am deeply in love……	A	DA
148. My family has many problems……..	A	DA
149. I never do anything that is bad for my health……..	A	DA
150. I am always happy with what I have……	A	DA
151. Other people have made my life hard……	A	DA
152. I laugh some almost every day……	A	DA
153. I sometimes worry that my needs will not be met……..	A	DA
154. I often feel afraid……..	A	DA
155. I sometimes act silly……	A	DA
156. A person should keep his business to himself……..	A	DA
157. I never raise my voice in anger……	A	DA
158. As a child I was knocked around by my parents…….	A	DA
159. I sometimes think of myself before others…….	A	DA
160. I always tell the truth……	A	DA

Appendix E

Family Environment Scale

1. Family members really help and support one another.
2. Family members often keep their feelings to themselves.
3. We fight a lot in our family.
4. We don't do things on our own very often in our family.
5. We feel it is important to be the best at whatever you do.
6. We often talk about political and social problems.
7. We spend most weekends and evenings at home.
8. Family members attend church, synagogue, or Sunday School fairly often.
9. Activities in our family are pretty carefully planned.
10. Family members are rarely ordered around.
11. We often seem to be killing time at home.
12. We say anything we want to around home.
13. Family members rarely become openly angry.
14. In our family, we are strongly encouraged to be independent.
15. Getting ahead in life is very important in our family.
16. We rarely go to lectures, plays or concerts.
17. Friends often come over for dinner or to visit.
18. We don't say prayers in our family.
19. We are generally very neat and orderly.
20. There are very few rules to follow in our family.
21. We put a lot of energy into what we do at home.
22. It's hard to "blow off steam" at home without upsetting somebody.
23. Family members sometimes get so angry they throw things.
24. We think things out for ourselves in our family.
25. How much money a person makes is not very important to us.
26. Learning about new and different things is very important in our family.
27. Nobody in our family is active in sports, Little League, bowling, etc.
28. We often talk about the religious meaning of Christmas, Passover, or other holidays.
29. It's often hard to find things when you need then in our household.
30. There is one family member who makes most of the decisions.
31. There is a feeling of togetherness in our family.
32. We tell each other about our personal problems.
33. Family members hardly ever lose their tempers.
34. We come and go as we want to in our family.
35. We believe in competition and "may the best man win."
36. We are not that interested in cultural activities.
37. We often go to movies, sports events, camping, etc.
38. We don't believe in heaven or hell.
39. Being on time is very important in our family.
40. There are set ways of doing things at home.
41. We rarely volunteer when something has to be done at home.

42. If we feel like doing something on the spur of the moment we often just pick up and go.
43. Family members often criticize each other.
44. There is very little privacy in our family.
45. We always strive to do things just a little better the next time.
46. We rarely have intellectual discussions.
47. Everyone in our family has a hobby or two.
48. Family members have strict ideas about what is right and wrong.
49. People change their minds often in our family.
50. There is a strong emphasis on following rules in our family.
51. Family members really back each other up.
52. Someone usually gets upset if you complain in our family.
53. Family members sometimes hit each other.
54. Family members almost always rely on themselves when a problem comes up.
55. Family members rarely worry about job promotions, school grades, etc.
56. Someone in our family plays a musical instrument.
57. Family members are not very involved in recreation activities outside work or school.
58. We believe there are some things you just have to take on faith.
59. Family members make sure their rooms are neat.
60. Everyone has an equal say in family decisions.
61. There are very little groups in our family.
62. Money and paying bills is openly talked about in our family.
63. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.
64. Family members strongly encourage each other to stand up for their rights.
65. In our family, we don't try that hard to succeed.
66. Family members often go to the library.
67. Family members sometimes attend courses or take lessons for some hobby or interest (outside of school).
68. In our family each person has different ideas about what is right and wrong.
69. Each person's duties are clearly defined in our family.
70. We can do whatever we want to in our family.
71. We really get along well with each other.
72. We are usually careful about what we say to each other.
73. Family members often try to one-up or out-do each other.
74. It's hard to be by yourself without hurting someone's feelings in our household.
75. "Work before play" is the rule in our family.
76. Watching T.V. is more important than reading in our family.
77. Family members go out a lot.
78. The Bible is a very important book in our home.
79. Money is not handled very carefully in our family.
80. Rules are pretty inflexible in our household.
81. There is plenty of time and attention for everyone in our family.
82. There are a lot of spontaneous discussions in our family.
83. In our family we believe you don't ever get anywhere by raising your voice.
84. We are not really encouraged to speak up for ourselves in our family.

85. Family members are often compared with others as to how well they are doing at work or school.
86. Family members really like music, art and literature.
87. Our main form of entertainment is watching T.V. or listening to the radio.
88. Family members believe that if you sin you will be punished.
89. Dishes are usually done immediately after eating.
90. You can't get away with much in our family.

Jenifer Francisco

CAREER OBJECTIVE

- To obtain a Ph.D. in clinical psychology, with a specialization in clinical child psychology, and to secure a position in a clinical and/or academic setting.

EDUCATION

- Virginia Polytechnic Institute and State University, Blacksburg, VA (2001-present)
  Current G.P.A: 3.84, Overall QCA: 3.71
- Virginia Polytechnic Institute and State University, Blacksburg, VA (1997-2000)
  B.S.: Psychology; G.P.A.: 3.41, Major G.P.A.: 3.65
  Honors: Dean's List (1998-2000), Graduated Cum Laude

RESEARCH EXPERIENCE

- **Emotional Aggression Study, Psychological Services Center and Child Study Clinic**
  Supervisors: Thomas Ollendick, Ph.D. and Angela Scarpa-Friedman, Ph.D.

