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## DEVELOPMENT OF A MEASURE ASSESSING ADOLESCENT AGGRESSION: THE AGGRESSIVE BEHAVIOR RISK ASSESSMENT- ADOLESCENT- PARENT REPORT

## (ABRA-A-PR)

by

#### KATHERINE E. FALLON, M.S.

(Under the Direction of Jeff Klibert, Ph.D.)

## ABSTRACT

Although parent-report scales for general behavioral difficulties and aggression (e.g., verbal and physical aggression) exist, there are currently no measures assessing sexual behaviors in this context. Commonly, parent-report measures provide a few items relevant to behavioral aggression, and items encompassing sexually aggressive behaviors are frequently vague and nonspecific in the actions being committed by the adolescent. The primary purpose of this project was to develop a comprehensive and multifaceted parent-report measure for aggressive behavior in adolescents. Three separate studies were conducted to evaluate the psychometric properties of the measure. Exploratory (EFA) and confirmatory factor analysis (CFA) were used to investigate the factorial structure of the measure. While a stable factor structure to organize different domains of aggression was not obtained, results did reveal robust factor structure for sexually aggressive behavior items through a unidimensional solution. Moreover, validity and reliability statistics were high for this unidimensional factor structure, indicating the items held together and represented the latent construct well. Some unique gender and rurality differences in parentreports of sexually aggressive behaviors were detected. Notably, via parent report, adolescent boys engage in more sexually aggressive behaviors compared to adolescent females, while adolescent from rural areas engage in higher levels of sexually aggressive behaviors compared to adolescents from non-rural areas. The formation of this sexually aggressive behaviors assessment likely serves best a screening tool. With further study, the measure has the potential to inform treatment options for behavioral health and forensic professionals working with adolescents.

INDEX WORDS: Adolescents, Behavioral aggression, Sexual aggression, Perpetrator, Victim, Parent-report

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by

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A Dissertation Submitted to the Graduate Faculty of Georgia Southern University

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DOCTOR OF PSYCHOLOGY

COLLEGE OF BEHAVIORAL AND SOCIAL SCIENCES

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#### CHAPTER 1

## LITERATURE REVIEW

## Rationale

Aggressive behavior is a significant public health concern facing youth in the United States (US). In 2019, law enforcement agencies arrested roughly 696,620 juveniles, with 44,010 of these arrests related to violent crimes (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 2020). Further, approximately 126,130 arrests were for simple assault and 27,070 for aggravated assault. In addition, trends indicate significant arrests related to non-physically violent crimes toward another person, including robbery (16,080 per year), burglary (20,700 per year), larceny-theft (83,690 per year), vandalism (31,950 per year), and disorderly conduct (53,990 per year). Importantly, more than a third of high-school-aged adolescents report being in a physical fight, with 4% of these fights leading to medical attention (Solomon et al., 2008). These trends are concerning as research highlights early engagement in exercised aggressive acts is a strong predictor of future convictions (Liu, 2004).

Regarding sexual violence, adolescents engage in numerous sexual offenses against other minors, per the National Incident-Based Reporting System (NIBRS, 2020). These offenses vary in severity with 49.4% related to fondling, 24% related to vaginal rape, 12.5% related to anal rape, 9.5% related to non-forcible sex offense, and 4.7% related to sexual assault with an object (Finkelhor, 2012). Current research notes roughly 40% of minors who are sexually abused are harmed by another minor (Finkelhor, 2012). In terms of situation and circumstance, juveniles who commit sex offenses are most likely to offend at school, in groups, in the afternoon or night, and aggress against younger victims (Finkelhor et al., 2009). Based on data from the NIBRS (2020), juveniles who identify as male account for roughly 93% of those engaging in sexually

offensive behaviors. Additionally, the proportion of perpetrated sexual offenses reported to the police drastically increases beginning at age 12 and plateaus at age 14 for offending against younger children (Finklehor et al., 2009). While adolescents younger than 12 rarely offend, the rate of offending significantly increases during middle to later adolescence (Finklehor et al., 2009). Roughly one-third of all sexual offenses are perpetrated by minors (Puszkiewicz & Stinson, 2019). However, a disproportional amount of sexual violence goes unreported, with 66% of adolescent victims not confiding in a trusted adult and only 19% of victims reporting to the police (Gewirtz-Meydan & Finkelhor, 2020). This is a significant trend as unreported cases of sexual violence are associated with higher rates of attempted suicide, truancy from school, emotional distress, and poor academic performance (Cole et al., 1994). Moreover, sexual behavior problems are commonly linked with several mental health difficulties, including diagnoses of Conduct Disorder (CD, 76%), Attention-Deficit/Hyperactivity Disorder (ADHD, 40%), and Oppositional Defiant Disorder (ODD, 27%; Kellogg, 2010). Additionally, studies note a comorbidity for violent behaviors with anxiety and depressive disorders, with an increased risk for suicidal ideation and attempts (Wareham & Boots, 2012). Given these trends, it is essential to identify mechanisms to prevent violence by adolescents.

There is ample research examining general behavioral aggression (verbal and physical) in children and adolescents. Many of these studies employ measures for other abuse and violent behaviors, including conduct issues in school, academic competencies, social skills/competence, externalized behavior problems, internalized behavior problems, substance misuse, rule-breaking, and adaptive skills (Arslan, 2019; Burns & Patterson, 1990). These measures are available within a variety of targeted reporters for adolescent behaviors (e.g., self-, parent-, teacher-, caregiver-, and clinician-reports) to gather a more comprehensive view of the problems

within various settings. However, given the increasing rates of sexual violence committed by adolescents, it is important to consider these deviant behaviors within any new measure of behavioral aggression.

Building and validating comprehensive measures of violent behaviors is one positive step toward helping professionals better understand what risk looks like and fostering unique insights into reducing problematic behaviors (Adesanya et al., 2022). Currently, there are limited measures available assessing for risk factors associated with behavioral aggression in adolescents, especially those incorporating risk for sexual aggression. Commonly, methods for assessing sexually aggressive behavior rely on structured interviewing (Baldry & Sorrentino, 2017; Douglas & Otto, 2021), leading to highly specific measures, that do not generalize to a greater subset of at-risk adolescents. Report measures including items relevant to sexual aggression are exceedingly brief and/or limited in scope. Moreover, established measures are commonly utilized with identified adolescent sexual offenders with little or no attention to nonoffended populations (Savignac, 2010).

Although there are many measures for behavioral aggression in children, currently published measures are not comprehensive in evaluating common verbal and physical forms of aggression (e.g., sexual aggression). Current measures tend to have only a brief number of items relevant to behavioral problems, and items encompassing risk factors are frequently vague and non-specific in nature (Achenbach & Ruffle, 2000; Barkley, 1988; Barzman, 2011; Orpinas & Frankowski, 2001). For example, many measures are non-explicit in differentiating between various forms of sexual harm (e.g., verbal harassment/assault, verbal threats, physical touching, vaginal/anal rape). Additionally, many measures do not contain items detailing adolescent history of victimization within risky or violent behaviors, which limits the scope by which comprehensive risk can be evaluated and incorporated into effective prevention and intervention programs.

These issues are further exacerbated when examining parent-report scales for general behavioral difficulties and aggression (e.g., verbal and physical aggression). Notably, there are no measures assessing adolescent sexual behaviors through parental-report forms. The utilization of a reporter other than the identified adolescent with potential difficulties with aggression contributes to a diverse understanding of behavioral/emotional problems and competencies (Achenbach & Ruffle, 2000).

#### **Purpose and Gaps in the Literature**

Aggressive behaviors in adolescents and their corresponding risk factors are multidimensional and complex. To address noted assessment concerns, researchers need a rigorous scientific approach to explicitly identify and measure parental reports of adolescent aggression, especially aggression related to sexual violence (e.g., verbal harassment/assault, verbal threats, physical touching, vaginal/anal rape). Therefore, the primary purpose of this study is to develop a comprehensive and multifaceted parent-report measure for aggressive behavior in adolescents.

## Significance

This study is needed to evaluate the frequency, specificity, behavioral range, characteristics, and experiences commonly related to violent behaviors in adolescents as reported by parents/legal guardians. Knowing the type and degree of these behaviors is an important building block in terms of identifying specialized resources to mitigate the effects of aggression in children/adolescents. Thus, the formation of a comprehensive aggression risk assessment has the potential to inform treatment options for clinicians, counselors, and other professionals who work with adolescents. On a larger scale, identifying aggressive risk factors is helpful in ensuring the safety of children, including perpetrators and victims. Overall, the identified structure of the measure has the potential for clinical utility. Specifically, if the psychometric properties of the measure are sound, researchers can evaluate the utility of the measure with parents of children seeking treatment for presenting concerns of aggression, sexual hyperactivity, characteristics of Disruptive Behavioral Disorders, and/or perpetration of abuse. Obtaining a baseline understanding of behavioral difficulties is important to determine the best types of treatment and programming. In the future, this measure may be beneficial, not only as a preliminary measure for adolescent violence, but also as a forensic assessment to predict likelihood of recidivism for future physically and sexually harmful acts. Overall, this study has the potential to contribute to a deeper understanding of risk factors for perpetration among adolescents.

The creation of a comprehensive measure for behavioral aggression in adolescents has additional implications within the field of psychological research. Identifying the specific risk factors for adolescent aggression can help researchers build and expand upon behavioral health theories and community safety plans. Moreover, this measure can uncover a more accurate depiction of the prevalence of adolescent aggression toward other familial minors, non-familial minors, or adults in clinical and non-clinical populations. Additionally, this exhaustive measure may provide a better understanding of the prevalence of forms of aggression adolescents are perpetrating against others (e.g., Verbal aggression: spreading rumors, name calling/verbally bashing, verbally threatening; Physical aggression: hitting, kicking, shoving; Sexual aggression: sexual harassment, fondling, forcing into vaginal or anal sex).

### **Definition of Terms**

**Aggressive Risk Behaviors.** Aggressive behavior is a multifaceted construct inclusive of various forms of behavioral expression (Parrott & Giancola, 2007). This may include aggressive behaviors targeting oneself, others, or property in the form of verbal (e.g., hostile threats either written, spoken, or non-verbal and slandering another person), physical (e.g., hitting, punching, slapping, kicking, hair-pulling, scratching, and choking), or sexual acts (e.g., sexual harassment, undesired fondling, forced oral, vaginal, and anal sex) with the intention to harm (Parrott & Giancola, 2007). Identifying major domains of risk factors for adolescent aggressive behaviors was the major focus of this study.

**Problematic Behaviors.** Adolescent problematic behaviors are commonly referred to as externalizing problem behaviors or nonaggressive expressions of antisocial behaviors (Liu, 2004). Individuals who express problematic behaviors commonly experience difficulties related to substance use, conduct problems, school problems, and juvenile delinquency (Dekovic, 1999). These difficulties are major risk factors for later juvenile delinquency, adult crime, and violence (Liu, 2004). Specific behaviors commonly captured in this domain include lying, cheating, and stealing (Liu, 2004). Within the current study, problematic behaviors were measured to establish convergent validity.

**Violent Behaviors.** Violent behaviors include acts involving the use of physical force with the intention to cause bodily harm. More specifically, the World Health Organization defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" (Denmark et al., 2005, p. 14). Violent acts can consist of physical assault (e.g., kicking, hitting), use of a weapon against another, and rape (Larsson & Gill, 2013). Within the current study, violent behaviors were measured to establish convergent validity.

Parental Attitudes. Eagly and Chaiken (1993) define attitudes as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p. 1). Parental attitudes specifically involve "the degree of warmth and acceptance or coldness and rejection that exists in the parent-child relationship, as well as the extent to which parents are permissive or restrictive in the limits they set" (Grusec, 2006, p. 1). Parental attitudes toward their child and their behaviors are influential in predicting adolescent engagement in aggressive risk behaviors, as well as the child's social, emotional, and cognitive development (Kulakci-Altintas & Ayaz-Alkaya, 2019; Soloman et al., 2008). Previous studies note a correlation between parental attitudes toward fighting with reports of behavior problems, school suspension, and fighting. Specifically, an authoritarian attitude in parenting is correlated to child engagement in more violent acts (Kulakci-Altintas & Ayaz-Alkaya, 2019). Moreover, youths perceived parents supported fighting more frequently than actual parent reporting; therefore, it can be important to additionally evaluate any variability in child and parental attitudes leading to potentially harmful behaviors (Soloman et al., 2008). Within the current study, parental attitudes were measured to establish convergent validity.

#### **Aggression Literature**

Given the wide view of violence, previous literature notes expansive definitions for behavioral aggression, highlighting the need to evaluate this complex construct operationally and conceptually (Liu, 2004). Additionally, the level of premeditation of the aggressive acts influences the conceptualization of the aggressive act. For example, hostile aggression (i.e., "a response to physical or verbal aggression initiated by others with violence that is relatively uncontrolled and emotionally charged, and which causes injury or pain on the victim with little or no advantage to the aggressor") is commonly attributed to low premeditation and referred to as "affective," "reactive," "defensive," "impulsive," or "hot-blooded" aggression (Liu, 2004, p. 3). Opposingly, instrumental aggression (i.e., "controlled, purposeful aggression lacking in emotion that is used to achieve a desired goal, including the domination and control of others") is commonly attributed as "predatory" and "instrumental" in nature (Liu, 2004, p. 3). A commonly supported, yet broad, operational definition for aggression is "any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment" (Baron & Richardson, 1994, p. 7). However, as a behavioral term, aggression needs to be unpacked via a more deconstructed lens. The following presents salient aggression features from a physical, verbal, and sexual context to underscore the importance of multiple dimensions in conceptualizing adolescent aggression.

**Physical Aggression.** Physical aggression is any behavior threatening or producing physical harm, including but not limited to hitting, kicking, biting, using weapons, and damaging possessions (Kaye & Erdley, 2011). These behaviors include threats of bodily harm with a weapon, physical fighting, and violent crimes (e.g., aggravated assault, homicide). From a global perspective, physical violence against adolescents aged 15 to 19 is the fourth leading cause of death (Henrisken et al., 2021; Mokdad et al., 2016). In the United States, homicide is the third leading cause of death among adolescents and the leading cause of death for non-Hispanic Black or African American youth aged 10 to 24 (Centers for Disease Control [CDC], 2021). A national study by the CDC (2019) notes among youth in grades nine to 12, 23.6% reported being in a physical fight and 4.8% reported carrying a gun in the last year.

Furthermore, research indicates various risk and protective factors for the perpetration of physical violence. Previous research compiling risk factors for adolescent physical aggression

details negative influences across multiple domains (i.e., individual, family, school, peer group, and community; Office of the Surgeon General, 2001). Additionally, research highlights significant correlations between the perpetration of physical violence and mental health disorders in youth. Commonly, physical violence is related to disruptive behavioral disorders (i.e., CD, ODD, ADHD), anxiety, and depression (Henrisken et al., 2021). Moreover, ADHD leads to increased aggressive behaviors (Henrisken et al., 2021). Specifically, mental health symptoms related to concentration difficulties, restlessness, hyperactivity, antisocial attitudes, and engaging in risky behaviors are early onset (ages six to 11) and late onset (ages 12 to 14) risk factors for physical violence for individuals between the ages of 15 and 18 (Office of the Surgeon General [US], 2001). Furthermore, behavioral changes associated with increased use of alcohol and substances are strongly linked to the perpetration of physical violence (Fontaine et al., 2008; Tomlinson et al., 2016; Wells et al., 2008).

The progression of physical aggression is steeped in relational processes. Youth who typically experience a decrease in parental supervision and an increase in social influences by peers often report elevated risk for harmful behaviors, including physical aggression (Henrisken et al., 2021; Martino et al., 2008). Moreover, social factors related to increased adolescent physical aggression include growing up in a single-parent household, having divorced parents, and living in poverty or low socioeconomic conditions (Henrisken et al., 2021; Office of the Surgeon General, 2001). Similarly, youth who experience poor parent-child relationships, harsh or relaxed discipline, witness familial conflict, and are victims of abuse or neglect by their parental figure are at increased risk of perpetrating physical aggression (Office of the Surgeon General, 2001). Regarding peer networks, experiencing rejection from peers, bullying victimization, and feelings of loneliness frequently coincide with perpetration of physical

aggression (Henrisken et al., 2021). Alternatively, positive social orientation, having warm and supportive parental or adult relations, parental monitoring, high school engagement, and individual and peer involvement in conventional activities serve as protective factors for perpetration of physical aggression in adolescence (Office of the Surgeon General, 2001).

Previous research consistently evaluates gender differences in violence perpetration among youth (Henrisken et al., 2022). The National Youth Risk Behavior Surveillance notes the prevalence of being involved in a physical fight is higher among boy (28.4%) compared to female (16.5%) adolescents (CDC, 2016). Comparatively, previous studies note a positive correlation between testosterone rates and physically aggressive behaviors in boys, which may explain why boys/men aged 12 to 25 are the primary perpetrators and victims of physical aggression (Bjorkqvist, 2018). Moreover, boys exhibit a significant increase in violent behaviors in late adolescence (Perry & Pauletti, 2011). Boys engage in more physically aggressive behaviors toward others of the same sex than do girls (Perry & Pauletti, 2011).

