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## Risk Factors Associated with the Arrest for Adolescent to Parent Abuse

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RISK FACTORS ASSOCIATED WITH THE ARREST FOR  
ADOLESCENT TO PARENT ABUSE

by

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## **ABSTRACT**

This study explored risk factors associated with the arrest for adolescent to parent abuse (ATPA) when compared to arrest for a similar violent misdemeanor against a non-parent. The phenomenon of ATPA is widely under-researched and there is little in terms of prevention policy or treatment. Using 18,548 risk assessment screens performed with adolescents (12-17) arrested in Florida for a violent misdemeanor, and guided by previous literature and social ecological and social bond theories, this analysis explored the relationship between risk factors (categorized as individual characteristics, beliefs, behavior, commitment and involvement and attachment) and arrest for ATPA versus arrest for a violent misdemeanor against a non-parent.

Of the 17 hypothesized risk factors, 9 risk factors were found to be significant risk factors associated with the arrest for ATPA versus the arrest for a violent misdemeanor against a non-parent. Age and ethnicity/race were both found to be associated with ATPA arrests. Risk factors found to increase the likelihood of being arrested for ATPA included a history of mental health problems, the adolescent witnessing domestic violence, the adolescent being a victim of abuse, and adolescents' normative beliefs in resolving conflict. The findings of this study add to the current body of literature and can be used to inform the creation of new policies and interventions in the realm of ATPA and family violence.

For Rosemary

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## **LIST OF ACRONYMS/ABBREVIATIONS**

ATPA – Adolescent to Parent Abuse

C-PACT – Community Positive Achievement Change Tool

FL-DJJ – Florida Department of Juvenile Justice

SBT – Social Bonds Theory

SEM – Social Ecological Model

## **CHAPTER 1: INTRODUCTION**

### **Adolescent to Parent Abuse**

The social phenomenon of adolescent to parent abuse (ATPA) is widely under researched, although it is anecdotally a familiar occurrence within the fields of child welfare, criminal justice, and mental health. There is little agreement on a name for the phenomenon, as well as a precise definition. The most commonly used terms are adolescent to parent abuse (ATPA), child to parent violence, and parent abuse. For the purposes of this research, the term adolescent to parent abuse is utilized as the name for the use of physical violence directed towards a parent by his or her biological child between the ages of 12 and 17 (Holt, 2011). This study explored factors that distinguished between being arrested for ATPA versus being arrested for a violent misdemeanor against a non-parent.

ATPA carries a strong stigma, often referred to as a double stigma. The double stigma exists because there are often behavioral issues, which are difficult for parents to discuss with others, and the abuse directed towards the parent is challenging to admit and report to authorities. ATPA falls among the areas of child abuse, domestic violence, and elder abuse. While not all perpetrators of ATPA have been abused, studies have consistently found a relationship between the presence of child abuse and the presence of ATPA (Boxer, Gullan, & Mahoney, 2009; Cornell, & Gelles, 1982; Lyons, Bell, Fréchette, & Romano, 2015). Early studies found a relationship between the presence of domestic violence in the household and the presence of ATPA (Peek, Fischer, & Kidwell, 1985) and have been supported by more recent research findings (Edenborough, Jackson, Mannix, & Wilkes, 2008; Contreras and Cano, 2014a, 2014b). Based on the research referenced above, ATPA sits within the realm of family violence; research



has also found mental health, peer relationships, parenting style, and community-based concerns to be risk factors as well.

### **Theoretical Frameworks**

This study utilizes two theories to guide the exploration of the risks associated with an arrest for ATPA versus an arrest for a violent misdemeanor against a non-parent. For a greater understanding of why a person may or may not behave in a certain manner or exhibit abusive behaviors, social control theory (specifically social bond theory) and the social ecological model are used as guiding frameworks. Social bond theory is used to explain and predict why people do not participate in delinquent or deviant behaviors (Hirschi, 1969). Further, the social ecological model posits that an individual's development and behaviors are impacted through many levels of interaction (Bronfenbrenner, 1994, 1977). The levels included for the purposes of this study were the individual and interpersonal. The Centers for Disease Control and Prevention (CDC) have based their prevention efforts on the adaptation of the social ecological model that focuses on the individual, interpersonal relationships (family and peers), and the community.

Previous studies have not utilized multiple theoretical frameworks, nor has the previous research explored multiple risk factors. Studies have researched single factor impacts on the presence of ATPA or used social ecological theory to explain the impact of environmental factors on the presence of ATPA. This study will contribute to the current research by combining the social ecological model and social bond theory to guide the exploration of risk.

### **Aim of the Study**

The purpose of this study was to identify risk factors for ATPA versus the risk factors for adolescent violence against a non-parent. This study is a starting point for future research and

informing policy on the use of interventions and prevention of ATPA. This study tested the independent effects of specific risk factors on the likelihood of being arrested for ATPA versus a violent misdemeanor in which the parent is not the victim.

The specific aim of this study was to:

Explore risk factors associated with an arrest for ATPA versus arrest for a violent misdemeanor against a non-parent. These variables included within the study were academic performance, attendance, the use of alcohol and/or drugs, history of mental health concerns, witnessing violence, being a victim of abuse, and the alignment with social norms in terms of behavior.

## **Research Design**

### **Method**

This exploratory study utilized a cross-sectional, retrospective research design. This was an appropriate design based on the source of data (discussed further below).

### **Sample**

The sample for this study were cases drawn from the Florida Department of Juvenile Justice (FL-DJJ) records of arrest for misdemeanor assault or battery from June 2007 to June 2016. The data were gathered from the Community Positive Achievement Change Tool (C-PACT) Pre-Screen Assessment tool. This tool is used by the FL-DJJ to gather data from juveniles arrested for all crimes in the state. All cases used within the study are adolescents with first time arrests for violent misdemeanor offenses coded as assault or battery.

## **Analysis**

This study utilized logistic regression analyses to test the effects of hypothesized risk factors on the odds of being arrested for ATPA versus being arrested for a violent misdemeanor against a non-parent.