  Spring 2001-present: Administered the Anxiety Disorders Interview Schedule-IV (ADIS-IV) and other assessment measures to participants in the Emotional Aggression study. In charge of scheduling clients. Trained and will continue to train undergraduate students to administer the ADIS-IV and other measures. Attended meetings, helped recruit subjects to participate in this study, and worked on conference presentations with other group members.

- **Psychological Services Center and Child Study Clinic, Virginia Tech**
  Supervisor: Thomas Ollendick, Ph.D.

  Summer 2000- Spring 2001: Assisted in the management and statistical analysis of a large-scale clinical and research database; Conducted research on multiple informant agreement using structured clinical interviews; Aided in the preparation of a manuscript and conference presentation on the Anxiety Disorders Interview Schedule for DSM-IV.

  Fall 1999- Spring 2000: Aided in the management of two major databases; Entered and integrated SPSS data files from a longitudinal study on school dropout prediction in children; Scored clinical measures of behavioral, emotional, and visual-motor functioning.

- **Dr. Robert Stephen's Addictions Research Team, Virginia Tech**
  Supervisor: Robert Stephens, Ph.D.

  August 1999- December 1999: Assisted in a study on marijuana dependence and treatment options; Coded therapy sessions for compilation in the study; Continued to assist in Stephanie Adams' Masters Thesis.
  May 1999- August 1999: Aided in the recruitment of subjects and entering of data in SPSS format for a graduate student's Masters Thesis on alcohol use among college students.

PROFESSIONAL PRESENTATIONS AND PUBLICATIONS

Francisco, J., Tanaka, A., Johnson, J. (2003). Parental Psychopathology and Child Anxiety as it Relates to Reactive and Proactive Aggression. Poster to be presented at the Annual American Psychological Society Conference, Atlanta, GA.

Hurley, J., Francisco, J., Van Voorhees, E., Scarpa, A., Hirai, M., & Ollendick, T.H. (2002). Emotional, Behavioral, and Psychophysiologial Correlates of Reactive and Proactive Aggression in Children. Poster accepted by the Annual American Psychological Association Convention, Toronto, Canada, August 2003.

Scarpa, A., Van Voorhees, E., Hurley, J., Francisco, J., Hirai, M., & Ollendick, T.H. (2002). Emotional, Behavioral, and Psychophysiological Correlates of Reactive and Proactive Aggression in Children. Submitted for publication at the Journal of Abnormal Child Psychology.

Francisco, J., Bowser, F., Van Voorhees, E., Travers, J., & Scarpa-Friedman, A. (2002, June). The relationship between anxiety and depression and proactive and reactive aggression. Poster presented at the Annual American Psychological Society Conference, New Orleans, LA.

Grills, A.E., Francisco, J., & Ollendick, T.H. (2001, March). Discriminant Validity of Three Self-Report Measures of Anxiety. Poster presented at the Anxiety Disorders Association of America Conference, Atlanta, GA.

Grills, A.E., Francisco, J., & Ollendick, T.H. (2001, July). An examination of multiple informant agreement and variables which may influence agreement using the Anxiety Disorders Interview Schedule. Poster presented at the World Congress of Behavioral and Cognitive Therapies, Vancouver, BC.

CLINICAL AND COMMUNITY EXPERIENCE

- **Graduate Clinician, Psychologial Services Center of Virginia Tech**
  Supervisor: Lee D. Cooper, Ph.D.
  May 2002- Present

- **Graduate Clinican, Psychological Services Center of Virginia Tech**
  Supervisor: George Clum, Ph.D.
  August 2001- May 2002
- **Adult Assessment Team, Psychological Services Center of Virginia Tech**
  Supervisor: Lee D. Cooper, Ph.D.

  August 2002- Present: Trained to conduct initial intake and assessments of adolescent and adult clients. Trained, administered, and scored tests of intelligence (Wechsler Intelligence Scale for Adults), achievement (Wechsler Individual Achievement Test and Woodcock Johnson Test of Achievement), memory (Wechsler Memory Scale), structured ADHD

retropective interview (Conners' Retrospective ADHD Interview), and clinical symptoms (Symptom Checklist-90-Revised, Beck Depression Inventory, Conners' Adult ADHD Scales). Scored measures, staffed cases during bi-weekly meetings, prepared adolescent and adult assessment reports, and presented the findings to the clients.

- **Child Assessment Team, Child Study Center of Virginia Tech**
  Supervisor: Thomas Ollendick, Ph.D.

  August 2000- August 2002: Trained to conduct initial intake and assessments of child clients; Observed and assisted a graduate clinician with child assessment cases. Trained, prepared, and administered tests of intelligence (Wechsler Intelligence Scale for Children), achievement (Wechsler Individual Achievement Test), visual-motor functioning, and behavior, and semi-structured clinical interview (Anxiety Disorders Interview Schedule-IV, Child and Parent versions). Scored measures, staffed cases during weekly meetings, prepared child assessment reports, and presented the findings to the parents.

RELATED WORK EXPERIENCE

- **Virginia Tech., Special Education Department**
  Supervisor: Cherry Houck, Ph.D.

  Spring 2001: Provided assistance to Dr. Houck in the administration of her graduate-level class, *Assessing Students With Special Needs*; Individually helped students learn how to score assessment measures (e.g., WIAT, Woodcock Johnson Test of Achievement) by hand and on the computer; Maintained office hours and assisted during weekly class meetings; Supervised students who observed assessments at the Child Study Center as part of their semester project; Inventoried and maintained Dr. Houck's manuals, books, and assessment tools.

PROFESSIONAL AFFILIATIONS

Student Member, American Psychological Association

Student Member, American Psychological Society

Student Member, Anxiety Disorders Association of America