Regarding rurality, adolescent boys more commonly exhibit physical aggression and resentment than girls in rural locations (Vyshkvyrkina & Tushnova, 2020). Additional studies indicate higher rates of physical aggression in rural areas compared to urban, with crime rates in rural counties exceeding urban crime by 25% and leading to considerable concern for youth safety (Larsen & Dehle, 2007; Taylor & Xia, 2022). Additional studies note rural perpetrators are more likely to inflict severe physical injuries, use a weapon, and threaten to kill their victims compared to urban perpetrators (Logan et al., 2005; Shannon et al., 2006; Taylor & Xia, 2022). Moreover, victims in rural areas are more likely to undergo numerous cases of abuse before seeking assistance or legal protection (Logan et al., 2003; Taylor & Xia, 2022). Interestingly, given the national trends in the increase of mass school shootings, between 1996 and 2005, 76%

of these events occurred in rural/nonmetropolitan areas (Larsen & Dehle, 2007). However, some research notes urban adolescents report higher rates of engagement in physical aggression and violence than rural adolescents. Notably, specific forms of physical aggression, such as gang-related violence, occur in urban settings at a higher rate than in rural (Larsen & Dehle, 2007).

Verbal Aggression: Face-to-Face. Verbal aggression is any form of in-person confrontation intended to cause emotional and psychological harm, including threats, intimidation, malicious teasing, insults with bad language, displaying anger, swearing, and sarcasm (Onukwufor, 2013; Zhang et al., 2020). While trends suggest the prevalence of physical aggression reduces with age, the frequency of verbal aggression increases with age and gained verbal and social skill development; social norms may further influence the use of verbal aggression (Card et al., 2008; Poling et al., 2019; Zhang et al., 2020). The literature demonstrates varying rates of verbal aggression, suggesting roughly 48% to 98% of adolescents engage in verbally aggressive behaviors (Bhilwar & Kapoor, 2016; Elmasry et al., 2016; Onukwufor, 2013). One study evaluated the prevalence of verbal aggression and severity levels, noting 51% of adolescents engaged in a minimal degree, 40.5% engaged in a mild degree, 8% engaged in a moderate degree, and 0.5% engaged in a severe degree of verbal aggression (Elmasry et al., 2016). Another study notes name calling and teasing/making fun of another as the most common forms of verbal aggression utilized by adolescents (Goldweber et al., 2013). More specifically, one study notes 24.7% of girls and 33.4% of boys report calling someone ugly names, and 52.1% girls and 52.8% boys report saying mean things about someone (Lundh et al., 2014).

With previous research denoting verbal aggression as widespread, there are a range of risk factors and outcomes associated with the perpetration of verbal aggression. Individual risk factors for verbal aggression include personal history of physical abuse, history of victimization

of verbal aggression, history of externalized difficulties (i.e., delinquency), listening to violently oriented music, limited prosocial behavior, and cognitive reactivity (Atkin et al., 2002; Elmasry et al., 2016; Poling et al., 2019). Social risk factors for verbal aggression include poor peer relationships, authoritarian parenting, and retained or delayed school entry (Batool, 2013; Elmasry et al., 2016; Spriggs et al., 2007; Wang et al., 2009). Individuals at greater risk of being victim to verbal aggression include youth with disabilities, gender and sexual minorities, and students who report greater social isolation, low academic performance, low self-control, gang presence, low parental support, growing up in a single-mother household, and greater participation in extracurricular activities (Poling et al., 2019). In addition, research notes multiple outcomes for victimization of verbal aggression including mental health concerns (i.e., anxiety, depression, anger, embarrassment, antisocial behaviors, hopelessness, cognitive reactivity), associations with deviant peers, engagement in more problematic behaviors, and substance use (Poling et al., 2019).

Previous literature varies in reported sex and gender differences for the perpetration of verbal aggression. Multiple studies note boys engage in more direct verbal aggression, including name-calling and arguing, than girls (Donoghue & Raia-Hawrylak, 2016; Perry & Pauletti, 2011; Sharma & Marimuthu, 2014; Toldos, 2005). Alternatively, Goldweber et al. (2013) and Bhilwar and Kapoor (2016) suggest girls perpetrate verbal aggression more frequently than boys. This specific set of findings may be related to developmental trajectory differences among boys versus girls. Notably, biological trajectories involving the onset of verbal and social skill development typically means adolescent girls develop these skills earlier than boys, suggesting girls may engage in more sophisticated dimensions of verbal aggression at younger ages than boys (Zhang et al., 2020). However, other researchers, like Bjorkqvist (2018), Gerlinger and Wo

(2016), and Holt et al. (2014), indicate an equal distribution of perpetration of verbal aggression between girls and boys. Minimal research evaluates rural differences for verbal aggression in adolescents; one study notes there are no significant differences in verbal aggression between urban and rural area adolescents (Rane & Bhaviskar, 2018).

**Verbal Aggression: Indirect.** With growing technological developments and utilization of online platforms at younger ages, verbal aggression in the form of cyberbullying, or online bullying, is a stark public health concern (Smith et al., 2006). Cyberbullying is defined as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself' (Smith et al., 2006, p. 1). Additionally, online aggression is commonly termed as "flaming" or "expressing oneself more strongly on the computer than one would in other communication settings" (Appel et al., 2014, p. 236). Online verbal aggression is enacted through a variety of platforms including, yet not limited to, text messaging, phone calls, chatroom, email, instant/direct messaging, website threads, and online posting of pictures or video clips (Smith et al., 2006). In 2019, a national survey from the CDC determined 15.7% of youth, aged 13 to 17, reported being bullied on an electronic platform, such as texting or a social media platform (e.g., Facebook, Instagram). Moreover, 22% of 11- to 16-year-old children/adolescents report being verbally aggressed through an online platform at least once with phone call, text messaging, or email, which is the most common form of cyberbullying utilized (Smith et al., 2006). However, research notes that nine out of 10 adolescents aged 12 to 17 commonly do not report being a victim of cyberbullying (Appel et al., 2014).

Another form of indirect aggression, relational or social aggression, is the use of techniques such as gossip and manipulation to psychologically harm the victim. This form of

aggression is often perpetrated to diminish the social standing of the victim and can result in the total social exclusion of the victim (Bjorkqvist, 2018). These specific forms of violence appear quite prevalent, with one study indicating 27.2% of youth act in socially aggressive ways and 8.3% perpetrate aggression through electronic means. Alternatively, 41% of youth report being a victim of relational aggression and 9.8% report being a victim of a cyber form of aggression (Wang et al., 2009).

Research indicates social intelligence as a strong correlate of indirect forms of aggression, favoring the interpretation that a child must hold the cognitive ability to analyze a social situation to use manipulation (Archer & Coyne, 2005; Bjorkqvist, 2018; Karriker-Jaffe et al., 2008). Moreover, previous literature notes a genetic, evolutionary advantage that plays a role in the perpetration of relational aggression 49% of the time, as girls/women engage in indirect aggression due to within-sex competition about boys/men (Bjorkqvist, 2018). Not surprisingly, risk factors for victimization of indirect aggression include perceived attractiveness (Leenaars et al., 2008). Additional risk factors for perpetration of online/indirect aggression include exposure to strong language in media, conduct problems, low self-esteem, harsh and coercive parenting styles, risk-taking behaviors, and higher social intelligence (Girard et al., 2019; Lundh et al., 2014; Swaim et al., 2004). Outcomes of victimization for indirect forms of aggression include internalized problems (i.e., anxiety, depression, suicidal ideation, anger, impulsivity, lethargy), increased and earlier sexual activity in girls, substance use, decreased social standing, poor selfawareness, and decreased self-esteem (Archer & Coyne, 2005; Lundh et al., 2014). One study determined female victims of relational aggression report increased negative self-perceptions regarding their athletic competence, physical appearance, romantic appeal, behavioral conduct, close friendships, and global self-worth (Archer & Coyne, 2005).

Previous literature varies in terms of sex and gender differences in terms of the perpetration of relational aggression. Specifically, research notes girls utilize indirect verbal aggression more frequently than boys of all ages (Bjorkqvist, 2018; Karriker-Jaffe et al., 2008). While young girls are engaging in indirect verbal aggression, studies show girls aged 15 and older use indirect aggression strategies much more frequently than younger girls (Bjorkqvist, 2018). Additionally, dependent upon procedural methods, studies utilizing peer nominations commonly determine female peers as more relationally, verbally aggressive (Bjorkqvist, 2018; Smith et al., 2009). Alternatively, a study by Wang et al. (2009) notes adolescent boys are more likely to engage in cyberbullying, while girls are more likely to be victims of cyberbullying. Yet other studies note comparable rates of perpetration for indirect aggression between boys and girls (Card et al., 2008) with 19.9% of girls and 20.7% of boys report trying to make others dislike someone, 12.3% of girls and 18.6% of boys report writing mean things to someone, 10% of girls and 13% of boys report spreading untrue or mean rumors, 34% of girls and 29.4% of boys report ignoring someone, and 45% of girls and 29.4% of boys report speaking ill of someone behind their back (Lundh et al., 2014).

In terms of rural differences, research findings are intersectional. For instance, rural differences are apparent when considering the type of indirect verbal aggression type. For instance, rural adolescents perpetrate higher rates of relational violence than verbal aggression (Crowell, 2008). Interestingly, the prevalence of indirect verbal aggression in rural youth is high, with 36 to 42% reporting being a victim of relational aggression (Crowell, 2008). However, few, if any studies, evaluate differences between rural and urban adolescents in engaging in and being a victim of relational and other indirect verbal violence.

Sexual Aggression. Ngo et al. (2018) define sexual violence as "contact and non-contact sexual experiences that are unwanted and where consent was not or could not be obtained" (p. 2). Sexual violence encompasses a variety of behaviors, including, yet not limited to, rape, sexual assault, incest, unwanted sexual touching, sexual exploitation, showing one's genitals to others without consent, masturbation in public, and watching someone in a private act without their knowledge or consent (National Sexual Violence Resource Center [NSVRC], 2010). Additionally, sexual assault can occur in opposite-sex dyads, same-sex dyads, or multipleperpetrator situations (Greathouse et al., 2015). A national study by the CDC (2019) highlights 8.2 % of youth, grades nine to 12, reported being forced to do undesired sexual acts (e.g., kissing, touching, sexual intercourse) in the past 12 months by someone they were dating. Specifically, 7.3% of youth reported being forced to engage in sexual intercourse. Comparatively, 10.8% of youth report they were a victim of sexual violence (CDC, 2019; Ngo et al., 2018). Before the age of 18, roughly 25% of girls and 17% of boys are expected to be sexually assaulted (NSVRC, 2010). There is also disproportional reporting between victimization and perpetration of sexual harm. Notably, rape is the least reported violent crime as only roughly 31% are reported to the police (NSVRC, 2010; Rape, Abuse & Incest National Network [RAINN], 2022). In terms of typologies, there is significant variation in reporting; 7% of youth report engaging in physical acts and 13.8% engaging in non-physical harm (Ngo et al., 2018).

The literature highlights many risk factors and outcomes associated with sexual aggression. Specifically, "rape attitudes," "peer pressure," and "masculine identity" play a role in perpetration and follow-up of sexually violent acts, as these mechanisms "serve to deny and justify male sexual aggression against women" while encouraging adolescent males' behavior to align to social and gender expectations (Moyano et al., 2017, p. 26). Research notes multiple

domains for risk factors of sexual aggression perpetration: individual, relational, community, and societal (CDC, 2022). Individual risk factors include substance misuse, prior delinquent activities, limited concern for others, early sexual engagement, coercive sexual fantasies, sexual risk-taking, exposure to explicit sexual media, witnessing sex behavior, exposure to violence, hostile attitudes, hyper-masculinity, support of traditional norms for gender roles, suicidal ideations and behavior, and prior perpetration or victimization of sexual harm (CDC, 2022; Povedeno et al., 2015; Puszkiewicz & Stinson, 2019; Russell & Oswald, 2001, 2002). Relational factors include family conflict, poor familial support, caregiver substance misuse, caregiver mental illness, involvement with peers who are sexually aggressive, hypermasculine or delinquent behavior; intimate relations with violent or abusive partners, and childhood physical, sexual, and emotional abuse (CDC, 2022; Puszkiewicz & Stinson, 2019; White & Smith, 2004; Zurbriggen et al., 2010). Specifically, childhood physical and sexual abuse are strong predictors of sexual perpetration in the future, whereas childhood emotional abuse is a strong predictor of perpetration of sexual aggression by girls/women and victimization of sexual aggression by boys/men (White & Smith, 2004; Zurbriggen et al., 2010). Community and societal risk factors include poverty, high crime rates, lack of police or judicial support, and tolerance of and weak laws/policies regarding sexual violence across the community culture (CDC, 2022). In contrast, protective factors for sexual violence perpetration include educational attainment, emotional and social connectedness, empathy, and peaceful conflict resolution among family members (CDC, 2022).

Little research notes the outcomes associated with the perpetration of sexual aggression as much of the research focuses on consequences for the victim, such as higher risky behaviors, truancy, decreased academic performance, and interpersonal difficulties (Brennan, 2016; Freeman & Temple, 2010). However, perpetration of sexual violence in youth is commonly comorbid with mental health and emotional difficulties, including ODD, ADHD, CD, and clinical concerns related to depression, shame, remorse, consent confusion, social isolation, alcohol use, and anger toward their victim (Brennan, 2016; Kellogg, 2010).

Sex and gender differences are noted concerning victimization and perpetration of sexually violent acts. Specifically, Ngo et al.'s (2018) research indicates 33.9% of boys/men and 53.5% of girls/women reported victimization of sexual aggression, whereas 22.8% of male adolescents and 12.6% of female adolescents reported perpetration of sexual aggression. Regarding victimization of sexual intercourse, 11.4% of girls report being a victim of nonconsensual sexual intercourse, compared to 3.4% of boys in a national study (CDC, 2019). Regarding perpetration, girls engage in more sexually aggressive behaviors during younger ages than boys (Finkelhor et al., 2009). Specifically, girls commit sexual offenses more than boys from ages six to 14, while aged 15 and older boys engage in more sexually offending behaviors compared to same-aged girls. Girls are more likely to sexually offend against a family member compared to boys, whereas boys are more likely to sexually offend toward an acquaintance than girls (Finkelhor et al., 2009).

When interpreting rural differences in the perpetration of sexual aggression, few studies offer any empirical differentiation. However, some studies note neighborhood disadvantage as a more predictable risk factor than living within a rural versus urban community (Karriker-Jaffe et al., 2009). Clearly, more research is needed to determine if rural versus urban youth report engaging in more sexually aggressive behaviors and whether rural versus urban youth report being the victim of such behaviors.

## **Limitations of Current Measures**

Before the 1990s, measures of aggressive behavior were primarily interview-format assessments (Seifert, 2015). Researchers note considerable clinical limitations to interviewformatted assessments, including unguided clinical judgment and lack of consistency of questions across risk factor domains (i.e., individual, community, school, familial; Seifert, 2015). However, interview formatting is still commonly used to assess aggressive risk (Baker et al., 2003). In response, researchers are calling for the construction and validation of standard and highly generalizable assessments to provide clinicians the most utility in identifying and navigating different behavioral aggression concerns (Adesanya et al., 2022).

Need for More Observer Report Assessments. It is crucial to collect information from various observers, parents, teachers, clinicians, and peers, in order to obtain more detail regarding risk factors and prevalence rates for aggressive behaviors (Conijn et al., 2020). Interestingly, many tools gather information exclusively through a self-report lens, which poses several risks or downfalls (Farrell et al., 2016). Specifically, self-report assessments increase the risk of underreporting as adolescents may experience a limited ability to recall their own behaviors and experiences, be concerned about being labeled as socially undesirable, or may minimize symptoms to avoid mental health care (DeVellis & Thorpe, 2021; Farrell et al., 2016). Incidentally, parental reports are vital in identifying markers of adolescent risk; they are comparable in strength to self-reports in identifying internalizing problems, attention problems and social problems (Kuitunen-Paul et al., 2021). Parent-reports also allow for unique insight from caregivers of current and past behavior in multiple natural settings and play a critical role in youth mental health care (Thompson et al., 2014). Furthermore, previous studies determine when assessing for childhood behavioral problems, parental reports are comparably effective in predicting behavioral difficulties in school as observational reports of anger expression within a

laboratory setting (Hayden et al., 2005). Therefore, parent-reports are particularly useful in accurately assessing adolescent externalizing and internalizing behaviors (Salbach-Andrae et al., 2009), and more of these reports need to be constructed and evaluated for clinical use.

Measure Response Scale Consistency. Many assessments for youth behavioral concerns utilize a varying degree of reporting types (i.e., Likert-scaled responses; Omrani et al., 2019). Although Likert-scales are reliable in assessing adolescent behaviors as they are universally understood and provide a measure of intensity, extremity, and direction (Omrani et al., 2019), many measurement scales employ problematic response formulas. For example, the Child Behavior Checklist (CBCL; Achenbach, 2000) and Youth Self-Report 11-18 (YSR/11-18; Achenbach & Rescorla, 2001) utilize a 3-point rating system which is not as reliable due to higher response error and less consistency in responding (Sauro, 2019). Instead, researchers suggest developing rating systems with a higher number of response options and a neutral midpoint or at least a four-point fully labeled Likert-scale without negative wording to accurately assess for variation in adolescent aggressive behavior (Omrani et al., 2019).