## **CHAPTER 2. REVIEW OF THE LITERATURE**

### **Characteristics and Associations of Perpetrators of Adolescent to Parent Abuse**

#### **Definition**

A clear definition of Adolescent to Parent Abuse (ATPA) is lacking, as is a consistent name for the phenomenon. Parent abuse is the most commonly used term (Cottrell, 2001; Cottrell & Monk, 2004; Holt, 2012), however, the use of this term is also used to refer to elder abuse. The differences in definition and name appear to depend on the perspective of the professionals who encounter ATPA (Holt & Retford, 2013). For example, mental health practitioners feel the lack of familiarity with the phenomenon creates a hesitancy to label or define the behavior as such (Nixon, 2012). Professionals working in the field of social work see the phenomenon as unstable family functioning and define ATPA as a behavior disorder (Holt & Retford, 2013; Nixon, 2012). Those working in the field of criminal justice see the phenomenon as criminal and define the action as a criminal activity. Regardless of discipline, all areas can agree that the phenomenon fits into the field of family violence, but cannot be clearly represented as abuse or domestic violence. For the purposes of this research, the term adolescent to parent abuse will be utilized as the name for use of physical violence directed towards a parent by his or her child (biological only in this study) between the ages of 12 and 17 (Holt and Retford, 2013; Hong, Kral, Espelage, & Allen-Meares, 2012).

According to a qualitative study of practitioners who have worked with families in which ATPA is present, social workers tend to focus on the adolescent in the situation and search for a cause of the aggression (Nixon, 2012). Findings of the same study show that workers in the criminal justice or court system seek to arrest the adolescent, as he or she is a perpetrator of a

crime. Youth advocates and child protective workers, like social workers, see the acts of aggression and violence as response to the nature of parenting, presence of abuse and/or violence, or similar environmental causes.

### **Prevalence**

Prevalence of ATPA is difficult to establish due to the lack of agreement about how to define it. The difficulty can be attributed to the varying definitions and names, as well as the recency of the research into the phenomenon. Early studies began with an attempt to quantify the phenomenon of ATPA and gather prevalence data. For example, when sampling 2,213 high school juniors and seniors, roughly 7-11% of the all-male sample reported an incident of physical violence towards a parent (Peek, Fischer, & Kidwell, 1985). Browne and Hamilton (1998), in a study of 469 undergraduate psychology students, found 14% of the youth surveyed were violent toward a parent and 3.8% of those were severely violent toward a parent. Kethineni (2004), through the review of juvenile arrest records in McClean County, Virginia, found that 10% of all juveniles sampled had been arrested for physically assaulting his or her parents. Further prevalence studies have shown that there were barriers in accessing juvenile data, including lack of specific tracking of ATPA and the overall lack of reporting by parents. The term “veil of silence” has been coined by researchers to describe the secrecy surrounding ATPA, due to the stigma attached (Holt, 2013; Hunter & Nixon, 2016; Hunter & Piper, 2012).

Lack of concrete prevalence data stems, at least in part, from this stigma. Mothers who are victimized by their children minimize the experiences based on feedback from other family members who blame the mothers for not being able to control their children. These mothers often do not report incidents of abuse because they do not know where to report it (Edenborough,

Jackson, Mannix, & Wilkes, 2008), leaving them with a feeling of powerlessness (Holt, 2011). Parents are also unwilling to report the violence out of fear of what may happen next, whether that is retribution or fear of their child's involvement with the criminal justice system. When police files are used to establish prevalence data, it is difficult to differentiate one instance of a violent act from an ongoing issue of abuse utilizing strictly police case files because the information is based on a singular event.

As actual prevalence data has been difficult to gather, researchers have explored elements of the experience to get a better understanding of the persons involved. For example, in order to determine the characteristics of perpetrators, the seminal research of Laurent and Derry (1999) suspected that the phenomenon was related to mental health issues, so they reviewed 645 case files of children and adolescents hospitalized on a psychiatric unit over a nine year period. Of those patients, 3% were found to exhibit abusive aggression against a parent, the average age of the offender was 14, and males were twice as likely to abuse their mothers. These early findings lead to further study examining gender and age of the perpetrator.

Other researchers have reviewed police files, surveyed large numbers of youth, interviewed practitioners, and interviewed parents in order to distinguish the characteristics of perpetrators and identify risk factors associated with ATPA (Calvete et al., 2014; Coogan, 2011a; Cottrell & Monk, 2004; Holt, 2012; Holt & Retford, 2013; Hong et al., 2012). Research findings concerning the demographic characteristics of perpetrators are varied, as discussed in the next section.

## **Characteristics of Perpetrators of ATPA**

### **Gender, Ethnicity/Race, Socio Economic Status**

There is very little agreement about demographic characteristics of perpetrators of ATPA. Research is inconsistent in reporting whether gender, ethnicity, race, and/or socio-economic status (SES) have an impact, and the research has not specifically identified which gender, ethnicity, race, or level of SES presents higher risks of ATPA.

A number of studies have examined the gender dynamics of perpetrators and victims of ATPA. Early researchers of ATPA, Agnew and Huguley (1989) and Paulson, Coombs, and Landsverk, (1990) found daughters to be more likely to utilize violence against a parent. Walsh and Krienert (2007) found female perpetrators of aggravated assault were 31% of their sample. Females also tended to be younger at the time of the offense compared to males. Others have found daughters less likely to utilize violence than their male counterparts (Hong et al., 2012). In a sample of 83 adolescents who had been arrested and charged with battery against a parent, Ketheineni (2004) found a higher percentage were male perpetrators. Based on these studies, there is little agreement on which gender is more likely to be a perpetrator of ATPA.

Early research on the gender of the parent also found differing results. Peek et al. (1985) found the violent acts were more likely to be towards the father, but, in an analysis of police reports, Evans and Warren-Sohlberg (1988) found son-to-mother aggression occurred more (49%) than female to mother (33%) and son-to-father (16%) or daughter-to-father (1%). Calvete, Orue, and Gamez-Guadix (2013) initially created the Child-to-Parent Aggression Questionnaire (CPAQ) to gather prevalence data and found the tool useful in extrapolating characteristics of perpetrators. Utilizing a sample of 2,719 adolescents (13–18 years old), a

confirmatory factor analysis showed psychological and physical aggression towards a mother occurred more often than towards a father (Calvete et al., 2013). Utilizing crime reporting by parents to police, Condry and Miles (2013), in an analysis of 1,892 cases, found 87% of the violent or aggressive acts were son-to-mother (male to female).

It is possible that other factors, such as race and ethnicity, confound the findings on gender. Some research has indicated that white males have been found to be perpetrators more than males of other ethnicities and races, particularly when the offense is against the mother (Hong et al., 2012; Kethineni, 2004; Walsh, Krienert, & Crowder, 2008; Walsh & Krienert, 2009). Perpetrators are more often in a higher social economic status bracket (based on family income, ethnicity/race, use of public assistance, and single parent household status) than non-perpetrators (Nock & Kazdin, 2002). Specifically, adolescents from European-American families with higher levels of parental stress and lower levels of frustration tolerance were more likely to be aggressive, when compared to African-American adolescents and adolescents of other races/ethnicities.

### **Risk Factors Identified in the Literature**

According to the World Health Organization (2016), a risk factor is any “attribute, characteristic, or exposure” (pg.1) that impacts the likelihood of a negative outcome occurring. Protective factors are experiences or exposures that can mitigate or buffer the negative outcomes. Researchers have identified a number of possible risk factors for ATPA (Agnew & Huguley, 1989; Benda & Corwyn, 2002; Brezina, 1999; Contreras & Cano, 2014a, 2014b; Coogan, 2011a). These possible risk factors include parenting style (be it rigid and aggressive or loose and inconsistent), the experience of childhood abuse (making the ATPA either a way to



terminate the abuse or a response to the abuse), family instability (i.e. stress, communication problems, single parent homes, multi-generational parenting), the presence of domestic violence between parents, poor peer relationships, and mental health concerns of the adolescent. The literature concerning risk, in a general sense, includes four domains: individual, family, peer, and community. These domains interact and influence a person's development, predicting future behaviors (Appleyard, Egeland, van Dulmen, & Sroufe, 2005). The following section is a discussion of several of these possible risk factors, organized by individual factors and interpersonal factors. The following section will also discuss the influence of cumulative risk and the interaction of risk factors.

### **Individual**

At the individual level, behavior or mental health issues, being a witness to violence or a victim of violence have been found to be associated with higher levels of aggression and violence, but academic connection (school performance or school related activity) and a sense of purpose is considered a protective factor (Stoddard et al., 2013; Stoddard, Zimmerman, & Bauermeister, 2012). The following section will discuss research of ATPA in this domain.

#### **Presence of Child Abuse**

The presence of delinquency and aggression in adolescents has been shown to have a relationship to his or her previous experiences of being abused by a parent (Baglivio et al., 2016; Barrett, Katsiyannis, Zhang, & Zhang, 2014; Kratcoski & Kratcoski, 1982). Previous research has focused on exposure to child abuse as a possible risk factor of ATPA. Early research findings began to show that abuse at the hands of the parent decreases when the child begins to "fight back". In a sample of university students (not all survivors of abuse), 14.5% stated he or

she had used violence against at least one parent and of those students, 80% had previously been victims of abuse by a parent (Browne & Hamilton, 1998). Utilizing a sample of 232 adolescent/mother dyads, Boxer, Gullan, and Mahoney (2009) found 57% of sons and 49% of daughters were aggressive in response to previous instances of aggression from the mother. Lyons, Bell, Frechette, and Romano (2015), asking a sample of 365 college-aged students to complete a survey about the disciplinary tactics used by his or her parents, found an association between the presence of child abuse and adolescent abuse directed toward the mother. Based on these findings, it appears that the presence of child abuse creates a reciprocal environment for violence. Given that there is a positive relationship between previous abuse at the hands of a parent and the development of ATPA (Brezina, 1999), previous exposure to child abuse, as a possible risk of ATPA, was included in this study.

## **Mental Health**

Poor or diminished mental health has been shown to negatively impact multiple elements of an adolescent's life and development, including the child-parent relationship, social engagement, academic performance, and the development of self-esteem and self-worth (Ruttle, et.al., 2011). Internalizing behaviors (such as depression or anxiety) can lead to externalized behaviors (the demonstration of aggression or violence) (Petty et al., 2008). Environmental factors, such as child abuse or the presence of domestic violence, increase a youth's risk for internalizing behaviors (Moylan et al., 2010) and the internalizing behaviors can manifest externalizing behaviors. Adolescents who are exposed to domestic violence and/or abused exhibit internalizing and externalizing behaviors in the clinical range at a higher rate than adolescents that are not exposed to violence or abuse (Bourassa, 2007).

The link between internalized behaviors and violence has been reported in research findings on ATPA. To assess the impact of mental health as a risk factor to ATPA, Calvete et al. (2013) surveyed 1,072 adolescents in Spain. Participants were asked to report aggression towards a parent along with whether the aggression was proactive or reactive, if the participant experienced depression or depression symptoms, and the existence of substance abuse in the adolescent. The findings showed proactive aggression, depression, and substance abuse in the adolescents were all predictors of ATPA.

In a study of adolescents with Attention Deficit Hyperactivity Disorder (according to the DSM-IV-TR diagnostic criteria), over half of the 74 participant sample exhibited abusive actions towards the parent (Ghanizadeh & Jafari, 2010). Utilizing a sample of outpatient adolescents (without divulging mental health diagnoses) it was found that adolescents exhibiting abusive tactics had more oppositional behavior, less adaptability, and were demanding of the parent (Nock & Kazdin, 2002). Based on these findings, mental health was included in the study as a possible risk factor of ATPA.