**Comprehensive Assessment vs. Screening Assessments**. Constructed measures should be comprehensive enough to gather appropriate and specific information (Omrani et al., 2019). While brief screening tools can be effective in identifying behavioral concerns, more comprehensive assessments are necessary for diagnostic clarification and understanding the breadth and range of concerning behaviors (Cochella et al., 2020). Common validated measures of behavioral difficulties are not widely available for use without a required fee or purchase of materials (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019). Therefore, researchers and clinicians may overly rely on free to low-cost screening tools to evaluate variation in adolescent aggressive behavior. Notably, many commonly used assessments of adolescent aggression, such as the Zurich Brief Bullying Scales (ZBBS; Halperin et al., 2002; Murray et al., 2021), Child-to-Parent Aggression Questionnaire (CPAQ; Calvete et al., 2013) Overt Aggression Teacher Report (Hoffman, 1971), the Aggression Scale (Orpinas & Frankowski, 2001), Youth Level of Service/Case Management Inventory-Short Version (YLS/CMI-SV; Savignac, 2010), and Victimization and Aggression Measure Self-Report Inventory (Toomey et al., 2014) are brief, utilizing minimal items to identify behavioral risk. Using such a small number of items may minimize perceptions of risk, mislead clinicians in developing workable prevention plans, and lead to incomplete or misguided treatment plans.

Moreover, using brief screeners may restrict how much information is obtained from different domains of behavioral aggression. Currently, most measures of behavioral aggression assessments evaluate risk exclusively from one domain (e.g., physical aggression, sexual aggression, verbal aggression; CDC, 2016; Kurek et al., 2019; Lee et al., 2017; Wright, 2014). This is problematic as risk in one area is often associated with risk in other areas (Gidycz et al., 2007). Additionally, perpetration of different forms of violence is predicted by exposure to respective violence type (Leiding et al., 2021). Assessing multiple behavioral aggression risk domains is advantageous for many reasons. Specifically, utilizing an empirically grounded actuarial approach through a comprehensive, multi-domain assessment for aggression increases inter-rater reliability and predictive validity, decreases vulnerability to clinical judgement, and allows for ease of administration for a quick examination of youth's overall risk (Shaffer-McCuish et al., 2017).

It is especially important for comprehensive assessments to include items pertaining to sexual aggression. Only a few measures of behavioral aggression include sexual aggression items. These measures include the ONSET (Savignac, 2010), ASSET (Baker et al., 2003), and

Risk Factor Profile Instrument (RFPI; Beuhring, 2002). However, even these measures do not assess for the breath and range of sexually aggressive behaviors commonly reported as problematic in the adolescent health literature. Moreover, some measures commonly used to assess for sexual aggression in adolescents were initially developed for adults, like the Sexual Experiences Survey (Cecil & Matson, 2006; Young et al., 2009), which generates significant concerns related to applicability and generalizability of findings to adolescent samples (Desmarais & Zottola, 2020). It is important for future measures to construct sexual aggression items including sexual harassment, rape, sexual assault, incest, unwanted sexual touching, and sexual exploitation to be integrated into more comprehensive risk assessments (NSVRC, 2010).

Overall, there are significant limitations with current adolescent behavioral aggression measures. Moving forward, researchers need to construct more comprehensive and inclusive observer report measures employing a consistent and stable response system to ensure research accurately and effectively assesses the wide range of deviant behaviors in which adolescents participate.

#### **Convergent Validity**

In order to address validity concerns, comprehensive measures of any given construct must be evaluated against theoretically relevant constructs to ensure the measures are assessing constructs as intended. Therefore, three areas in which literature notes clinical and theoretical relevance to adolescent aggressive behavior include parental attitudes, problematic behaviors, and violent behaviors.

**Parental Attitudes.** Since socialization begins in the family, the research identifies a strong association between adolescent aggressive behavior and parental attitudes. Parents' dysfunctional attitudes positively correlate with youth aggressive and violent behaviors, with emphasis on increased influence during adolescent years (Dyavanoor & Jyoti, 2017; Kulakci-

Altintas & Ayaz-Alkaya, 2019; Solomon et al., 2008). Youth who engage aggressively with others commonly perceive their parents' support of, tolerance of, or demonstrated careless attitudes with aggressive behaviors, leading to increased risk of youth fighting, weapon carrying, and suspension (Demir & Kumcağız, 2015; Solomon et al., 2008). Parental modeling strongly influences adolescent behaviors, suggesting youth who perceive violence as a normal method of handling conflict within their family dynamic (e.g., exposure to domestic violence in the home) are at greater risk for exhibiting violent behaviors as a method of problem-solving (Kulakci-Altintas & Ayaz-Alkaya, 2019). Additionally, youth who engage in more violent behaviors perceive their parents' attitudes aligning with authoritarian views and are demanding in their expectations, leading to low self-realization (Kolburan et al., 2012; Kulakci-Altintas & Ayaz-Alkaya, 2019). Along with low self-realization, dysfunctional parental attitudes negatively influence youth self-esteem, problem-solving skills, school achievement, and social competence, all related protective factors for youth aggression (Kulakci-Altintas & Ayaz-Alkaya, 2019). Additionally, recent studies suggest an association between parental attitudes and youth aggression, even when controlling for youth attitudes toward aggression (Solomon et al., 2008). Where parental emotional support indirectly influences aggressive behaviors, low parental monitoring directly correlates to limited prosocial friendships and increased sexual activity, substance use, fighting, and violent behaviors (Kaynak et al., 2013; Larsen & Dehle, 2007; Solomon et al., 2008).

**Problematic Behaviors.** Empirical studies also suggest a strong association between adolescent aggressive behavior and problematic behaviors (Brook et al., 2004). Correlational studies indicate instances of adolescent physical, verbal, and relational aggression positively correlate with substance use, nonviolent delinquent behaviors (e.g., stolen property, academic cheating), and conduct disorder behavioral symptoms (Farrell et al., 2016). With normative increases in risk-taking following puberty, the correlation between substance use and aggression in adolescence is heightened by increased interactions with deviant peers, interruption of brain development due to drug exposure, increased impulsivity, and increased social stress from role transitions (Doran et al., 2012). Moreover, childhood aggression predicts the onset and frequency of adolescent substance use concerns (Doran et al., 2012). Within online settings, problematic behaviors predict appetitive aggression (i.e., "the infliction of harm to a victim for the purpose of experiencing violence-related heroism and enjoyment") for older adolescents (Graf et al., 2022; Weierstall et al., 2013, p. 2). Adolescents exhibiting both aggressive and problematic behaviors are at higher risk for decreased emotion regulation, impaired social-wellbeing, lower academic success, and decreased learning opportunities due to disruptions in the classroom (Powell et al., 2011).

**Violent Behaviors.** A strong association exists between adolescent aggression and violent behaviors. Specifically, proactive aggression (i.e., "calculated and goal-oriented, motivated by external reward") is linked to delinquency and violence in adolescents (Doran et al., 2012, p. 750). Conversely, reactive aggression (i.e., "defensive, impulsive responding to threat or frustration") is linked more infrequently with future violent acts (Doran et al., 2012, p. 750). Per the General Aggression Model, short-term exposure to violence (e.g., media violence) influences arousal, aggressive thoughts, and aggressive feelings leading to an increased risk of displayed aggressive behaviors (Gentile et al., 2010). However, long-term exposure to violence influences hostile attribution bias, increased perpetration of violent acts, positive attitudes toward violence, and beliefs of aggression being an appropriate and effective conflict resolution model (Gentile et al., 2011). Although social rules suggest catharsis in aggressive acts can decrease the

need to engage in future violent or more aggressive behaviors, this myth is invalid given aggressive acts often increase the likelihood of additional violent behaviors (Bushman, 2002). Research suggests childhood aggression is a predictor of future adult violence (Liu, 2004). Therefore, assessing risk or previous perpetration of violence is necessary when comprehensively assessing adolescent aggression.

#### **Current Measure**

The current study was designed to develop and validate a comprehensive, observer report measure of behavioral aggression in adolescents. Given this primary goal, the present study attempted to address the following: (1) identify multiple, internally consistent dimensions of aggressive risk behaviors in adolescents (e.g., physical, verbal, and sexual aggression); (2) determine and verify an adequate factor structure for the measure; (3) validate aggressive risk behavioral dimensions against theoretically relevant measure of aggression in adolescents (problematic behaviors, violent behaviors) and parental attitudes toward behavioral problems; and (4) determine whether aggressive risk behavioral dimension scores vary by gender and rural status. In completion of these goals, the study leaned heavily upon the recommendations of Clark and Watson (2019).

The current project was evaluated through three studies. The purpose of Study 1 was to gather participant responses to the developed measure and evaluate the exploratory structure of the items as a whole. During this process, items not loading significantly onto a given factor were omitted and items loading onto multiple factors were managed. By the end of Study 1, there was a clear set of items loading onto multiple factors associated with adolescent aggression. The purpose of Study 2 was to determine the fit between the exploratory structure established in Study 1 and a new confirmatory structure. By confirming the factor structure established in

Study 1, the measure became more stable. Finally, the purpose of Study 3 was to determine the validity of the identified factors established in Studies 1 and 2. Notably, the identified factors were explored through correlations with theoretically relevant constructs to better determine the factor structures' measurement of content pertaining to behavioral forms of adolescent aggression.

**Hypotheses.** Within the current study, three hypotheses and one exploratory aim were developed. Importantly, it was expected the measure would yield a clear, multidimensional factor structure identifying physical, sexual, verbal, and indirect forms of aggressive behaviors. Second, it was expected that all identified factors would produce high internal consistency ( $\alpha >$  .70) metrics. Next, it was expected that each identified factor of adolescent aggression would positively relate to problematic behaviors and violent behaviors and negatively relate to positive (e.g., non-acceptance) parental attitudes of aggression. Finally, as an exploratory measure, the study evaluated whether identified factor scores of aggressive behaviors varied as a function of rural status and gender identity.

**Research Questions.** The current study examined the following questions:

- Does the measure generate a stable and multidimensional factor structure (does it measure for independent domains of aggressive behaviors in adolescents [i.e., sexual violence])?
- 2. Do the items demonstrate high levels of internal consistency?
- 3. Do the items of the measure demonstrate high levels of construct validity with correlated features of general and specific risk factors?
- 4. Do established domains of aggressive behaviors vary by social-demographic statuses (i.e., rurality, gender)?

### **CHAPTER 2**

## STUDY 1 METHOD

### **Participants**

Participants were recruited from a nationwide sample of adults through Amazon's Mechanical Turk (MTurk). One criterion for participation was parental status. Specifically, participants had to self-identify as a parent or guardian of a child between the ages of 12 and 18. Participants also had to be at least 18 years old. Participants received monetary compensation in the amount of \$2.00 for their participation.

A total of 785 responses were submitted to the Qualtrics survey for Phase 1 of the study. In order to ensure the validity of the data, a total of 58 responses were removed due to insufficient completion of the data (i.e., less than 90% of the survey items were answered). The 728 remaining responses in Phase 1 were split for Study 1 and Study 2 data, with 328 participants used for Study 1. Additionally, 109 responses were removed because the reported child's current age was not within the required 12-18 year old age range. As a result, the total sample size included in Study 1 was 219. The average age of parents/guardians who participated in the study was 38 years (SD = 8.6), with the youngest participant being 18 years and the oldest being 67 years. Additional reported socio-demographic characteristics for the participants, including parental status, gender identity, racial identity, financial resources, rural status, relationship status, and current housing structure, are noted in Table 1.

Of the participants who identified as a non-biological parent (i.e., foster parent, adoptive parent, or legal guardian), the average length of time the participant knew the identified child was 11.7 years (SD = 2.7), with the shortest time being six years and longest time of 15 years. Additionally, of the participants who identified as a non-biological parent, the average length of

Demographic Variab	les	n (%)
Parental Status		
	Biological Mother	107 (48.9%)
	Biological Father	87 (39.7%)
	Adoptive Mother	7 (3.2%)
	Adoptive Father	3 (1.4%)
	Foster Mother	5 (2.3%)
	Foster Father	4 (1.8%)
	Legal Guardian	6 (2.7%)
Gender Identity	-	
	Male	101 (46.1%)
	Female	117 (53.4%)
Racial Identity		
·	White/Caucasian	171 (78.1%)
	Black/African American	14 (6.4%)
	Asian/Asian American/Pacific Islander	29 (13.2%)
	American Indian/Alaskan Native	4 (1.8%)
<b>Financial Resources</b>		
	Poor/Impoverished	10 (4.6%)
	Some financial resources	123 (56.2%)
	Substantial financial resources	78 (35.6%)
	Affluent/rich	8 (3.7%)
Rural Status		
	Rural	82 (37.4%)
	Urban	127 (58.0%)
	Suburban	10 (4.6%)
<b>Relationship Status</b>		
-	Single	2 (0.9%)
	Married/Partnered/Common Law	216 (98.6%)
Housing Structure		· · · ·
-	Family Home	157 (71.7%)
	Condominium	8 (3.7%)
	Apartment	45 (20.5%)
	Mobile Home	7 (3.2%)

Table 1. Socio-demographic Characteristics of the Parent Sample, Study 1

Participants reported their identified child's demographic characteristics. The average age of the participants' identified child was 13.8 years (SD = 1.7), with the youngest child's age being 12 years and oldest child's age being 18 years. See Table 2 for the identified children's socio-demographic characteristics, including sex assigned at birth, gender identity, racial identity, current education status, academic performance status, and employment status.

Demographic Varia	ables	n (%)
Sex Assigned at Bi	rth	
	Male	127 (58.0%)
	Female	90 (41.1%)
	Intersex	1 (0.5%)
Gender Identity		
	Male	131 (59.8%)
	Female	85 (38.8%)
	Prefer not to say	2 (0.9%)
Racial Identity	·	
-	White/Caucasian	170 (77.6%)
	Black/African American	14 (6.4%)
	Asian/Asian American/Pacific Islander	29 (13.2%)
	American Indian/Alaskan Native	4 (1.8%)
Current Education Status		
Status	6 <sup>th</sup> grade or below	41 (18.7%)
	7 <sup>th</sup> grade	40 (18.3%)
	8 <sup>th</sup> grade	40 (10.3%)
	9 <sup>th</sup> grade	30 (13.7%)
	10 <sup>th</sup> grade	33 (15.1%)
	11 <sup>th</sup> grade	18 (8.2%)
	12 <sup>th</sup> grade	9 (4.1%)
	Current college student	6 (2.7%)
Academic	Current conege student	0(2.770)
Performance		
Status	Above 4.0/A+/100% or higher	15 (6.8%)
	3.5 to 4.0/A/90%	84 (38.4%)
	3.0 to 3.5/B/80%	79 (36.1%)
	2.5 to 3.0/C/70%	30 (13.7%)
	2.0 to 2.5/D/60%	7 (3.2%)
	1.5 and below/F/below 60%	3 (1.4%)
Employment Status		- (2.170)
1 /	Self-employed	19 (8.7%)
	Part-time employed	16 (7.3%)
	Full-time employed	87 (39.7%)
	Non-employed	97 (44.3%)

Table 2. Socio-demographic Characteristics of the Participant's Child, Study 1

Moreover, additional information was gathered to understand the social functioning of the identified children, including number of siblings, number of detentions received in the past year, number of in-school suspensions received in the past year, number of out-of-school expulsions received in the past year, number of times the child experienced troubles with the law in the past year, child's participation in mental health services, primary form of discipline used with the child, and respondent's perception of the child's relationships with the parent and other siblings. See Table 3 for additional information regarding the child's social functioning.

Table 3. Social Functioning Characteristics of the Participant's Child, Study 1

Demographic Variables	Characteristics of the Participant's Child, Study 1	n (%)
Number of Siblings		<i>II</i> (70)
Number of Stoffings	0	25 (16.00/)
	0	35 (16.0%)
	1	131 (59.8%)
	2	47 (21.5%)
	3	2 (0.9%)
	4	3 (1.4%)
	5	1 (0.5%)
Number of Detentions in		
Past Year	0	59 (26.9%)
	1-2	98 (44.7%)
	3-4	47 (21.5%)
	5-6	6 (2.7%)
	7-8	6 (2.7%)
	9 or more	3 (1.4%)
Number of In-school		
Suspensions in Past Year	0	74 (33.8%)
	1-2	92 (42.0%)
	3-4	43 (19.6%)
	5-6	6 (2.7%)
	7-8	1 (0.5%)
	9 or more	1 (0.5%)
Number of Out-school	) of more	1 (0.576)
	0	66 (20, 10/)
Expulsions in Past Year	0	66 (30.1%)
	1-2	97 (44.3%)
	3-4	41 (18.7%)
	5-6	12 (5.5%)
	7-8	2 (0.9%)
Number of Legal		
Interactions in Past Year	0	59 (26.9%)
	1-2	90 (41.1%)
	3-4	48 (21.9%)
	5-6	16 (7.3%)
	7-8	2 (0.9%)
	9 or more	
	9 of more	2 (0.9%)
Participation in Mental		
Health Services	Yes	101 (46.1%)
	No	118 (53.9%)
Primary Form of Discipline		
	Ignoring	23 (10.5%)
	Redirection	42 (19.2%)
	Time-out	27 (12.3%)
	Grounding	44 (20.1%)
	Privilege removal	15 (6.8%)
	Scolding	39 (17.8%)
	Physical punishment	17 (7.8%)
	Other not noted above	12 (5.5%)
Parent-child Relationship		
	Poor	7 (3.2%)
	Good	113 (51.6%)
	Very good	99 (45.2%)
Child-sibling Relationship		
5 · · · · · · · · · · · · · · · · · · ·	Very poor	5 (2.3%)
	Poor	5 (2.3%)
	Good	125 (57.1%)
	Very good	84 (38.4%)

### Measures

Demographic Survey. All participants reported demographic information pertaining to themselves, as the child's parent/guardian, and one identified child. If participants had more than one child within the noted age range, they reported on the child who they believe expresses more behavioral health concerns. Participants chose what child they focused on as they completed the survey. The participants reported their relationship to the child, age, gender, race/ethnicity, marital status, socioeconomic status, type of living structure or current place of residence, and rural status. Rural status was assessed by participants' report of current residence in either an urban, suburban, or rural community. Regarding child-specific demographics, the parent reported their child's age, sex assigned at birth, identified gender, race/ethnicity, number of siblings, current level of formal education, current GPA, current employment status, and past mental health services received. Additionally, participants reported the number of times their child received detention, in-school suspension, out-of-school suspension, and troubles with the law in the past year. An additional three demographic questions were added to further illustrate the nature of the child's relationship with others. These questions included information about the child's relationship with the reporting parent and with their sibling(s). Finally, participants reported the primary form of discipline used with their child. See Appendix A for the demographic questionnaire.

Adolescent Aggressive Behavior. The items were developed to comprehensively evaluate risk of behavioral aggression in adolescent children. The items were developed by Katherine E. Fallon and Jeff Klibert. Katherine E. Fallon initiated the process of searching available literature for references and investigating risk factors for adolescents to engage in aggressive behaviors. Initially, a 30-item rating scale was developed to measure the extent clinicians identify problematic behavior or experiences with at-risk behavior in adolescents. These problem at-risk factors were placed within three categories: *Social* (perpetrator of aggression to others, target of harm from others, social support), *Individual* (deviant and violent personality characteristics), and *Behavioral* (sexual activity, aggression to self, animals, or property, and behavior at interview). Following a further review of the literature, there was a need to assess at-risk behaviors via parent/guardian-report. Thus, the measure was adjusted to better assess parent/guardian reports of their child's behaviors and experiences. Following this change, additional items (n = 122) were added to further assess adolescent engagement in at-risk behaviors. In total, the initial draft of this assessment contains 152 items, rated on a 4-point scale ranging from 1 (Not at all True) to 4 (Extremely True). All 152 items were evaluated by six professional colleagues for clarity and consistency with the defined construct. Following this review, the authors further evaluated the items for intelligibility and consistency with the defined construct. Overall, the end product resulted in 152 items. See Appendix B for the full list of items.

### Procedure

Participants were recruited through Amazon's MTurk, a platform allowing individuals from across the country the opportunity to perform different tasks or work within a virtual format. Upon completion of the identified tasks, individuals received monetary compensation for their time and work. For the current study, each participant received \$2.00 through the MTurk website. In order to ensure anonymity, no identifying information was collected during any part of the study.

Interested individuals evaluated the merits of participating in the study by reviewing a list of available projects via the MTurk interface. Those who wished to learn more about the study clicked on a link directing them to a Qualtrics survey. The beginning page of the Qualtrics study showed the informed consent, outlining the nature of and unique conditions associated with participation in the study. To participate, individuals gave their informed consent through a passive procedure, clicking a button to represent their desire to participate in the study. Once the passive consent procedure was completed, participants completed the demographic and at-risk parental report survey.

**Data Storage**. Responses for all participants in the study were initially stored in Qualtrics. Following the initial data collection procedures, the data were transferred to SPSS for analysis and deleted from Qualtrics. The transferred data were securely stored on a passwordprotected hard drive and will remain there for five years following completion of the study.

### CHAPTER 3

## STUDY 1 RESULTS

### **Feasibility of Data**

Initial Models of Evaluation. Initially, an Exploratory Factor Analysis (EFA) with no set criteria for identified factors was conducted, letting the analytic procedures determine the number of factors by evaluating eigenvalues. In the first model, results for the EFA were highly complex, generating skepticism regarding the nature and function of how the items held together. Notably, there were items with significantly lower (< .3) communalities, small factor loading scores (< .5), and high levels of cross-loading across factors. In total, the model produced nine factors, but the rotation strategy could not be employed accurately due to measurement error. When compiling this evidence, it was determined that using an unspecified factor model was not a feasible method of identifying meaningful factor scores.

Moving forward, there was sufficient theoretical evidence for 3- and 5-factor solutions, and these were conducted. In the 3-factor model, communalities and factor loading scores remained low, while cross-loadings were high. Moreover, the total amount of variance accounted for in the model was less than 35%, with 36 items excluded from the model due to measurement error. Similar results were revealed in analyzing a 5-factor model. Communalities and factor loading scores remained low, while cross-loadings were high. The amount of variance accounted for in the latent construct was 35% and a significant number of items (n = 35) could not be included in the model. Neither of the models produced meaningful data. As a result a smaller, more targeted group of items associated with sexually aggressive behaviors were evaluated.

**Final Model Results.** In this model, 17 items were identified as targeting sexually aggressive behaviors. A series of EFAs were utilized to evaluate how the constructed measure

items weighed into distinct factors. The first EFA included all 17 items of the updated measure. To determine the initial adequacy of the data before running an EFA, Kaiser Meyer Olkin (KMO) and Bartlett's Test of Sphericity were analyzed. Given that correlations were expected across identified factors, a Promax rotation was chosen. A Promax rotation strategy allows for a robust rotation creating evident, delineating lines for factor rotation. The threshold for including a factor based on loading was equal to or above 0.5 (Stevens, 2012). Coefficients with values that were less than 0.3 were discontinued.

#### **Exploratory Factor Analysis**

In evaluating the results of the KMO and Bartlett's Test of Sphericity, the data appeared appropriate to be analyzed through an EFA (*KMO* = 0.945; *Bartlett's Test, p* < .01; Hutcheson & Sofroniou, 1999). The initial EFA produced one factor, with 15 items. Two items were removed due to cross-loadings. The 15 items presented appropriate factor loading scores ( $\geq$  .5) without cross-loadings or items not loading onto the single factor (see Appendix C for a list of final items). The 15 items loaded onto one factor (see Figure 1). This factor maintained a high eigenvalue level ( $\lambda > 1$ ) of 6.185.

The items accounted for 41.23% of the total variance in the latent construct (see Table 4). The items captured a significant feature of the latent construct, suggesting the total variance is consistent with these metrics.

Figure 1. Scree Plot for Final EFA Model

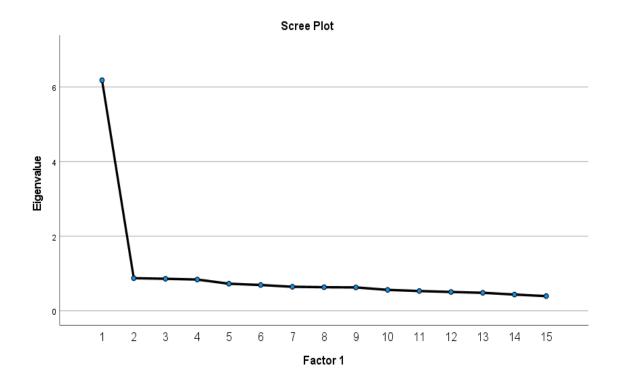


Table 4. Regression Statistics Total Variance Explained by the Identified Factors

	Initial Eigenvalues			Extrac	tion Sums of S	quared Loadings
		% of			% of	
Factor	Total	Variance	Cumulative %	Total	Variance	Cumulative %
1	6.185	41.234	41.234	5.560	37.069	37.069

See Table 5 for the communalities of the 15 items. Consistent to the field expectations,

the communalities showed appropriateness for item inclusion into the final model.

Item #	Initial	Extraction
Item 27	.380	.353
Item 31	.313	.290
Item 35	.294	.293
Item 46	.354	.367
Item 56	.334	.356
Item 61	.376	.388
Item 73	.362	.365
Item 77	.443	.460
Item 81	.316	.324
Item 93	.356	.348
Item 96	.444	.438
Item 111	.393	.422
Item 140	.373	.395
Item 146	.383	.401
Item 147	.357	.359

Table 5. Communalities of Retained Items

See Table 6 for factor loading scores for each item. The single factor demonstrated a strong fit to the overarching latent construct, given that the average factor loading fell slightly above 0.6.

Item #	Factor 1
Item 27	.594
Item 31	.539
Item 35	.541
Item 46	.606
Item 56	.596
Item 61	.623
Item 73	.605
Item 77	.678
Item 81	.569
Item 93	.590
Item 96	.662
Item 111	.649
Item 140	.629
Item 146	.633
Item 147	.599

Table 6. Factor Loadings of Retained Items

This single factor was associated with several theme clusters, including perpetrating verbal sexual harassment, perpetrating inappropriate (i.e., inappropriate amount of consensual, non-consensual, unprotected) sexual activity, engaging in concerning masturbation habits, and experiencing negative impacts due to sexual activity. Examples of items include: "*I believe my* 

child is verbally sexually harassing a peer," "I believe my child is initiating sexual fondling or unwanted sexual touching with an adult," "I believe my child is forcing vaginal or anal sex with a sibling or another minor in my family," "I believe my child engages in masturbation leading to physical distress (e.g., swelling, bruises, bleeding)," and "I believe my child engages in sexual activity that negatively impacts his/her/their relationships with friends or family." This factor was labeled Sexually Aggressive Behaviors given the content of the items.

### **Internal Consistency Scores**

Following analysis and labeling of the factor, internal consistency was measured. The internal consistency was good ( $\alpha = .88$ ), demonstrating that the items effectively hold together.

### **Normalcy of Factor**

Distribution scores for the data were evaluated (M = 42.53, SE = 0.57). The skewness of the data was -.704 with a standard error of .164. The kurtosis of the data was .844 with a standard error of .327. A Kolmogorov-Smirnov test was analyzed to examine if the normal distribution was violated by these effects. A Kolmogorov-Smirnov test was significant, D(219) = .091, p < .01, indicating the data do not follow a normal distribution. Particularly, the results display a negatively skewed pattern depicted in the histogram in Figure 2.

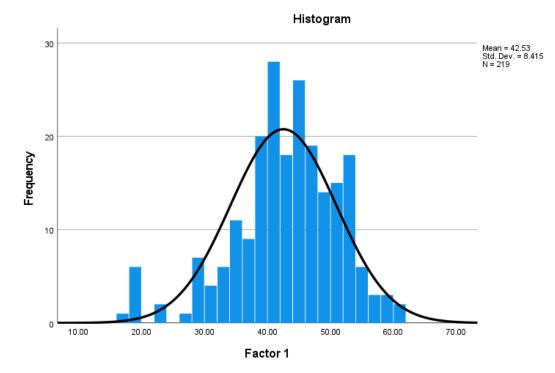


Figure 2. Histogram for Normalcy Distribution of Factor Model, Study 1



To determine if gender and rurality differences were reported on the identified sexually aggressive behaviors factor scores, a 2 (gender) x 2 (rurality) Factorial ANOVA was analyzed. Through reported labels from parents for their child's gender and self-reported labels of rurality, gender and rurality were divided into two groups. For gender, 131 male adolescents and 85 female adolescents were identified. Moreover, zero participants identified their child's gender as intersex, non-binary, or genderqueer. For rurality, 81 participants self-reported residing in a rural location and 135 participants self-reported residing in a non-rural (i.e., urban or suburban) location.

Table 7 depicts the means and standard deviations for gender and rurality on the sexually aggressive behaviors factor. The results detected a significant main effect for gender, F(1, 212) = 4.38, p < .05,  $\eta_p^2 = .02$ . However, the results revealed a non-significant main effect for rurality,

 $F(1, 212) = 1.12, p > .05, \eta_p^2 < .01$  and a non-significant interaction between gender and rurality,  $F(1, 212) = .18, p > .05, \eta_p^2 < .01$ . Specifically, via parental guardian reports, male adolescents (M = 43.73, SD = 9.18) engaged in more sexually aggressive behaviors compared to female adolescents (M = 41.04, SD = 6.72). Additionally, parental reports indicate children residing in rural areas (M = 43.86, SD = 8.51) engage in comparable levels of sexually aggressive behaviors with children residing in non-rural areas (M = 41.95, SD = 8.26).

		Gender Identity	
-		Male	Female
		( <i>n</i> = 131)	( <i>n</i> = 85)
Rural $(n = 81)$			
	Mean	44.76	41.61
	SD	8.97	6.89
	n	58	23
Non-Rural ( $n = 135$ )			
	Mean	42.90	40.82
	SD	9.32	6.70
	n	73	62

Table 7. Means and Standard Deviations by Gender Identity and Rurality, Study 1

#### CHAPTER 4

### STUDY 2 METHOD

## **Participants**

Data recruitment procedures are outlined in Chapter 2. A total of 399 responses were obtained from adult MTurk workers with caregiving responsibilities. Fifty-three responses were removed because the reported child's current age was not within the required 12 to 18-year-old age range. Thus, the total sample size was 346. Consistent with expectations and parents' age in Study 1, the average age of parents/guardians who participated in the study was 39.3 years (SD = 9.1), with the youngest participant being 21 years old and the oldest being 70 years old. Additional reported socio-demographic characteristics for the participants, including parental status, gender identity, racial identity, financial resources, rural status, relationship status, and current housing structure, are noted in Table 8.

Demographic Varia	bles	n (%)
Parental Status		
	Biological Mother	167 (48.3%)
	Biological Father	138 (39.9%)
	Adoptive Mother	15 (4.3%)
	Adoptive Father	13 (3.8%)
	Foster Mother	3 (0.9%)
	Foster Father	1 (0.3%)
	Legal Guardian	9 (2.6%)
Gender Identity		
	Male	147 (42.5%)
	Female	198 (57.2%)
Racial Identity		
	White/Caucasian	316 (91.3%)
	Black/African American	9 (2.6%)
	Asian/Asian American/Pacific Islander	18 (5.2%)
	Mexican American/Latino/a/LatinX	2 (0.6%)
Financial Resources	S	
	Poor/Impoverished	6 (1.7%)
	Some financial resources	192 (55.5%)
	Substantial financial resources	130 (37.6%)
	Affluent/rich	17 (4.9%)
Rural Status		
	Rural	73 (21.1%)
	Urban	221 (63.9%)
	Suburban	50 (14.5%)
Relationship Status		
1	Single	7 (2.0%)
	Married/Partnered/Common Law	332 (96.0%)
	Separated	2 (0.6%)
	Divorced	2 (0.6%)
	Widowed	1 (0.3%)
Housing Structure		
C	Family Home	255 (73.7%)
	Condominium	8 (2.3%)
	Apartment	78 (22.5%)
	Mobile Home	4 (1.2%)
	Other	1 (0.3%)

 Table 8. Socio-demographic Characteristics of the Sample, Study 2

Of the participants identifying as a non-biological parent (i.e., foster parent, adoptive parent, or legal guardian), the average length of time the participant knew the identified child

was 10.2 years (SD = 3.6), with a range of six months to 17 years. Additionally, of the participants identifying as a non-biological parent, the average length of time the participant was the primary caretaker for the identified child was 9.2 years (SD = 3.3), with a range of two to 16 years.

Participants reported demographic information for their identified child. The average age of the participants' identified children was 13.8 years (SD = 1.6), with a range of 12 to 18 years. See Table 9 for the identified children's socio-demographic characteristics, including sex assigned at birth, gender identity, racial identity, current education status, academic performance status, and employment status.

Demographic Variables		n (%)
Sex Assigned at Birth	h	
	Male	165 (47.7%)
	Female	181 (52.3%)
Gender Identity		
	Male	163 (47.1%)
	Female	180 (52.0%)
	Intersex	1 (0.3%)
Racial Identity		
	White/Caucasian	313 (90.5%)
	Black/African American	7 (2.0%)
	Asian/Asian American/Pacific Islander	17 (4.9%)
	Mexican American/Latino/a/LatinX	3 (0.9%)
	Middle Eastern/North African	1 (0.3%)
	Multiracial	4 (1.2%)
Current Education		
Status		
	6 <sup>th</sup> grade or below	50 (14.5%)
	7 <sup>th</sup> grade	92 (26.6%)
	8 <sup>th</sup> grade	70 (20.2%)
	9 <sup>th</sup> grade	46 (13.3%)
	10 <sup>th</sup> grade	36 (10.4%)
	11 <sup>th</sup> grade	27 (7.8%)
	12 <sup>th</sup> grade	16 (4.6%)
	Current college student	8 (2.3%)
Academic Status		
	Above 4.0/A+/100% or higher	27 (7.8%)
	3.5 to 4.0/A/90%	134 (38.7%)
	3.0 to 3.5/B/80%	134 (38.7%)
	2.5 to 3.0/C/70%	44 (12.7%)
	2.0 to 2.5/D/60%	6 (1.7%)
	1.5 and below/F/below 60%	1 (0.3%)
Employment Status		
	Self-employed	37 (10.7%)
	Part-time employed	23 (6.6%)
	Full-time employed	82 (23.7%)
	Non-employed	204 (59.0%)

 Table 9. Socio-demographic Characteristics of the Participant's Child, Study 2

Moreover, additional information was gathered to understand the social context of the

child. See Table 10 for additional information regarding the child's social functioning.