## **Interpersonal Relationships**

### **Family**

A positive and supportive relationship with a parent is associated with lower risk of aggression, while family aggression is a risk factor for youth violence (Stoddard, Zimmerman, & Bauermeister, 2012). Utilizing data from the Pittsburgh Youth Study, Jolliffe, Farrington, Loeber, and Pardini (2016) found physical punishment and parental stress to be significant risk factors for adolescent violence. The following section will discuss family and the relationship to ATPA.

**Parenting Style.** Studies on parenting style have found parents who combine warmth, firmness, and clarity in expectations are considered to yield the most positive results in the behavior of the child (Miller-Graff, Cater, Howell, & Graham-Bermann, 2016). Positive parenting results in better social outcomes, positive behaviors, and less delinquency. Positive parenting is also associated with lower levels of aggression in children. Poor family relationships were found to have a direct effect on child-to-parent violence in a study of 585 children between the ages of 12 and 18 (Ibabe & Bentler, 2016). In the same study, harsh parenting or uninvolved parenting were also associated with increased aggressive behaviors by adolescents. Parenting style (specifically the exertion of power) has been related to the presence of physical violence. Utilizing the Quebec Longitudinal Study of Kindergarten Children (Rouquette et al., 2014), the impact of parenting style was researched in order to find if there is a link between harsh parenting and ATPA (Pagani et al., 2004). The researchers found that aggressive parenting predicted abuse towards the mother. The study also noted that long term harsh punishment (rather than only a few events) increased the odds of ATPA occurring. Similarly, Contreras and Cano (2014a) found lack of open communication and problematic communication (criticism and rejection), along with rigid parenting were likely to occur in adolescent toward father instances of ATPA. The same was shown when the victim of ATPA was the mother. Parenting style was represented in the study conducted by Contreras and Cano (2014a) as a possible risk factor.

**Domestic Violence.** Domestic violence between parents (or caregivers) in a household in which a child has grown up, has been found to be significantly related to ATPA (Brezina, 1999; Lyons et al., 2015; Margolin & Baucom, 2016; Margolin & Gordis, 2000; Winstok, 2015). Drawing from a sample of adolescents in Spain, Ibabe, Jaureguizar, and Bentler (2013) found both parent-to-child violence (not termed child abuse in this particular study) and parent-to-

parent violence to be associated with ATPA. Additional findings indicate that male children were more likely to be aggressive to their mothers if the fathers were abusive towards their mothers. According to McCloskey and Lichter (2003), in a longitudinal study of 296 youths exposed to marital violence in their homes, marital violence in a household only impacted the aggression towards a parent when the child was older than 18. When using a control group of non-offenders, it was found that adolescent criminal offenders experienced high levels of verbal abuse in their households (Spillane-Grieco, 2000). It appears that exposure to violence or trauma during childhood impacts the ability of the child to form attachment to others, including the parent (Ogden & Fisher, 2015). Therefore, this supported the inclusion of domestic violence in the homes as a possible risk factor to ATPA.

**Family Instability.** Stable family environments have a positive impact on child development and stability in the adolescent years (D. Lee & McInahan, 2016; Lewis, Cramer, Elliott, & Sprague, 2014; Provenzi, Olson, & Tronick, 2016). When adolescents feel they have a close knit and supportive family, there is a negative association with the presence of ATPA (Ibabe, Jaureguizar, & Bentler, 2013a). When compared to non-perpetrators of ATPA, adolescents who abuse their parents are more likely to have experienced family instability in the form of divorce, separation, single parenting, or multi-generational parenting and have self-reported the inability to relate to their family members (Kennedy, Edmonds, Dann, & Burnett, 2010). When the mother is the victim, the household is often a mother headed, single parent home (Contreras & Cano, 2014). Nock and Kazdin (2002) found in a sample of adolescents exhibiting aggressive behaviors toward a parent in outpatient mental health treatment that the families in which the patients were coming from showed high levels of parental stress and poor family communication. Perpetrators express a lack of close or nurturing relationships with their

parent (Paulson, Coombs, & Landsverk, 1990). Perpetrators also express a poor sense of well-being attached to their families. It appears family instability creates an atmosphere in which children do not have the proper tools to manage their reaction to disputes within the household. This study examined family instability as a possible risk factor.

### **Peer Relationships**

Research in related areas of development, such as sociology and psychology, are supportive of the impact peer relationships have on adolescents (Prinstein & Dodge, 2008; Williams & Anthony, 2015). Pro-social peer relationships lower the risk of aggression or violence. In a study of the impact of social support on dangerous behaviors, researchers discovered, utilizing a growth curve model, an increase of one unit of social or peer support saw a 5% decrease in the likelihood of dangerous behavior occurring (Farrell, Bolland, & Cockerham, 2016). Similarly, children engaging in pro-social behaviors (with pro-social peers) have been found to be more resilient and resiliency is a protective factor (Jaffee, Caspi, Moffitt, Polo-tom, & Taylor, 2007). Conversely, relationships and friendships with other youth taking part in delinquent behavior increases the likelihood of a person also participating in delinquent behavior (Stoddard, Zimmerman, & Bauermeister, 2012).

Specific to ATPA, the impact of peer relationships has shown that adolescents who utilize aggressive and abusive tactics toward their parents have friends who also utilize aggressive tactics towards their own parent, approve of violence, and have poor relationships with their parents (Agnew & Huguley, 1989). Similarly, adolescent perpetrators of ATPA are more likely to have friends that own firearms and have personal gang affiliations than non-perpetrators (Kennedy et al., 2010). In a qualitative study utilizing four focus groups (mothers of

adolescents who had been violent to a parent, fathers of adolescents who had been violent to a parent, adolescents who had been violent to a parent, and professionals working in ATPA), with the of exploring differing perspectives on ATPA, researchers discovered that parents attributed violence from adolescents to poor influence of peers (Calvete et al., 2014). Based on the limited research on the topic of peer influence, this factor was included in the study.