Demographic Variables		n (%)
Number of Siblings		
-	0	80 (23.1%)
	1	196 (56.6%)
	2	64 (18.5%)
	3	5 (1.4%)
	4	1 (0.3%)
Number of Detentions in		
Past Year	0	196 (56.6%)
	1-2	90 (26.0%)
	3-4	57 (16.5%)
	5-6	3 (0.9%)
Number of In-school		
Suspensions in Past Year	0	230 (66.7%)
ł	1-2	69 (20.0%)
	3-4	31 (9.0%)
	5-6	12 (3.5%)
	7-8	3 (0.9%)
Number of Out-school		
Expulsions in Past Year	0	207 (60.2%)
Expulsions in Fust Four	1-2	77 (22.4%)
	3-4	41 (11.9%)
	5-6	13 (3.8%)
	7-8	5 (1.5%)
	9 or more	1(0.3%)
Number of Local	9 01 more	1 (0.5%)
Number of Legal Interactions in Past Year	0	201 (58.3%)
interactions in Fast Tear		
	1-2	84 (24.3%)
	3-4	43 (12.5%)
	5-6	16 (4.6%)
	7-8	1 (0.3%)
Health Services	¥7	115 (22.20)
	Yes	115 (33.2%)
	No	231 (66.8%)
Primary Form of		
Discipline	Ignoring	35 (10.1%)
	Redirection	46 (13.3%)
	Time-out	51 (14.7%)
	Grounding	56 (16.2%)
	Privilege removal	23 (6.6%)
	Scolding	85 (24.6%)
	Physical punishment	28 (8.1%)
	Other not noted above	22 (6.4%)
Parent-child Relationship		
_	Very poor	3 (0.9%)
	Poor	10 (2.9%)
	Good	192 (55.5%)
	Very good	141 (40.8%)
Child-sibling Relationship		
5	Very poor	2 (0.6%)
	Poor	14 (4.1%)
	Good	209 (60.6%)
	Very good	120 (34.8%)

*Table 10. Social Functioning Characteristics of the Participant's Child, Study 2* 

## Measures

The measures for Study 2 are identical to those in Study 1 (see Chapter 2).

## Procedure

Similar to Study 1, participants were recruited through Amazon's Mechanical Turk. Upon completion of the identified tasks, individuals received \$2.00. Interested individuals clicked on a link, leading them to the Qualtrics survey. Participants read the informed consent and agreed to participate through a passive procedure. Once the passive consent procedures were completed, participants completed the demographic and at-risk parental report survey.

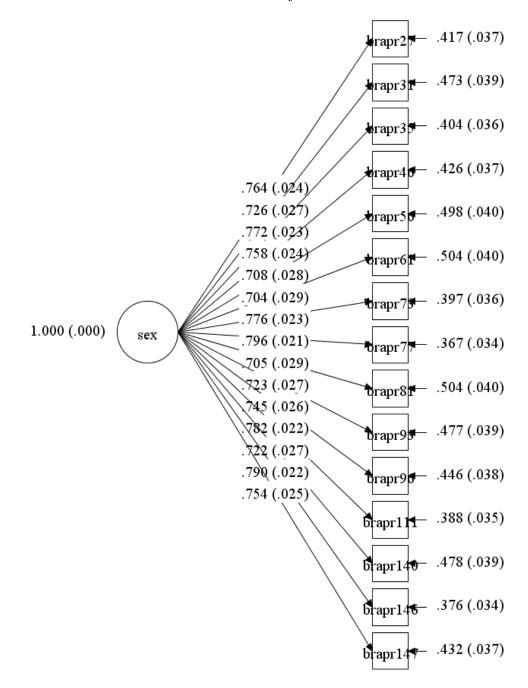
### **CHAPTER 5**

### **STUDY 2 RESULTS**

### **Confirmatory Factor Analysis**

Using Mplus 8.0, a confirmatory factor analysis (CFA) was evaluated to assess fit between the data and the sexually aggressive behavior one-factor model identified in Chapter 3. A wide range of descriptive and model fit statistics were examined. The results of the analysis are presented in Figure 3. The composite goodness-of-fit statistical decision indicates a strong fit for the one-factor model,  $\chi^2(345, 90) = 169.373$ , p < .01; RMSEA .05; CFI = .98; SRMR = .03. In relation to field standards, a non-significant  $\chi^2$  effect indicates a good model fit. The significant  $\chi^2$  result in this analysis suggests less than good fit. However, solely interpreting the  $\chi^2$  results fails to adequately consider assumptions of multivariate normality and sample size sensitivity. Failure to consider these noted limitations may negatively affect the results' ability to differentiate between inadequate and good fit. Therefore, other indices of fit were evaluated and considered. The literature supports that a RMSEA value between 0.05 and 0.08 indicates a good fit (Cangur & Ercan, 2015). The RMSEA fit index results (.05) for the one-factor solution falls within this range. Thus, the RMSEA findings suggest good absolute fit. Experts in the field determine that SRMR effects below .05 are indicative of a well-fitting model (Hu & Bentler, 1999). The SRMR index score of .05 implies a good absolute fit for the one-factor solution. Finally, the CFI is utilized to analyze model fit and is indicative of goodness of fit regardless of sample size. Literature suggests a CFI value above .95 classifies excellent fit; therefore, CFI index results (.98) revealed an excellent fit (Hu & Bentler, 1999). Taken together, the one factor solution demonstrated excellent relative fit.

Figure 3. CFA One-Factor Structure Goodness-of-Fit Model

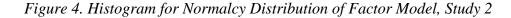


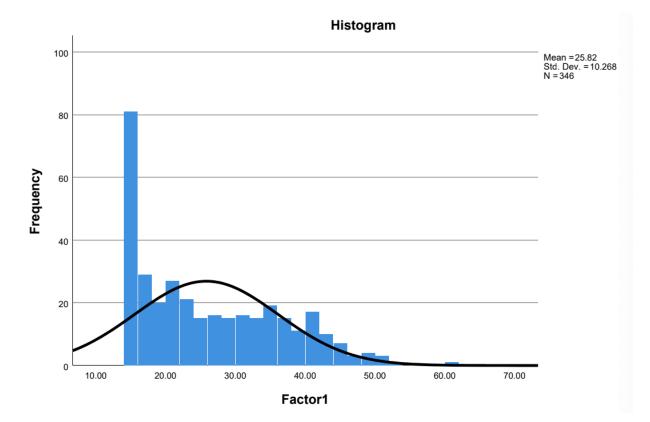
## **Internal Consistency Scores**

Internal consistency was assessed. The internal consistency score was excellent ( $\alpha = .95$ ), demonstrating the items effectively hold together.

### **Normalcy of Factor**

The data were analyzed to evaluate the distribution of scores (M = 25.82, SE = .56). The skewness of the data was .67 with a standard error of .13. The kurtosis of the data was -.569 with a standard error of .261. A Kolmogorov-Smirnov test was analyzed to examine if the normal distribution was violated by these effects. The results were significant, D(346) = .15, p < .01, indicating the data are non-normally distributed. Specifically, the results display a positively skewed pattern depicted in the histogram in Figure 4.





### **Mean Differences**

To determine if gender and rurality differences were reported on the identified sexually aggressive behaviors factor score, a 2 (gender) x 2 (rurality) Factorial ANOVA was analyzed. Through parents' report for their child's gender and self-reported labels of rurality, gender and rurality were divided into two groups. For gender, 163 male adolescents and 178 female adolescents were identified. Moreover, one participant identified their child's gender as intersex, and no participants identified their child as non-binary or genderqueer. For the purposes of this analysis, only participants' who identified their child's gender as male or female were included in the analysis because of cell size requirements. For rurality, 72 participants identified residing in a rural location and 269 participants identified residing in a non-rural (i.e., suburban or urban) location.

Table 11 indicates the means and standard deviations for gender and rurality on the sexually aggressive behaviors factor. The results revealed a significant main effect for rurality, F(1, 337) = 8.57, p < .05,  $\eta_p^2 = .03$ . The results also detected a non-significant main effect for gender, F(1, 337) = 4.22, p > .05,  $\eta_p^2 = .01$  and a non-significant interaction between gender and rurality, F(1, 337) = 6.49, p > .05,  $\eta_p^2 = .02$ . Inconsistent with the findings from Study 1, based on parental reports, male adolescents (M = 26.24, SD = 11.10) engage in comparable levels of sexually aggressive behaviors to female adolescents (M = 25.33, SD = 9.51). Additionally, parental reports suggest children residing in a rural areas (M = 28.91, SD = 10.83) engaged in more sexually aggressive behaviors compared to children residing in non-rural areas (M = 24.92, SD = 10.0).

	Gender Identity		er Identity	
-		Male	Female	
		( <i>n</i> = 163)	( <i>n</i> = 178)	
Rural $(n = 72)$				
	Mean	31.91	25.74	
	SD	10.00	9.85	
	п	37	35	
Non-Rural ( $n = 269$ )				
	Mean	24.57	25.23	
	SD	10.61	9.46	
	n	126	143	

Table 11. Means and Standard Deviations by Gender Identity and Rurality, Study 2

#### **CHAPTER 6**

## STUDY 3 METHOD

## **Participants**

Data recruitment procedures were the same as those outlined in Chapter 2 and Chapter 4. However, during this data collection period, participants received monetary compensation of \$2.50 for their participation.

A total of 320 responses were submitted to the Qualtrics survey for the third study. In order to ensure the validity of the data, a total of 35 responses were removed due to insufficient completion of the data (i.e., less than 90% of the survey items were answered). Additionally, 53 responses were removed because the reported child's current age was not within the required 12 to 18-year-old age range. Thus, the total sample size included in analyses for Study 3 was 228. Consistent with expectations, the average age of parents/guardians who participated in the study was 39.5 (SD = 9.4), with a range of 20 to 69. Additional reported socio-demographic characteristics for the participants, including parental status, gender identity, racial identity, financial resources, rural status, relationship status, and current housing structure, are noted in Table 12.

Demographic Variat	bles	n (%)
Parental Status		
	Biological Mother	107 (46.9%)
	Biological Father	95 (41.7%)
	Adoptive Mother	14 (6.1%)
	Adoptive Father	6 (2.6%)
	Foster Mother	1 (0.4%)
	Foster Father	1 (0.4%)
	Legal Guardian	4 (1.8%)
Gender Identity		
	Male	104 (45.6%)
	Female	123 (53.9%)
	Genderqueer or nonbinary	1 (0.4%)
Racial Identity		
	White/Caucasian	208 (91.2%)
	Black/African American	3 (1.3%)
	Asian/Asian American/Pacific Islander	15 (6.6%)
	Mexican American/Latino/a/LatinX	2 (0.9%)
Financial Resources		
	Poor/Impoverished	7 (3.1%)
	Some financial resources	122 (53.5%)
	Substantial financial resources	96 (42.1%)
	Affluent/rich	3 (1.3%)
Rural Status		
	Rural	64 (28.1%)
	Urban	131 (57.5%)
	Suburban	33 (14.5%)
Relationship Status		
	Single	5 (2.2%)
	Married/Partnered/Common Law	219 (96.1%)
	Divorced	3 (1.3%)
	Widowed	1 (0.4%)
Housing Structure		
	Family Home	177 (77.6%)
	Condominium	10 (4.4%)
	Apartment	39 (17.1%)
	Mobile Home	2 (0.9%)

Table 12. Socio-demographic Characteristics of the Sample, Study 3

Of the participants identifying as a non-biological parent (i.e., foster parent, adoptive parent, or legal guardian), the average length of time the participant knew the identified child was 10.1 years (SD = 3.0), with a range of two to 13 years. Additionally, of the participants

identifying as a non-biological parent, the average length of time the participant was the primary caretaker for the identified child was 9.8 years (SD = 3.6), with a range of two to 13 years.

Participants reported demographic information of their identified child. The average age of the participants' identified children in the study was 13.9 (SD = 1.6), with a range of 12 to 18. See Table 13 for the identified children's socio-demographic characteristics, including sex assigned at birth, gender identity, racial identity, current education status, academic performance status, and employment status.

Demographic Variables		n (%)
Sex Assigned at Bin	rth	
	Male	134 (58.8%)
	Female	93 (40.8%)
	Intersex	1 (0.4%)
Gender Identity		
	Male	131 (57.5%)
	Female	97 (42.5%)
Racial Identity		
	White/Caucasian	203 (89.0%)
	Black/African American	3 (1.3%)
	Asian/Asian American/Pacific Islander	15 (6.6%)
	Mexican American/Latino/a/LatinX	4 (1.8%)
	Multiracial	2 (0.9%)
	Another Description Not Listed	1 (0.4%)
Current Education		
Status		
	6 <sup>th</sup> grade or below	24 (10.5%)
	7 <sup>th</sup> grade	44 (19.3%)
	8 <sup>th</sup> grade	48 (21.2%)
	9 <sup>th</sup> grade	29 (12.7%)
	10 <sup>th</sup> grade	42 (18.4%)
	11 <sup>th</sup> grade	22 (9.6%)
	12 <sup>th</sup> grade	16 (7.0%)
	Current college student	3 (1.3%)
Academic Status		
	Above 4.0/A+/100% or higher	11 (4.8%)
	3.5 to 4.0/A/90%	100 (43.9%)
	3.0 to 3.5/B/80%	82 (36.0%)
	2.5 to 3.0/C/70%	28 (12.3%)
	2.0 to 2.5/D/60%	4 (1.8%)
	1.5 and below/F/below 60%	3 (1.3%)
Employment Status		
	Self-employed	23 (10.1%)
	Part-time employed	10 (4.4%)
	Full-time employed	56 (24.6%)
	Non-employed	139 (61.0%)

Table 13. Socio-demographic Characteristics of the Participant's Child, Study 3

Moreover, additional information was gathered to understand the social context of the

child. See Table 14 for additional information regarding the child's social functioning.

Demographic Variables		n (%)
Number of Siblings		(0.00)
	0	68 (29.8%)
	1	127 (55.7%)
	2	29 (12.7%)
	3	3 (1.3%)
	4	1 (0.4%)
Number of Detentions in		
Past Year	0	114 (50.0%)
	1-2	73 (32.0%)
	3-4	33 (14.5%)
	5-6	7 (3.1%)
	9 or more	1 (0.4%)
Number of In-school		
Suspensions in Past Year	0	139 (61.0%)
	1-2	55 (24.1%)
	3-4	24 (10.5%)
	5-6	9 (3.9%)
	9 or more	1 (0.4%)
Number of Out-school		1 (0.170)
Expulsions in Past Year	0	135 (59.2%)
Expuisions in Fast Tear	1-2	52 (22.8%)
	3-4	26 (11.4%)
	5-6	· · · · · · · · · · · · · · · · · · ·
		12 (5.3%)
NT	7-8	3 (1.3%)
Number of Legal	0	126 (50, 60())
Interactions in Past Year	0	136 (59.6%)
	1-2	44 (19.3%)
	3-4	33 (14.5%)
	5-6	15 (6.6%)
Health Services		
	Yes	88 (38.6%)
	No	140 (61.4%)
Primary Form of		
Discipline		
	Ignoring	19 (8.3%)
	Redirection	34 (14.9%)
	Time-out	27 (11.8%)
	Grounding	34 (14.9%)
	Privilege removal	28 (12.3%)
	Scolding	40 (17.5%)
	Physical punishment	27 (11.8%)
	Other not noted above	19 (8.3%)
Parent-child Relationship		17 (0.070)
i arent enna relationship	Very poor	1 (0.4%)
	Poor	4 (1.8%)
	Good	
		112 (49.1%)
	Very good	111 (48.7%)
Child-sibling Relationship		0 (0 50/)
	Poor	8 (3.5%)
	Good	141 (61.8%)
	Very good	75 (32.9%)

Table 14. Social Functioning Characteristics of the Participant's Child, Study 3

### Measures

**Demographic Survey.** The demographic measure used in Studies 1 and 2 were administered to Study 3 participants. (See Chapter 2.)

Adolescent Aggressive Behavior. Participants in Study 3 received the Aggressive Behavior Risk Assessment- Adolescent- Parent Report. This was the 152-item version described in Chapter 2. Three additional measures of child aggressive behaviors were included to explore convergent validity of those constructs with this measure.

Eyberg Child Behavior Inventory (ECBI). The ECBI (Eyberg & Ross, 1978) is a 36item measure assessing a variety of problem behaviors in children, including aggression, noncompliance, disruptive behaviors, stealing, lying, and annoying behaviors. Parents report the frequency that these behaviors are exhibited by their child (intensity score). The items are scored from 1 (never) to 7 (always), with a total score ranging from 36 to 252. The ECBI demonstrates high internal consistency ( $\alpha = .93$ ), and good (internalizing behaviors – r = .41, p < .0001) to excellent (externalizing behaviors – r = .75, p < .0001) convergent validity with the Child Behavior Checklist (CBCL) measuring child temperament and conduct-disordered pathology (Boggs et al., 1990; Burns & Patterson, 1990). For this study, the shortened form ECBI, consisting of 22 items, was used to capture disruptive behavior concerns in children (Burns & Patterson, 2000). In the current study, the 22-item ECBI demonstrated excellent internal consistency ( $\alpha = .98$ ).

Youth Risk Behavior Surveillance System (YRBSS). Violent behaviors and experiences displayed through physical force, use of weapons, and non-consensual sexual activities were measured using the violence-related and experiences subscale of the YRBSS (CDC, 2016). Parents indicated the frequency they believe various violent offenses occur to their child or are displayed by their child to indicate the extent these behaviors may affect their adolescent's health. Response choices vary across items, inclusive of dichotomous reporting (i.e., "yes" or "no") and listings of number of days (ranging from 0 to 6 or more days) or times (ranging from 0 to 12 or more times) these behaviors occur to or by an individual. Higher scores indicate more problematic behaviors and experiences, highlighting a higher level of concern for the minor's health and safety. For items assessing violent behaviors and risk for adolescents, the YRBSS demonstrated good inter-temporal consistency (TCC = .88, SEM = 3.8; Rosenbaum, 2009). The YRBSS subscale measuring violent behaviors demonstrated moderate inter-rater reliability for sexual behavior items (Cohen's kappa = .627) and violence items (Cohen's kappa = .599; Brener et al., 2002). Currently, there is no research assessing the validity of the violent risk behavior items included on the YRBSS, nor the measure in its entirety (Brener et al., 2013). In the current study, the YRBSS demonstrated excellent internal consistency ( $\alpha = .91$ ).

**Parental Aggressive Values Measures.** The Parental Aggressive Values Measure (Pinderhughes et al., 2000) is a 6-item measure designed to assess parent reporting of their attitudes and values toward aggression in children. Parents indicate their beliefs about the use of spanking as a discipline strategy with their child and beliefs about their child using aggression with others on a 7-point scale. Responses to each item range from 1 (definite disagreement) to 7 (definite agreement). Total scores can range from 6 to 42, with higher scores indicating greater parental agreement and attitudes toward the use of aggression. The Parental Aggressive Values Measure demonstrates moderate internal consistency ( $\alpha = .52$ ; Pinderhughes et al., 2000). In the current study, the Parental Aggressive Values Measure demonstrated good internal consistency ( $\alpha = .86$ ).

# Procedure

Similar to Studies 1 and 2, 320 participants were recruited through Amazon's Mechanical Turk. Upon completion of the identified tasks, individuals received monetary compensation of \$2.50. Interested individuals clicked on a link leading them to the Qualtrics survey and gave their informed consent through a passive procedure. Next, participants completed the demographic and at-risk parental report survey.

### CHAPTER 7

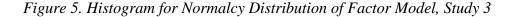
# **STUDY 3 RESULTS**

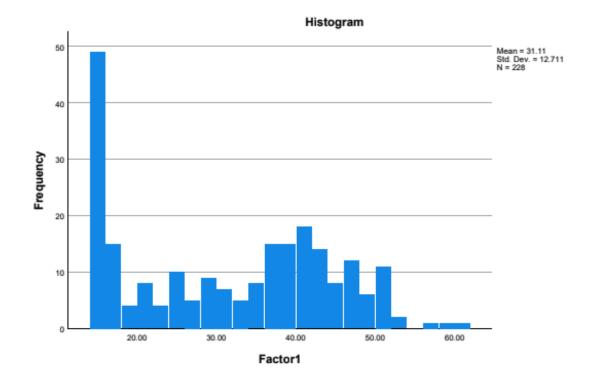
# **Internal Consistency Scores**

Internal consistency was assessed for the Sexually Aggressive Behaviors items, and the reliability score was excellent ( $\alpha = .96$ ). This score demonstrates the items effectively hold together.

# **Normalcy of Factor**

The data were analyzed to evaluate the distribution of scores (M = 31.11, SE = .84). The skewness of the data was .05 with a standard error of .161. The kurtosis of the data was -1.35 with a standard error of .321. A Kolmogorov-Smirnov test was significant, D(228) = .147, p < .01, indicating the data do not follow a normal distribution and display a positively skewed pattern depicted in the histogram in Figure 5.





# **Mean Differences**

To determine if gender and rurality differences were reported on the identified sexually aggressive behaviors factor score as well as theoretically related constructs, a 2 (gender) x 2 (rurality) Factorial MANOVA was analyzed. Through reported labels from parents for their child's gender and self-reported labels of rurality, gender and rurality were divided into two groups. For gender, 130 male adolescents and 96 female adolescents were identified. Moreover, zero participants identified their child's gender as intersex, non-binary, or genderqueer. For rurality, 62 participants self-reported as residing in a rural location and 164 participants self-reported as residing in a non-rural (i.e., suburban or urban) location.

Table 15 shows the means and standard deviations for gender and rurality on the sexually aggressive behaviors factor, violent behaviors, parental values, and problematic behaviors.

Results revealed a significant multivariate main effect for gender,  $\lambda = .95$ , F(4, 219) = 2.94, p < .05,  $\eta_p^2 = .05$ . However, results did not reveal a significant multivariate main effect for rurality,  $\lambda = .97$ , F(4, 219) = 1.74, p > .05,  $\eta_p^2 = .03$ . There was a significant interaction effect,  $\lambda = .96$ , F(4, 219) = 2.58, p < .05,  $\eta_p^2 = .05$ .

A series of Factorial ANOVAs were analyzed to evaluate univariate-level differences on the four dependent variables. For the sexually aggressive behaviors factor, the results revealed a significant main effect for rurality, F(1, 222) = 5.67, p < .05,  $\eta_p^2 = .03$ . However, the results detected a non-significant main effect for gender, F(1, 222) = 2.51, p > .05,  $\eta_p^2 = .01$ , and a nonsignificant interaction between gender and rurality, F(1, 222) = .57, p > .05,  $\eta_p^2 < .01$ . Based on parental reports male adolescents (M = 32.15, SD = 13.05) engage in comparable levels of sexually aggressive behaviors to female adolescents (M = 29.58, SD = 12.26). Additionally, parental reports suggest children residing in rural areas (M = 34.66, SD = 13.39) engaged in more sexually aggressive behaviors compared to children residing in non-rural areas (M = 29.70, SD =12.27).

For the problematic behaviors, the results revealed a significant main effect for gender,  $F(1, 222) = 7.86, p < .05, \eta_p^2 = .03$ . The results detected a non-significant main effect for rurality,  $F(1, 222) = 2.65, p > .05, \eta_p^2 = .01$ , and a non-significant interaction between gender and rurality,  $F(1, 222) = 1.21, p > .05, \eta_p^2 < .01$ . Based on parental reports, male adolescents (M= 84.52, SD = 32.98) engaged in more problematic behaviors compared to female adolescents (M= 72.65, SD = 33.31). Additionally, parental reports suggest children residing in rural areas (M =86.61, SD = 36.54) engage in comparable levels of problematic behaviors to children residing in non-rural areas (M = 76.77, SD = 32.07). For violent behaviors, the results revealed a significant main effect for gender, F(1, 222) = 6.93, p < .05,  $\eta_p^2 = .03$ , and a significant interaction between gender and rurality, F(1, 222) = 8.44, p < .05,  $\eta_p^2 > .04$ . The results detected a non-significant main effect for rurality, F(1, 222) = 1.99, p > .05,  $\eta_p^2 < .01$ . Based on parental reports, male adolescents (M = 21.18, SD = 8.5) engaged in more violent behaviors compared to female adolescents (M = 19.55, SD = 7.38). Additionally, parental reports suggest children residing in rural areas (M = 22.27, SD = 9.37) engage in comparable levels of violent behaviors to children residing in non-rural areas (M = 19.82, SD = 7.44). The interaction effect reveals an interesting pattern of results. Notably, male adolescents residing in rural areas (M = 24.84, SD = 10.55) engage in more violent behaviors compared to male adolescents residing in non-rural areas (M = 19.68, SD = 7.04). This pattern was reversed for female adolescents. Based on parental report, female adolescents residing in rural areas (M = 18.21, SD = 5.08) engage in less violent behaviors compared to those residing in non-rural areas (M = 20, SD = 7.98).

For the parental aggressive values, the results revealed a significant main effect for gender, F(1, 222) = 4.88, p < .05,  $\eta_p^2 = .02$ , and a significant main effect for rurality, F(1, 222) = 4.26, p < .05,  $\eta_p^2 = .02$ . The results detected a non-significant interaction between gender and rurality, F(1, 222) = .002, p > .05,  $\eta_p^2 < .01$ . Importantly, caregivers for male adolescents (M = 27.26, SD = 7.24) reported higher aggressive values compared to caregivers for female adolescents (M = 24.61, SD = 8.26). Additionally, caregivers reported higher levels of aggressive values for children residing in rural areas (M = 27.98, SD = 7.84) compared to children residing in non-rural areas (M = 25.44, SD = 7.67).

			Gender Identity		
			Male	Female	
			( <i>n</i> = 130)	( <i>n</i> = 96)	
Sexually	Rural $(n = 62)$				
Aggressive		Mean	36.39	31.92	
Behaviors		SD	12.74	13.86	
		n	38	24	
	Non-Rural ( $n = 164$ )				
		Mean	30.39	28.81	
		SD	12.74	11.68	
		n	92	72	
Rurality: F(1	, 222) = 5.67, $p < .05$ , $\eta_p$	$^{2} = .03$			
Gender: F(1,	222) = 2.51, $p > .05$ , $\eta_p^2$	= .01			
Problematic	Rural $(n = 62)$				
Behaviors		Mean	94.18	74.63	
		SD	33.77	38.24	
		n	38	24	
	Non-Rural ( $n = 164$ )				
		Mean	80.52	71.99	
		SD	31.98	31.77	
		n	92	72	
	, 222) = 2.65, $p > .05$ , $\eta_p$				
Gender: $F(1,$	222) = 7.86, $p < .05$ , $\eta_p^2$	= .03			
Violent	Rural $(n = 62)$				
Behaviors		Mean	24.84	18.21	
		SD	10.55	5.08	
		n	38	24	
	Non-Rural ( $n = 164$ )				
		Mean	19.68	20.00	
		SD	7.04	7.98	
		n	92	72	
	, 222) = 8.44, $p < .05$ , $\eta_p$				
Gender: $F(1,$	$(222) = 6.93, p < .05, \eta_p^2$	= .03			
Parental	Rural ( $n = 62$ )				
Aggressive		Mean	20.00	26.38	
Values		SD	7.19	8.69	
		n	38	24	
	Non-Rural ( $n = 164$ )				
		Mean	26.54	24.03	
		SD	7.17	8.09	
		n	92	72	
	, 222) = 4.26, $p < .05$ , $\eta_p$				
Gender: $F(1,$	222) = 4.88, $p < .05$ , $\eta_p^2$	= .02			

Table 15. Means and Standard Deviations by Gender Identity and Rurality, Study 3

## **Convergent Validity**

Bivariate correlations were used to determine convergent validity for the identified sexually aggressive behavior factor. I evaluated the relationships between the sexually aggressive behaviors factor and the three theoretically relevant constructs (problematic behaviors, violent behaviors, parental aggressive values). The correlation matrix is shown in Table 16. As expected, the sexually aggressive behaviors factor was positively associated with problematic behaviors, violent behaviors, and parental aggressive values. Based on parental reports, these findings revealed that children who engage in more sexually aggressive behaviors also exhibit more problematic and violent behaviors, and their parents have higher acceptance of aggression.

ana Theoretically Related Const	SAB	PB	VB
Sexually Aggressive Behaviors	-		
Problematic Behaviors	.812**	-	
Violent Behaviors	.546**	.555**	-
Parental Aggressive Values	.644**	.718**	.421**

Table 16. Cross-Sectional Relationships between the Sexually Aggressive Behaviors Factor and Theoretically Related Constructs

Note: SAB = Sexually Aggressive Behaviors; PB = Problematic Behaviors; VB = Violent Behaviors; PAV = Parental Aggressive Values \*\* = p < .01.

### **Incremental Validity**

In order to further evaluate the connection between the sexually aggressive behaviors factor and violent behaviors, I ran one hierarchical regression model. This regression model examined whether the sexually aggressive behaviors factor independently accounts for variation in violent behaviors, over and beyond the variance accounted for by key demographic variables (gender, rurality), problematic behaviors, and aggressive parental values. Therefore, two demographic variables (child gender and rural status) were entered into the first block of the model and three aggressive behavior determinant variables were added into the second block (sexually aggressive behaviors, problematic behaviors, parental aggressive values) of the hierarchical model. Results for this regression model are depicted in Table 17.

Rural status (b = -.099, p < .05) was a significant predictor for violent behaviors, accounting for 3% of the variance in the first block, F(2, 223) = 3.25, p < .05. However, rural status was not a significant predictor in the second and final block of the model. The variables in the second block significantly predicted an additional 31% of the variance in violent behaviors,  $F_{change}(3, 220) = 22.40$ , p < .01. Sexually aggressive behaviors (b = .273, p < .01) was retained as a significant individual predictor in the final model, suggesting the factor scores possess some incremental validity in accounting for variance in violent behaviors.

	β	SEβ	Beta	Final β	Final SEβ	Final Beta	$\mathbb{R}^2$
1 <sup>st</sup> Block							.03*
Child Gender	-1.59	1.06	099				
<b>Rural Status</b>	-2.36	1.19	131*				
2 <sup>nd</sup> Block							
Child Gender				484	.896	030	.34**
<b>Rural Status</b>				803	1.01	044	
SAB				.173	.061	.273**	
PB				.077	.025	.321	
PAV				.003	.083	.003	

Table 17. Hierarchical Regression on Risky and Violent Behaviors

Note: SAB = Sexually Aggressive Behaviors; PB = Problematic Behaviors; VB = Violent Behaviors; PAV = Parental Aggressive Values \*\* = p < .01

### **CHAPTER 8**

## DISCUSSION

# **Review of Purpose**

The primary purpose of this study was to develop a comprehensive and multifaceted parent-report measure for aggressive behavior in adolescents. Currently, limited measures are available to assess for risk factors of behavioral aggression in adolescents, especially those that identify and measure explicit features of sexual violence (e.g., verbal harassment/assault, verbal threats, physical touching, vaginal/anal rape). Furthermore, methods for assessing sexually aggressive behavior rely on structured interviewing (Baldry & Sorrentino, 2017), leading to measures that may not generalize to a greater subset of at-risk adolescents. Additionally, this developed measure intended to examine the frequency, specificity of victims, range of behaviors, and experiences commonly related to the perpetration of sexually aggressive behaviors in adolescents via parental reports. Given these goals, the current study addressed the following: (1) identify multiple dimensions of aggressive behaviors (e.g., sexual, physical, verbal, relational, cyber); (2) determine and verify an acceptable factor structure for the measure with items demonstrating high levels of internal consistency; (3) validate aggressive behaviors dimensions against theoretically relevant measures of general and specific risk factors (problematic behaviors, violent behaviors, parental attitudes towards aggression); and (4) determine whether aggressive behaviors dimension scores vary by social-demographic statuses (i.e., rurality, gender). This measure can be used to evaluate adolescent risk for current or future perpetration of sexually aggressive behaviors, which will inform parents, clinicians, juvenile justice personnel, and other stakeholders involved in the safety and well-being of youth.

### **Unidimensional Model Fit**

**Structure and Goodness of Fit.** A series of EFAs were conducted to evaluate how the constructed measure items, targeting sexually aggressive content, weighed into distinct factors. The initial EFA produced one factor. Two items with poor loadings were removed from the final model. The remaining items produced appropriate factor loading scores, resulting in 15 items retained in the final, single-factor model. Despite stable evidence for a unidimensional factor structure, the percentage accounted for in the final model was less than desirable (< .60). This was likely due to measurement error and lower levels of power. The decision to proceed forward was made based on the notion that more stringent levels of evaluation (e.g., CFA) would shed light on whether this issue would persist.

A CFA was evaluated to assess fit between the data and the sexually aggressive behavior one-factor model. The composite goodness-of-fit metrics indicate a strong fit for the one-factor model. The REMSEA and SRMR findings indicated good absolute fit for the one-factor solution. Additionally, the CFI index results indicated excellent relative fit. In summary, a cumulative interpretation suggested the one-factor solution provided a good fit to the data.