### **Involvement in Schools**

Children spend a majority of their time in school and school provides children with access to adults outside of their family. In a study of 652 adolescents moving from middle school into high school, based on the Social and Health Assessment survey (Weissberg, Voyce, Kaspro, Arthur, & Shriver, 1991), students with low attachment to their schools reported higher levels of violence and aggression (Frey, Ruchkin, Martin, & Schwab-Stone, 2009). In contrast, adolescents who were engaged in school, showed less violent behaviors (Fontaine, Brendgen, Vitaro, & Tremblay, 2016). For instance, Vassallo, Edwards, and Forrest (2016), in a five wave, thirty-year longitudinal study of children, found that children who have bonded with teachers have lower instances of fighting. Similarly, academic achievement, as evidenced by grades and participation, is considered a protective factor (Joliffe et al., 2016).

There is little research on the impact of community on the presence of ATPA. Pagani et al. (2004) researched the behaviors of adolescents in a school setting, but not specifically the impact of school on the adolescent who abuses a parent. Although still not completely fulfilling the gap on the impact of school on the presence of ATPA, a study of 687 adolescents (age 12-16) found relationships with school professionals to be a predictor of ATPA (Jaureguizar, Ibabe, &

Straus, 2013). This study builds on this research by including the community level factor of academic achievement and attendance at school.

### **Summary of Literature Findings**

In summary, the literature has identified specific risk factors associated with the presence of ATPA. Harsh, aggressive, or absent parenting has been linked to ATPA, as has the presence of child abuse. Family instability and the presence of domestic violence in the home affects the presence of ATPA. Along with mental health and peer relationships, relationships with adults in the school setting have been found to predict ATPA.



### **CHAPTER 3: THEORETICAL FRAMEWORK**

This study utilizes the guiding frameworks from two theories to explain abusive behavior toward a parent. As the study follows an exploratory method, the two frameworks are used to inform the researcher and the study on possible risk factors associated with ATPA. The following section discusses each framework, previous use of the frameworks, and how the framework relates to ATPA.

#### **Social Ecological Model**

The social ecological model has been utilized in the fields of psychology, sociology, and social work to demonstrate the interactions between levels within a person's environment (interpersonal or structural) and how these interactions influence the development of the person. Bronfenbrenner (1994, 1977) asserted that humans are impacted by nested layers of the environment. Society in general affects the communities in which we live, those communities affect the relationships we have, and these relationships affect our individual development. The social ecological model (or framework) is a highly utilized and regarded structure when presenting how behavior is impacted by the interactions people have with their surroundings (Ali & Naylor, 2016). This model has been cited widely in research in the areas of inter-personal violence (domestic violence), child abuse, and family violence. The CDC has adopted prevention approaches based on the model due its ability to recognize the many factors involved with perpetration and experiences of violence (Centers for Disease Control and Prevention, 2015; Dahlberg & Krug, 2002).

The social ecological model presents three levels which are nested within each other and overlap. The three levels, individual, relationships, and community, have elements within the

level that seep into the other levels. Figure 1 depicts the levels and the way they overlap with each other; note the dashed line separating the levels because the boundaries are permeable. Each level may house a part of another level. For example, a person may work in a school (the community level) but have a relationship with an individual within the school (the relationship level). Age, gender, race/ethnicity, mental health status, and substance use/misuse are examples of factors within the individual level.

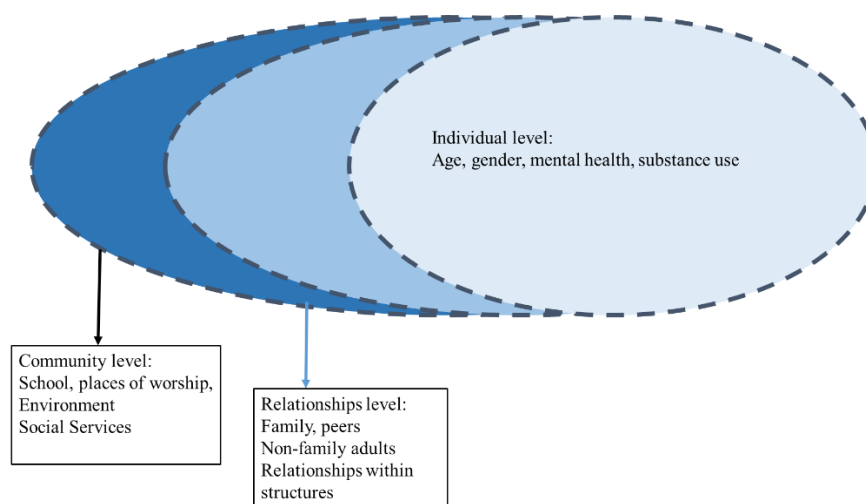


Figure 1. Social Ecological Model

The next level includes relationships with family members and peer groups, and relationships within environmental entities such as schools, places of worship, or after school programs (in which the structure itself is housed within the community level) (Ali & Naylor, 2016; CDC, 2015). The relationships are of particular importance because children and youth, through observational learning, emulate the behaviors of the others around them (Bandura, 2006; Bandura, Caprara, & Barbaranelli, 2011). Many of the studies on the topic of ATPA focus on the presence of violence in the family and relationship factors (IPV, DV, and/or child abuse) (Benda & Corwyn, 2002; Calvete, Orue, & Gámez-Guadix, 2013; Contreras & Cano, 2014b;

Cottrell, 2001; Gallagher, 2008; Tew & Nixon, 2010). The studies have found an association between family violence and the presence of ATPA, but little focus on social processing, why the adolescent becomes the perpetrator of ATPA. Calvete, Gamez-Guadix, and Garcia-Salvador (2014) developed the Social Information Processing (SIP) Questionnaire to study the cognitive processes an adolescent goes through before perpetrating an aggressive or violent act. This questionnaire was administered to 1,272 adolescents in public and private school settings. The results indicated that two variables, hostile attribution and anger, are predictors of ATPA. Further research is needed, but the path between learned aggression, attributed hostility (the person's own reason for their hostility or aggression), and the act of ATPA may be present within the relationship level of the social ecological model.