This measure is the first to evaluate adolescent perpetration of sexually aggressive behaviors through reports provided by parents and caregivers across the United States. This is a first step in capturing a parent-report of adolescent sexual aggression, as currently there are no standardized measures available for this area. Because of the unidimensional nature of the measure, it seems wise for professionals, researchers, and theorists to consider this tool as a screening mechanism; the tool may provide a unique pathway to identify adolescents engaging in inappropriate or harmful sexual activities. Most screening tools hold a unidimensional structure, making it easier for researchers and professionals to conceptualize what risk might look like. Though the model is meaningful and holds some practical value as a screening tool, it is essential to extend the measure to capture sexual aggressive behavioral content not well represented by the 17 determined items targeting sexually aggressive behaviors. In its fullness, the decision to engage in and the perpetration of sexual behaviors is a complex and multifaceted public health concern (Alexander & Miller, 2022). Therefore, it is likely a unidimensional structure for this construct is ill-suited to fully account for the range of behaviors underlying this large umbrella construct. For example, additional items specifying different examples and forms of sexual harassment or unwanted sexual touching may improve the scope of this measure to uncover more specificity and severity in sexual aggressive behaviors.

Further, future directions should focus on evaluating this measure with different samples to increase generalizability. It is important to understand the adaptability of this measure across educational infrastructures (e.g., in-person public school, in-person private school, alternative schools, online schools), treatment facilities (e.g., outpatient, residential, and inpatient care settings), and confinement/correctional facilities (e.g., juvenile detention centers, long-term juvenile correctional facilities, adult jails and prisons, immigration and customs enforcement, and tribal youth facilities).

**Reliability.** Using a cross-sectional design, reliability of the final set of items was determined through internal consistency measures. To ensure maximum internal consistency, reliability coefficients (alpha) were evaluated for the single factor across the three studies. In the first administration, the internal consistency factor score was good ( $\alpha = .88$ ). Next, the internal consistency score at the second administration was excellent ( $\alpha = .95$ ). Finally, in the final administration, the internal consistency factor score was excellent ( $\alpha = .96$ ). Across all three administrations, the internal consistency factor scores suggest the items effectively held together.

This is an important metric in determining psychometric soundness for the measure. However, more research is needed to evaluate reliability estimates using different designs. For instance, it will be important to evaluate whether reliability of the measure's items hold up over time. As such, research should evaluate test-retest reliability using a time-series longitudinal design, whereby researchers can evaluate the reliability and correlational structure of how baseline reports of sexually aggressive behaviors are linked to reports of sexually aggressive behaviors at 3-, 6-, and 12-month intervals.

**Validity**. Multiple forms of validity were evaluated to determine whether the items measured the intended construct. Convergent validity was measured through bivariate correlations and incremental validity was assessed through a hierarchical regression model to further examine the connection between the sexually aggressive behaviors factor and violent behaviors.

*Convergent Validity.* As anticipated, the sexually aggressive behaviors factor was positively associated with problematic behaviors, violent behaviors, and parental aggressive values. Adolescents who engaged in more sexually aggressive behaviors also exhibited more problematic and violent behaviors, and their parents held a higher acceptance of aggression compared to their less sexually aggressive peers. These results are consistent with the predominant literature noting children with sexual behavior problems commonly exhibit nonsexual disruptive behavioral concerns and violent acts (Chaffin et al., 2008; DeGue et al., 2013; Grossi et al., 2016).

These findings generate basic evidence for convergent validity of the unidimensional factor structure. Because of the preliminary nature of these findings, it is important for researchers to further evaluate these connections. For instance, correlations only estimate the size

of a connection between two variables; they do not illuminate the directional nature of these relationships. Currently, it is unknown whether parental values, problematic behaviors, and conduct-related issues pertaining to more common violations of social norms in adolescence are gateway mechanisms leading to more problematic outcomes, like sexually aggressive behaviors. Longitudinal and structure equation modeling studies will be key in unraveling the directionality components of these relationships. Specifically, it will be important to mold pathway models (e.g., mediation) to determine if and how problematic behaviors and parental values account for change scores in sexually aggressive behaviors in at-risk adolescents.

*Incremental Validity*. As expected, the sexually aggressive behaviors factor was a significant predictor in the final model for violent behaviors. These results suggested that the sexually aggressive behaviors factor independently accounts for variation in violent behaviors, over and beyond the variance accounted for by key demographic variables (gender, rurality), problematic behaviors, and aggressive parental values. These results confirm the relationship found between sexual aggression related risk factors for sexual violence, including prior aggressive behaviors, acceptance of violent behaviors, a preference for impersonal sex, tendency to engage in risky sexual behavior, prior sexual perpetration, early sexual initiation, exposure to sexually explicit media, and societal norms and attitudes tolerating sexual violence (CDC, 2022). In general, a history of early aggressive behaviors is shown to be a risk factor for perpetration of violent behaviors (CDC, 2020). Moreover, these results support Ybarra and Langhinrichsen-Rohling's (2019) findings that attitudes about violence and sex are related to perpetration of sexual initiate partner abuse in adolescents.

Further evaluation of the connection between sexually aggressive behaviors and general proclivities for violence is sorely needed. Sexual violence is disparate from general violence in

that the victim is more commonly female, private settings more frequently produce perpetrator opportunities than public settings, the perpetrator is commonly in a close relationship to the victim, and victimization occurs across social and economic positions (DeGue et al., 2013). Given these distinct characteristics, some sexually aggressive behaviors or risk factors differentially predict general violence. For example, sexual violence in response to strong beliefs in rape myths, victim blaming, or hostile attributions toward women may have a stronger prediction of general assault against women than other groups. Future research should address the underlying perpetrator beliefs through qualitative discussions to further examine how such beliefs contribute to offending.

**Risk Factors and Theory Development.** The developmental stage of adolescence is characteristic of increased vulnerability to impulsive and risky behaviors, with natural maturational changes across sexual arousal, emotional lability, emotional intensity, and impaired decision-making abilities (Grossi et al., 2016). The literature discusses various static and dynamic risk factors for sexual offending. Static risk factors include prior adverse childhood experiences (i.e., abuse, maltreatment, caregiver criminality), antisocial behavior in parents, conduct difficulties, delinquent history, lower intelligence, peer rejection, and prior offending history (Chaffin et al., 2008; Grossi et al., 2016). Dynamic risk factors include anger management difficulties, impulsivity, and substance misuse (Grossi et al., 2016).

Given that this measure is the first of its kind, it can be used foundationally for future researchers to expand upon current understandings of sexually aggressive behaviors in adolescents. Future research aligned to help further identify the specific risk factors for adolescent perpetration of sexual aggression can help test and validate more comprehensive theories and build bridges to address gaps between implementing effective safety plans for children in the community and preventing sexually aggressive behaviors. Therefore, building and validating comprehensive measures of sexually violent behaviors can be one positive step toward helping professionals better understand what risk looks like and foster unique insights into reducing problematic behaviors. Future research should aim to develop a comprehensive and multifaceted measure of risk factors for perpetration of sexually aggressive behaviors to serve as a complimentary tool for juvenile risk assessments designed to increase predictions for reoffending. Also, a more comprehensive assessment for inclusive risk factors may assist clinicians in identifying children more at-risk for offending and allow for more time to intervene prior to offending. In a similar vein, research should additionally evaluate current levels of protective factors (e.g., caregiver stability and support, community and neighborhood safety, mental health treatment, and prosocial personal attitudes and peers) a child may hold to manage sexually aggressive urges.

#### The Utility of Parental Reports for Sexually Aggressive Behaviors

The measurement developed utilized a unique design for the targeted reporter (i.e., parents, caregivers) of adolescent behaviors. Currently, no measures assess sexually aggressive behaviors through parental report forms. Using a parent reporter allows for an incrementally diverse understanding of adolescents' behavioral or emotional concerns and competencies (Achenbach & Ruffle, 2000). While parental reports will never replace behavioral, observational, and self-reporting mechanisms, they are comparable in utility regarding accurately assessing social concerns, behavioral difficulties, and expressions of anger in adolescence (Hayden et al., 2005). Importantly, parents and caregivers provide additional observational insight into a child's behavior especially when compared to other reporters (i.e., clinicians, teachers, peers; Hayden et al., 2005; Kuitunen-Paul et al., 2021; Thompson et al., 2014). Because of these patterns of

observation and measurement, the developed measure likely adds to a growing database to holistically assess and prevent sexually aggressive behaviors.

If used appropriately, this sexually aggressive behaviors measure will offer unique opportunities to prevent sexual violence. Specifically, this measure can be utilized as a screener to understand prior harmful acts a child has committed or the risk of future perpetration (Baldry & Sorrentino, 2017; Douglas & Otto, 2021). With further evaluation, this measure may serve as a juvenile risk assessment for offending or reoffending adolescents, especially among youth with stark histories of assault (Ryan, 1998). Additionally, with further study, this measure may be combined with other commonly administered parental reports for other aggressive or problematic behaviors (e.g., CBCL, ECBI) to provide a comprehensive view of a child's current behavioral risk. Finally, with further evidence, information generated from this measure can provide healthcare providers (e.g., pediatric care physicians, psychologists, mental health clinicians) with parental view of risky behavioral concerns, potentially impacting diagnostic decisions, treatment goals, and therapeutic progress.

#### **Measurement Error Issues with Other Models**

General Model of Aggression. The initial goal of the current project was to develop a comprehensive and multifaceted measure of risk factors for victimization and perpetration of aggressive behaviors. The initial measure intended to include a large set of items distributing into multiple theoretically sound constructs. In the first step to completing this goal, an EFA with no set criteria for identified factors led to highly complex results and an unspecified factor model not feasible for interpretation. The initial sample size in the first study was relatively low (219 participants), possibly influencing the poor results. However, previous studies determined a participant sample size of 50 is an adequate minimum (de Winter et al., 2009). So, it is unknown

if lack of power due to low sample was a root cause of the poor model statistics. Another issue is difficulties creating a diverse yet meaningful cluster of items to account for different facets of aggressive behaviors. Aggression is a convoluted and multifunctional behavior, expressed in numerous forms (Gilbert et al., 2017). As a result, it is possible the attempt to develop a cascade model based on a highly varied approach was too complicated and the latent construct was not represented well by the developed set of items. These concerns within the field may prove developing a sound general model for aggression without preset criteria for organizing the model is an unattainable goal.

Three and Five Factor Models. Next, the data were organized into smaller, theoretically relevant groups of aggressive behavior domains. Specifically, an attempt to cluster the items into 3- and 5-factor models. The 3-factor model was developed with the theoretical scope for anticipated facets of biological, psychological, and social aggressive risk. Incidentally, a significant number of the items reflected content with the expression of physical, psychological, and social forms of risk. Given this trend within the item set and the theoretical base from the literature for these subdomains, I analyzed a 3-factor EFA. Similar to the general model with no set criteria, results from the EFA remained highly complex, not producing meaningful data for interpretation. This unforeseen result may be because of the complexity and interconnectedness of contributing factors for aggressive risk noted in the biopsychosocial model (Huntington, 2012). In other words, it is difficult to categorize factors, as one item may fit within multiple domains simultaneously, such as emotional lability being considered as both a biological and psychological factor.

Next, I tried to frame the items into a 5-factor model. The 5-factor model was developed with the theoretical scope for anticipated facets of aggressive behaviors, including sexual

aggression, physical aggression, in-person verbal aggression, cyber-based verbal aggression, and relational aggression. These subdomains are well-established in the literature as unique yet highly correlated constructs, leading to the possibility that items may uniquely reflect separation into this type of system. Moreover, item content for these facets was well represented in the item pool. However, results from the EFA again remained highly complex and did not produce meaningful data. In reviewing the items in more depth to explain these poor results, it is possible that measurement error may prohibit meaningful clustering around these areas. For instance, items included content pertaining to perpetration of violence and victimization. This seemed important as individuals who are victimized by violence sometimes perpetuate it later in adolescence (Smith & Ecob, 2007). However, victimization is not always highly correlated with perpetration, which may have negatively impacted the development of items naturally clustering into subdomains of aggressive behaviors. Given these difficulties, it seemed prudent to shorten the item pool down into a very unique and explored facet of sexually aggressive behaviors.

Overall, it appears additional research is needed to understand the relatedness of these domains for aggression in order to inform a larger scale development project worth pursuing. Thus, to address these pitfalls, future research should aim to develop comprehensive and multifaceted measures of risk factors for victimization and perpetration across domains of aggressive behaviors (i.e., physical, verbal, and sexual) separately to serve as a widespread diagnostic tool for conduct-related concerns.

#### **Demographic Differences in Sexually Aggressive Behaviors**

An ANOVA was analyzed across three different samples to determine if there was a significant main effect for the child's reported gender identity on different facets of risk behaviors. Results were variable. In the first study, male adolescents were reported to engage in

higher amounts of sexually aggressive behaviors when compared to female adolescents. This finding is consistent with the available literature indicating boys engage in more perpetration of sexual harm than girls (CDC, 2019). However, in the second and third studies, no significant main effect was found for gender.

One potential reason for these findings was variation in child age. Studies note boys engage in more sexually aggressive behaviors as they grow older than same-aged girls, who commit sexual offenses more than boys from ages six to 14 (Finkelhor et al., 2009). The mean child age across studies was relatively similar, around 13 years old, which may account for the lack of variability between male and female adolescents' reported sexual aggression. Moreover, female adolescents are more likely to offend against family members, whereas literature suggests male adolescents are more likely to offend against peers (Finkelhor et al., 2009). Given that this survey utilized a parental report, parents may be more aware of inter-familial offending than those outside of the family. Although there were mixed findings, these results still indicate the importance of targeting differentiated prevention and intervention methods and safety plans for sexual aggression with school-aged boys versus girls. Gender specific prevention plans focusing on sexually deviant behaviors would help inform youth, parents, clinicians, and educators on identification and intervention with support for adolescent perpetrators and victims.

An ANOVA was analyzed across three different samples, to determine if there was a significant main effect for the child's reported rurality status on different facets of risk factors for aggression. There were mixed findings. The first study produced non-significant effects, whereas the second and third studies indicated rural children engaged in higher amounts of sexually aggressive behaviors when compared to children residing in non-rural areas. Although previous literature suggests mixed results in rural differences for perpetration of aggression, rural

differences in risk factors for aggression found in this study are consistent with some research noting the rate of violent victimization for youth ages 12 to 17 is higher in rural areas than urban and suburban areas (National Center for Victims of Crime, 2017). Literature suggests violence is exacerbated by unique barriers rural families face (Lewis & Reed, 2003). It is possible different patterns of results across studies are related to power issues. For instance, Study 1 had the lowest methodological power (i.e., smallest sample size), suggesting the lowest likelihood of detecting significant differences. Future research should confirm findings stemming from studies 2 and 3 via replication with larger samples sizes.

Noted differences among rural groups on sexually aggressive behaviors is important. There is minimal research reviewing the influence of rurality on the perpetration of sexual aggression in youth (Karriker-Jaffe et al., 2009). Therefore, if confirmed by future studies, the current results suggest a new consideration in the perpetration of harmful sexual acts. Prevention plans should be sensitive to unique barriers rurality places on adolescent development. For example, in rural schools there are notable concerns regarding the elevation of aggressive instances (Bowen & Wretman, 2014). Thus, policies and outreach initiatives focusing on ensuring access to affordable and accessible parenting resources (i.e., education, childcare) and adolescent healthcare should be explored further in efforts to decrease the likelihood of children engaging in harmful sexual acts.

#### **Clinical Implications**

It is important to identify mechanisms supporting the prevention of sexual violence in adolescents. This measure evaluates the frequency, specificity of victims, range of behaviors, and experiences commonly related to sexually violent behaviors in adolescents. Knowing the type and degree of these behaviors is an essential building block in identifying specialized resources to mitigate the effects of aggression in children. Thus, this developed sexually aggressive risk screening tool has the potential to inform treatment options for clinicians, counselors, and other professionals working with adolescents currently or previously engaging in sexually aggressive behaviors. In addition, this measure may be utilized with parents of children seeking treatment for presenting concerns of aggression, sexual hyperactivity, or characteristics of Disruptive Behavioral Disorders.

## Limitations

Although this measure was a valid and reliable assessment of sexually aggressive behaviors, there are several limitations to be addressed. These limitations are associated with the design, item development, and recruitment methods of the study.

Generalizability. The demographics of the participants recruited in the sample were limited. There was disproportionate representation regarding ethnic identity, with increased representation of White individuals and decreased representation of Black/African American and Mexican American/Latino participants. Also, consistent with national trends, the reported gender identity of the respondent's youth appeared to underrepresent non-cis-gender adolescents, including youth identifying as non-binary/genderqueer, transgender, or intersex (The Trevor Project, 2021). Additionally, the parental relationship status reported as divorced or separated was deficient across the three study samples compared to national averages. Specifically, for the mean age group of the three studies, the marriage-to-divorce ratio is 1.3, suggesting these samples have an underrepresentation of separated or divorced parents (Schweiser, 2019). Therefore, to increase the generalizability of results, a reanalysis of the study questions is imperative with more diverse samples of racial identity, gender identity, and parental relationship status. Additionally, this measure was developed for parents within the general public.

Therefore, data were not collected from parents whose children appeared to be at high risk as evidenced by the skewness and kurtosis patterns for the sexually aggressive behaviors factor. The majority of comparative measures in the field for sexual offending risk assessments are conducted by evaluators for children with a history of sex offending. Given the specificity of samples used in current risk assessments, there may be limitations in comparing this measure's adaptability to adolescents within the general public. Therefore, current, evidence-based assessments in the field may not be a suitable comparison to this newly developed measure. Moreover, it is unknown whether the nature of the sample recruited limited the identification of a unique and multifaceted factor structure. It is quite possible that evaluating parental reports from caregivers with at-risk youth might produce meaningful evidence for a 3- or 5-factor structure.