Within the relationship level of the social ecological model, the types of relationships adolescents maintain can impact the perpetration of ATPA. For example, youth who feel they matter to their families are less likely to be perpetrators of ATPA (Elliott, Cunningham, Colangelo, & Gelles, 2011). Mattering is a term utilized to describe the extent to which a person feels he or she has an impact on their environment and he or she is a significant part of the world around them (Elliott, Kao, & Grant, 2004). Positive peer relationships and social supports have positive relationships with stability and negative relationships with the presence of delinquency or violence (Donlan, Lynch, & Lerner, 2015; Williams & Anthony, 2015).

The community level contains variables such as the physical environment, government systems (education, healthcare, protection agencies, etc.), and other quasi-structures in which youth may interact (gangs, clubs, social organizations). Quasi-structures are social entities that provide a structured environment for the purposes of structure, process, and function, as seen in gangs, organized crime, and terrorist cells (Lampe, 2016; Long, 2001; Mainas, 2012; Moran,

2015). The physical environment in which a person develops impacts the manner in which a person relates to others and develops physically and socially (Koger, Schettler, Weiss, & Control, 2004; Wheeler, 2008). Perceived disorder in the physical environment, as evidenced by structural deterioration, the use of land (bars, liquor stores, pawn shops, pay-day advance stores), and the social disorder within the community, is harmful to a person's development (Franzini, Brien, Murray, & Campo, 2008; Sampson & Raudenbush, 2004). Several studies have found that youth exposed to violence in their environments are likely to be aggressive (Boxer et al., 2013; Huesmann, Moise-Titus, Podolski, & Eron, 2003; Huesmann, Dubow, & Boxer, 2009; Huesmann & Kirwil, 2007).

### **Social Ecological Model in the ATPA Literature**

As previously discussed, ATPA is under researched and under theorized (Holt, 2012; Selwyn & Meakings, 2016). The largest study of ATPA based on the social ecological model was a systematic review of the literature utilizing the Cottrell (2001) definition of ATPA, guided by the social ecological model (Hong et al., 2012). The purpose of the afore cited study was not to test the framework, but instead the review used the social ecological model to organize and inform the exploration of previous research findings. The findings suggested Caucasian youth were more likely to perpetrate against a parent and mothers were more often the target. The review also found family violence (domestic violence and child abuse) to be risk factors for ATPA. The study also found that previous studies identified friendships, societal norms on gender roles, and exposure to violence through the media to also be risk factors for ATPA. There is an agreement that more research is needed in terms of the social ecology of ATPA (Condry & Miles, 2013; Contreras & Cano, 2014a; Cottrell & Monk, 2004; Hong et al., 2012).

As previously discussed, the factors identified in the research are unlikely to occur as singular events. The studies on singular risk factors have begun to fulfill the knowledge base of ATPA, but do not explicitly consider the body of research supporting the cumulative effect of risk. The social ecological model supports this supposition because factors within levels, and the levels themselves, influence each other while influencing the outcome (Cicchetti & Valentino, 2006). This study focuses wholly on the unique contributions of single factors on the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent. Further research is necessary to discover the impact of multiple variables and the cumulative impact of risk for ATPA.

### **Social Bond Theory**

Hirschi's (1969) social bond theory identified four important elements to an individual's bond to society. These elements include attachment to others, commitment to social norms and institutions, involvement in conventional activities, and beliefs in conforming behavior. Social bond theory posits that if one or more of the four elements of social bond (attachment, commitment, involvement, and belief) are weakened, individuals are more likely to participate in delinquent behavior (Hirschi, 1969). Each element can be observed and measured individually, but are also not mutually exclusive (Wiatrowski, Griswold, & Roberts, 1981). Hirschi (1969) specified that bonds simply need to be present and do not need to be positive to make an impact on an individual.

As a supportive theory for the prevention of delinquency, social bond theory guides the position that attachments keep a person from participating in delinquent or negative behaviors (Hirschi & Rudisill, 1976). The focus of research on this topic is not why people participate in

delinquent behavior, rather why they do not (C. Lee, Moak, & Walker, 2016). Specifically, for adolescents, long term consequences (such as incarceration, loss of civil rights, and an inability to find employment) are not as effective in controlling behaviors as an early intervention with a focus on strengthening social bonds (Gottfredson & Hirschi, 1990, 1994, 2016). Figure 2 depicts the four elements of the social bond theory.

### Attachment

Hirschi (1969) explained that attachment to others is how one internalizes social norms and behaviors. Attachments to others, in the form of friends, parents, or romantic partners, impede the natural deviant nature of a person. If attachments change, such behaviors may come to surface. Those that participate in delinquent activities generally have either no friendships or relationships or weak social bonds (Boman, Marvin, Gibson, & Stogner, 2012).

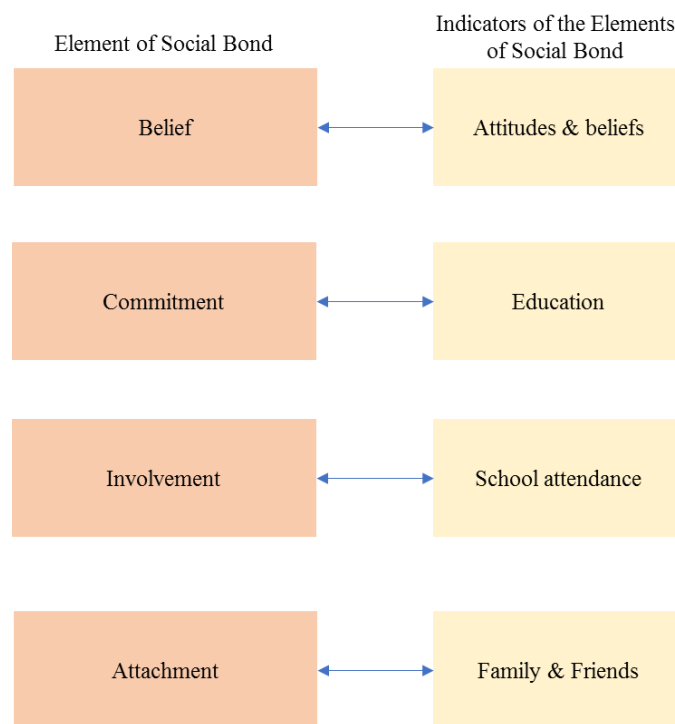


Figure 2. Elements and Indicators of Social Bond Theory

Hirschi (1969) also asserted that attachments are the most important element of social bonds. Attachments influence and impact each of the other three elements and a weakened attachment can deteriorate the others. For example, lack of parental attachment can negatively impact an adolescents' desire or drive towards higher education, impacting future achievements and other portions of the social bond structure (J. Y. Lee, Brook, Nezia, & Brook, 2016). Similarly, poor treatment at the hands of parents or teachers will decrease attachment and commitment and can lead to delinquent behaviors (Bao, Haas, Chen, & Pi, 2014).

As a rule, those with strong social bonds and close attachments generally do not participate in delinquent acts or exhibit delinquent behaviors, but instead they tend to engage in large scale prevention of delinquent acts (for example, neighborhood crime) (Wickes, Hipp, Sargeant, & Mazerolle, 2017). Such communal support of non-delinquent activity leads to general support of laws and fear of punishment.

### **Commitment**

As discussed previously, when an individual supports non-delinquent behavior it leads to stronger community support of non-delinquent behavior through the conformity towards social norms on a large scale. Hirschi (1969) coined this commitment within the pillars of social bond. People commit to social norms, such as continuing education, attending centers of worship, or building a family. The risk associated with deviant or delinquent acts becomes too great because there is a strong hold on their elements of commitment, therefore the person is less likely to participate in delinquent behaviors or acts. If the commitments are removed, the likelihood of delinquent or deviant behaviors occurring increases. Adolescents have rarely created structures

of commitment on their own, so the commitments of their parents become their own (Church, Jagers, & Taylor, 2012). If parents have strong commitments it tends to be displayed through control over life stressors and coping skills. Such skills are then passed onto the adolescent.

An adolescent's commitment can be seen the most in their educational achievement and goals. For example, in a study of 3,449 South Korean middle school students, researchers found the students with goals of higher education are less likely to use alcohol or cigarettes (Han, Kim, & Ma, 2015). A sense of belonging and connection to school can mitigate parental stress and decrease the likelihood of an adolescent engaging in delinquent activities (Lucero, Barrett, & Jensen, 2015). Participation in religious worship activities is also a display of commitment. In a study of 11,481 evangelical youth, researchers found personal religious belief, along with belief in the religious teachings, decreased the likelihood of participating in delinquent activity (Ji, Perry, & Clarke-Pine, 2011).

## **Involvement**

When a person is busy with their family, job, and social engagements, he or she has less time to participate in deviant or delinquent behavior (Hirschi, 1969). Adolescents who participate in extracurricular activities or have a strong focus on their school work are less likely to participate negative behaviors, such as violence towards others. (Blomberg, Bales, & Piquero, 2012; Himelfarb, Lac, & Baharav, 2014; Taylor, Nanney, Welch, & Wamser-Nanney, 2016). Mahaymya and Lohman (2011), in a four-year longitudinal study, found after-school activities to be a protective factor against delinquency in low income, single-parent families. Involvement in pro-social activities and behavior impacts the person's adherence to social norms and beliefs. Such adherence is guided by attachment and commitment. Adolescents who participate in extra-



curricular activities have another opportunity for attachment to pro-social adults who serve as positive role models. Activities, such as sports, youth groups, volunteer groups, or the arts, are connected to an increase in adult support, which also increases the adolescents' ability to make positive decisions on their own and decreases the likelihood of engaging in delinquent acts (Crean, 2012).

## **Belief**

The final element of social bond theory is the belief in social norms (Hirschi, 1969). Adolescents who adhere to the norms of right and wrong, tend to not engage in delinquent activities. Adolescents learn social norms from their parents and peers and their belief in social norms is also strengthened (or weakened) by adults and peers. For example, adolescents living in neighborhoods in which violence and crime is present can experience a change in the social norms taught by their parents (Valdimarsdottir & Bernburg, 2015). Longest and Vaisey (2008) found religious belief and the belief in religious doctrine on right and wrong was a stronger influence than participation in religious based activities. Simply having the guidance of social norms decreased the likelihood of delinquency.

Beliefs are not always supported by the systems in place. For example, child abuse and intimate partner/domestic violence were once considered "women's issues" and were not criminalized until the women's rights movement (Messing, 2011). In the cases of ATPA, the current systems may not fully accept the actions as abusive versus a behavior problem.

## **Social Bond in the Literature**

Adolescents who report high levels of social bond (measured in level of parental bonding, commitment to school, belief in the legal system, and non-curricular activity involvement) also

report low levels of delinquency or violence (Chan & Chui, 2015). Of specific interest is the parent-to-child bond. As children age, their parental bond decreases and their peer bond increases (Jang, 2006). Children derive their beliefs and social norms from their parents first. Social norms, such as belief in law abiding behavior and respect for law enforcement, impact whether or not an adolescent will participate in delinquent activity (White, Haines, & Eisler, 2009). If the parent bond is already weakened, the adolescent is susceptible to the formation of peer bonds with anti-social peers, as seen in instances of gang recruitment (Cruz-Santiago & Garcia, 2011). Social bonds with anti-social friends or peers who are participating in delinquent activities can increase the likelihood of the adolescent also participating in delinquent activities. For example, peer involvement can influence the likelihood of an adolescent cheating in school (Gentina, Tang, & Gu, 2017). Such influence can impact an adolescent's commitment and involvement bonds through their attachment to school.