**Sample Differences.** Additionally, to ensure data quality, a significant number of participants were removed across the studies. Such a significant reduction in participants may impact power, leading to difficulties detecting significant effects. Also, given the considerable reduction in sample sizes, it is critical to consider how the removed participants fundamentally differ from retained participants. These differences may alter the identified factor structure and further change the study results. Future research could focus on re-conducting the study with a larger and more diverse sample size to receive a more accurate understanding of youth behaviors and the influence of gender and rurality on sexually aggressive behaviors.

**Caregiver Report.** The targeted reporter of a measure also may influence the accuracy of the data received. Specifically, this study developed a caregiver report for sexually aggressive behaviors. A comparison study between caregiver and child reports of child abuse suggests multiple factors may influence a discrepancy in reporting of events (Chan, 2012). Additionally,

parents may report in a biased and socially desirable manner to uphold their perceived level of respect or status, leading to additional underreporting (Chan, 2012; Paulhus & Vazire, 2007). Moreover, the online survey provided to participants was relatively lengthy, a 177-item survey during Study 1 and Study 2 and a 216-item survey during Study 3, which may have led to increased risk for extreme responding, acquiescent responding, and random responding (Paulhus & Vazire, 2007).

**Cross-Sectional and Correlational Design.** This research only assessed adolescent behaviors at one time point in time. Given the fluidity in risk of behavioral concerns for youth, continuing to monitor and assess violent behaviors and related difficulties is imperative. Thus, to understand the important clinical implications of adolescent sexually aggressive behaviors over time, future research should focus on a longitudinal design to assess how much adolescents engage in new or re-engage in similar harmful behaviors. Furthermore, the final study examined correlations between constructs; however, causational relationships cannot be determined via correlations. Future research may benefit by utilizing an experimental design to identify a causal relationship between sexually aggressive behaviors and other problematic behaviors, violent behaviors, or parental attitudes toward their child's use of aggression.

### **General Conclusions**

Although the initial goal of the project was to develop a comprehensive and multifaceted measure of risk factors for victimization and perpetration of broad aggressive behaviors (i.e., physical, verbal, and sexual), difficulties with item construction and measurement error prevented meaningful interpretations to emerge from the analysis. Instead, using theory and scientific best practices, the study's focus shifted to develop a unique measure of sexually aggressive behaviors. This measure fills a considerable gap in the current literature. At a

preliminary level, this measure appears to be a psychometrically sound parental report for sexually aggressive behaviors with adolescents. Using factor analytic procedures, a unidimensional model was deemed the best fit for the data. This single sexually aggressive behaviors factor was validated against three theoretically relevant constructs (problematic behaviors, violent behaviors, and parental aggressive values). As anticipated, the single factor positively correlated with problematic behaviors, violent behaviors, and parental attitudes toward the use of aggression. As expected, the sexually aggressive behavior factor showed good internal consistency, convergent validity, and incremental validity. In total, these findings suggest this new measure demonstrates preliminary levels of factor stability, reliability, and convergent validity. Finally, the sexually aggressive behaviors factor was analyzed to determine if gender and rurality differences were present. For gender, results were varied and partially consistent with expectations. For rurality status, results were again varied but offer new insights regarding how sexually aggressive behaviors may be expressed in rural communities. In summary, the results indicate that this measure is a preliminary sound parental report of sexually aggressive behaviors among adolescents.

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# APPENDIX A

# DEMOGRAPHIC QUESTIONNAIRE

Please fill out the demographic information regarding you and your child. If you have more than one child between the ages of 12 and 17 in your care, please report on the child who you believe expresses more behavioral health problems.

- 1. Your relationship to the child
  - Biological Mother
  - Biological Father
  - Adoptive Mother
  - Adoptive Father
  - Foster Mother
  - Foster Father
  - Legal Guardian
- 2. If adoptive parent, foster parent, or legal guardian selected...
  - How long have you known the child? \_\_\_\_\_\_
  - How long have you been the primary caretaker for the child?
- 3. How old are you?
- 4. What gender do you identify as?
  - Male
  - Female
  - Intersex
  - Genderqueer or nonbinary
  - Other
  - Prefer not to say
- 5. What race/ethnicity do you identify with the most?
  - White/Caucasian
  - Black/African American
  - Asian/Asian American/Pacific Islander
  - Mexican American/Latino/a/Latinx
  - American Indian/Alaskan Native
  - Asian/Asian American/Pacific Islander
  - Middle Eastern/North African
  - Multiracial
  - Another description not listed
- 6. What is your marital status?
  - Single
  - Married/Partnered/Common Law

- Separated
- Divorced
- Widowed
- 7. How old is your child?
- 8. What sex was your child assigned at birth?
  - Male
  - Female
  - Intersex
- 9. What gender does your child identify as?
  - Male
  - Female
  - Intersex
  - Genderqueer or nonbinary
  - Other
  - Prefer not to say
- 10. What race/ethnicity does your child identify with the most?
  - White/Caucasian
  - Black/African American
  - Asian/Asian American/Pacific Islander
  - Mexican American/Latino/a/Latinx
  - American Indian/Alaskan Native
  - Asian/Asian American/Pacific Islander
  - Middle Eastern/North African
  - Multiracial
  - Another description not listed
- 11. How many siblings does your child have?
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6+
- 12. What is your child's current level of formal education?
  - 6<sup>th</sup> grade or below
  - 7<sup>th</sup> grade
  - 8<sup>th</sup> grade
  - 9<sup>th</sup> grade
  - 10<sup>th</sup> grade

- 11<sup>th</sup> grade
- $12^{\text{th}}$  grade
- Current college student
- 13. What is your child's current GPA/School grades?
  - Above 4.0; A+; 100% or higher
  - 3.5 to 4.0
  - 3.0 to 3.5
  - 2.5 to 3.0
  - 2.0 to 2.5
  - 1.5 and below

14. How many times has your child received detention in the past year?

- 0
- 1-2
- 3-4
- 5-6
- 7-8
- 9 or more

15. How many times has your child received in-school suspension in the past year?

- 0
- 1-2
- 3-4
- 5-6
- 7-8
- 9 or more

16. How many times has your child received out-of-school suspension in the past year?

- 0
- 1-2
- 3-4
- 5-6
- 7-8
- 9 or more

17. How many times has your child experienced troubles with the law in the past year?

- 0
- 1-2
- 3-4
- 5-6
- 7-8
- 9 or more

18. What is your child's current employment status?

• Self-employed

- Part-time employed
- Full-time employed
- Non-employed

19. What type of structure do you and your child live in?

- Family home
- Condominium
- Apartment
- Mobile Home
- Other

20. I consider my hometown to be more...

- Rural
- Urban
- Suburban
- 21. How would you currently describe your family's financial resource status?
  - Poor/Impoverished
  - Some financial resources
  - Substantial financial resources
  - Affluent/Rich
- 22. Has your child participated in mental health services in the past?
  - Yes
  - No
- 23. What is the primary form of discipline you have used with your child?
  - Ignoring
  - Redirection
  - Time-out
  - Grounding
  - Privilege removal
  - Scolding
  - Physical punishment
  - Other not noted above
- 24. How would you describe your child's relationship with you?
  - Very poor
  - Poor
  - Good
  - Very good

25. How would you describe your child's relationship with other siblings?

- Very poor
- Poor
- Good
- Very good

#### APPENDIX B

# EVALUATING PARENTS' PERCEPTIONS OF ADOLESCENT BEHAVIORAL HEALTH RISK

## **Instructions**:

Listed below are items concerning adolescent behavioral difficulties. Adolescents sometimes experience a wide range of difficulties as they develop. Please read each item carefully and decide how true these items are based on your child's actions or experiences in the past **six months**.

Reminder: If you have more than one child between the ages of 12 and 17, please only answer these statements regarding the child you completed the demographic information about.

1- Not at all True 2- Slightly True 3- Moderately True 4- Extremely True

#### I believe my child...

- 1. is spreading rumors about an adult.
- 2. gets even with others.
- 3. causes major harm to themselves needing medical attention.
- 4. frequently hears domestic violence or harming a loved one.
- 5. bullies peers in person.
- 6. has difficulties keeping promises due to drug and alcohol use.
- 7. is acting physically aggressive toward a sibling or another minor in my family.
- 8. is being forced into vaginal or anal sex by a peer.
- 9. is not well liked by other peers.
- 10. has problems paying attention
- 11. engages in excessive masturbation.
- 12. breaks own possessions.
- 13. steals when others are not watching.
- 14. is name calling/verbally bashing a peer.
- 15. loses temper easily.
- 16. runs away from home.
- 17. is being threatened by an adult.

18. lies to avoid being punished.

1- Not at all True 2- Slightly True 3- Moderately True 4- Extremely True

## I believe my child...

19. engages in sexual activity under the influence of substances.

- 20. uses profanity inappropriately.
- 21. accidentally hurts themselves while using drugs or alcohol.
- 22. is the target of physical harm by a sibling or another minor in my family.
- 23. is verbally threating a peer.
- 24. is socially dominant.
- 25. frequently says or does things without thinking about the consequences.
- 26. has quick mood changes while using drugs or alcohol.
- 27. is forcing vaginal or anal sex with a peer.
- 28. blames family members for his/her/their difficulties.
- 29. purposefully annoys others.
- 30. receives detention in school.
- 31. is verbally sexually harassing a peer.
- 32. is the target of rumors spread by a peer.
- 33. would have a difficult time leading peers.
- 34. is manipulative.
- 35. engages in an inappropriate amount of consensual sexual activity with other minors.
- 36. frequently reads inappropriate or violent literature.
- 37. harasses or bullies peers online.
- 38. is being verbally sexually harassed by an adult.
- 39. is spreading rumors about a peer.
- 40. has many friends he/she/they can talk about his/her/their joys and sorrows with.
- 41. argues with authority figures.
- 42. uses physical force to dominate others.
- 43. acts out.
- 44. has received a warning from law enforcement for drug or alcohol use.
- 45. is the target of name calling/verbal bashing by a peer.
- 46. is forcing vaginal or anal sex with a sibling or another minor in my family.
- 47. frequently brags or boasts
- 48. is frequently restless.

49. uses weapons in fights.

1- Not at all True 2- Slightly True 3- Moderately True 4- Extremely True

## I believe my child...

50. skips classes.

- 51. teases animals.
- 52. is often in a bad mood.
- 53. negatively compares him/herself/their self to other peers.
- 54. is verbally threating a sibling or another minor in my family.
- 55. is being fondled or sexual touched by a peer.
- 56. engages in an inappropriate amount (large amount in a short period of time) of romantic relationships.
- 57. easily gets angry when he/she/they does not get what he or she wants.
- 58. expresses feelings of guilt or regret after hurting someone else.
- 59. has difficulties maintaining responsibilities due to drug and alcohol use.
- 60. is the target of rumors spread by an adult.
- 61. is verbally sexually harassing a sibling or another minor in my family.
- 62. frequently breaks rules that he/she/they does not agree with.
- 63. frequently argues with parents about rules.
- 64. inflicts minor harm (e.g., cuts, bruises, biting, head banging) to him/her/their self not needing medical attention.
- 65. is the target of physical harm by a peer.
- 66. constantly seeks attention.
- 67. is uncaring toward others' feelings.
- 68. is engaging in delinquent acts.
- 69. frequently watches violent TV shows or movies.
- 70. is being verbally sexually harassed by a peer.
- 71. is name calling/verbally bashing an adult.
- 72. is easily annoyed or irritated by others.
- 73. pressures others into engaging in sexual activities.
- 74. steals large, valuable items (e.g., tv's, laptops, cars).
- 75. argues with others over drug or alcohol use.
- 76. lacks remorse.
- 77. is initiating sexual fondling or unwanted sexual touching a sibling or another minor in my family.
- 78. is being forced into vaginal or anal sex by an adult.

79. typically demands a lot of attention from others.

1- Not at all True 2- Slightly True 3- Moderately True 4- Extremely True

## I believe my child...

- 80. enjoys being mean.
- 81. engages in masturbation leading to physical distress (e.g., swelling, bruises, bleeding).
- 82. frequently witnesses domestic violence or harming of a loved one.
- 83. frequently defies rules or curfews at home.
- 84. is inappropriately loud for a given setting.
- 85. is spreading rumors about a sibling or another minor in my family.
- 86. is timid or quiet around others he/she/they does not know
- 87. is bullied by peers in person.
- 88. kills animals.
- 89. blames others for his/her/their own mistakes.
- 90. has strong family support.
- 91. is the target of name calling/verbal bashing by an adult.
- 92. has difficulties forming close relationships.
- 93. engages in unprotected (without use of birth control or condom) sexual activity.
- 94. is being forced into vaginal or anal sex by a sibling or another minor in my family.
- 95. graffities private property.
- 96. is initiating sexual fondling or unwanted sexual touching with a peer.
- 97. steals items of minimal value (under \$20).
- 98. has faced consequences of the law for drug or alcohol use.
- 99. is acting physically aggressive toward a peer.
- 100. is harassed or bullied by peers online.
- 101. intentionally damages or destroys items that belong to others.
- 102. is verbally threating an adult.
- 103. is being threatened by a sibling or another minor in my family.
- 104. frequently watches violent videos on social media.
- 105. is frequently truant from school.
- 106. is the target of physical harm by an adult.
- 107. intentionally sets fires for the purpose of causing damage.
- 108. often plays by themselves.
- 109. argues with other peers.

110. does not feel guilty after misbehaving.

1- Not at all True 2- Slightly True 3- Moderately True 4- Extremely True

#### I believe my child...

- 111. engages in sexual activity that negatively impacts his/her/their relationships with friends or family.
- 112. is name calling/verbally bashing a sibling or another minor in my family.
- 113. does not understand why others get upset easily with them.
- 114. frequently shows off when with peers.
- 115. is an even-tempered individual.
- 116. carries a knife or other weapon in public.
- 117. is confident in large groups of peers.
- 118. teases or aggravates peers.
- 119. gets in legal trouble for fighting or assaulting others.
- 120. has angry outbursts while using drugs or alcohol.
- 121. is being verbally sexually harassed by a sibling or another minor in my family.
- 122. enjoys intimidating others.
- 123. raises his/her/their voice to get what he/she/they wants.
- 124. physically harms animals.
- 125. is being fondled or sexual touched by an adult.
- 126. frequently plays violent video games (involving shooting or fighting).
- 127. is verbally sexually harassing an adult.
- 128. is the target of rumors spread by a sibling or another minor in my family.
- 129. is easily jealous.
- 130. is called into the principal's office frequently.
- 131. has difficulties trusting others.
- 132. steals while confronting a person.
- 133. is being fondled or sexual touched by siblings or other minors in my family.
- 134. has few friends he/she/they can talk about his/her/their problems with.
- 135. interrupts others when they are speaking.
- 136. is acting physically aggressive toward an adult.
- 137. gets suspended or expelled from school.
- 138. is stubborn.
- 139. frequently breaks rules at school.

140. is forcing vaginal or anal sex with an adult.

1- Not at all True 2- Slightly True 3- Moderately True 4- Extremely True

## I believe my child...

- 141. accidentally hurts someone else while using drugs or alcohol.
- 142. is the target of name calling/verbal bashing by a sibling or another minor in my family.
- 143. is viewed by others as domineering.
- 144. breaks into someone else's property.
- 145. frequently watches violent acts on the news.
- 146. is initiating sexual fondling or unwanted sexual touching with an adult.
- 147. engages in an inappropriate amount of consensual sexual activity with adults.
- 148. is being threatened by a peer.
- 149. graffities public property.
- 150. is typically a leader amongst his/her/their peers.
- 151. talks too much.
- 152. is rarely fortunate in building reliable friendships

Note: Items in italics are reverse-scored.

# APPENDIX C

# MODIFIED SEXUALLY AGGRESSIVE BEHAVIORS MEASURE

- 27. is forcing vaginal or anal sex with a peer.
- 31. is verbally sexually harassing a peer.
- 35. engages in an inappropriate amount of consensual sexual activity with other minors.
- 46. is forcing vaginal or anal sex with a sibling or another minor in my family.
- 56. engages in an inappropriate amount (large amount in a short period of time) of romantic relationships.
- 61. is verbally sexually harassing a sibling or another minor in my family.
- 73. pressures others into engaging in sexual activities.
- 77. is initiating sexual fondling or unwanted sexual touching a sibling or another minor in my family.
- 81. engages in masturbation leading to physical distress (e.g., swelling, bruises, bleeding).
- 93. engages in unprotected (without use of birth control or condom) sexual activity.
- 96. is initiating sexual fondling or unwanted sexual touching with a peer.
- 111. engages in sexual activity that negatively impacts his/her/their relationships with friends or family.
- 140. is forcing vaginal or anal sex with an adult.
- 146. is initiating sexual fondling or unwanted sexual touching with an adult.
- 147. engages in an inappropriate amount of consensual sexual activity with adults.