When an adolescent has a poor bond with the school environment, two of the elements of social bond are impacted, commitment and involvement. For example, if an adolescent is victimized in school through bullying, he or she is more likely to participate in delinquent behaviors (Popp & Peguero, 2012). The student teacher bond is also a predictive factor for delinquent behavior. Youth who disclosed high levels of attachment to their teachers also reported a delay in use of alcohol and cigarettes (Han, Kim, & Lee, 2016). Adolescent engagement in extracurricular activity is also a protective factor. Neely and Vaquera (2017) found participation in extracurricular activities decreases the likelihood of a student dropping out of school. Such activities strengthen the social bond and, due to the requirements of keeping a stable grade point average, lead to a greater focus on studying and academics. Studying and

doing homework increases the attachment to the school and decreases the likelihood of participating in delinquent activities (Wong, 2005).

Delinquent behaviors and actions, such as the use of illegal substances, are impacted by an adolescent's social bonds. In research of adolescent drug use (specifically the use of MDMA, also known as ecstasy or Molly, depending on the form), Norman and Ford (2015) found adolescents with positive attitudes towards drug use, along with peers and family members that were users, were more likely to use ecstasy than those with strong family and peer bonds. Similarly, Aliiaskarov and Bakiev (2014) correctly predicted adolescent alcohol use would increase when social bonds were weakened, as guided by the social bond theory. In studies predicting adolescent cocaine use (Schaefer, Vito, Marcum, Higgins, & Ricketts, 2015), other high risk behaviors, such as sexting, are also increased when attitudes towards the high risk behavior and social bonds are decreased (C. Lee et al., 2016).

As described by in the social ecological model, the community in which an adolescent grows up can have a negative impact on their development. Pro-social bonds can mediate the negative impacts of an adolescent's community (Intravia, Pelletier, Wolff, & Baglivio, 2017). Such bonds can be found with community leaders, religious organizations, or within the school system. An adolescent's participation in faith based activity and involvement with a religious or spiritual organization can decrease the likelihood of participating in delinquent activity (Ryan, Testa, & Zhai, 2008). As an answer to weakened social bonds between children and parents, health care professionals (social workers, nurses, and mental health counselors) have successfully intervened to provide adult level social bonds in cases of child abuse and/or neglect (Carlos et al., 2016).

## Combining Social Ecological and Social Bond Theories

The social ecological model, as a model of explanation, and the social bond theory, as a theory of prediction, can be combined as complimentary theories to explain why an adolescent may exhibit ATPA behaviors and actions and predict the presence of ATPA, as seen in Figure 3. The social ecological model guides the rationale that a person is impacted and influenced by their relationships. The social bond theory offers insight on elements that can strengthen an individual's desire and ability to follow social norms and law-abiding behaviors. A person's beliefs, commitment, and involvement fall into the individual level of the social ecological model. Note, factors such as mental health and alcohol/drug use are individual factors not part of the social bond theory. Attachment to friends and family falls into the interpersonal level of the social ecological model.

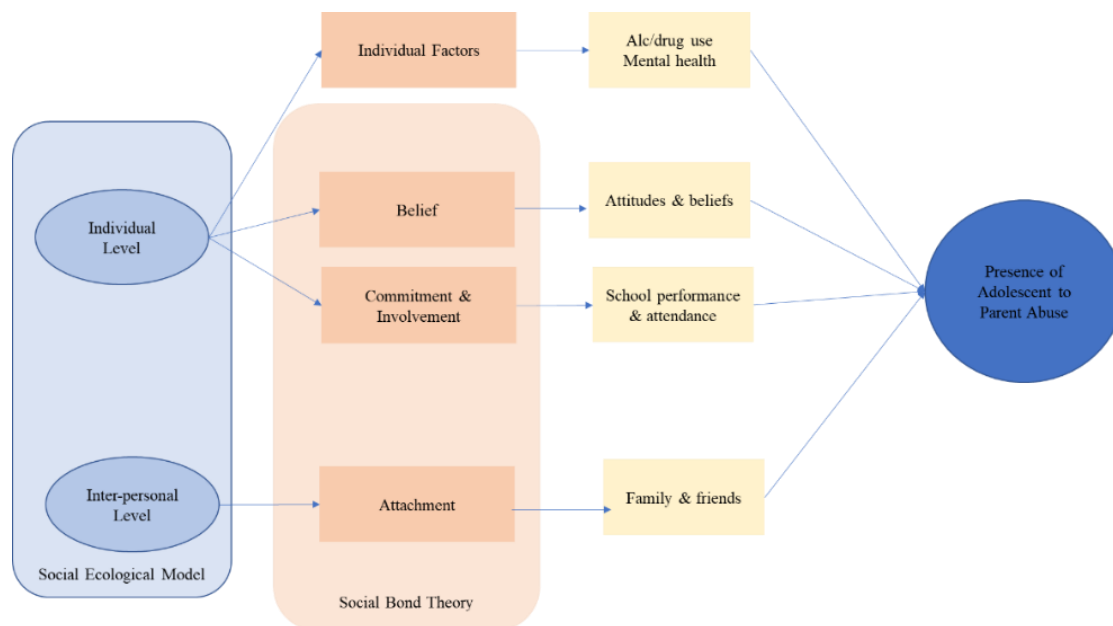


Figure 3. Theoretical framework Combining the Social Ecological Model and the Social Bond Theory

## Development of Research Questions and Hypotheses

The purpose of this study was to determine the risk factors associated with an arrest for ATPA versus an arrest for a violent misdemeanor against a non-parent, as guided by the previous research and testable through the available data. The hypotheses generated for this study were generated from elements of the social ecological model and social bond theory. The primary research question and associated hypotheses are organized by level and category. Figure 4 depicts the organizational structure of the hypotheses based on the guided categorization. The research question and hypotheses are as follows:

**Research Question.** Which risk factor(s) have significant independent effects on the likelihood of being arrested for ATPA versus being arrested for a violent misdemeanor against a non-parent?

Each risk factor was derived from the previous research and the guiding theories. The hypotheses for each risk factor have been organized based on the guiding theories. Social ecological theory was used as a guide to divide factors into the individual and the interpersonal levels. Further groupings were based on the social bond theory and split into belief, commitment, involvement, and attachment groups. Individual factors included demographic factors, specifically age, gender, and race/ethnicity. The belief category includes factors defining attitudes and beliefs on the use of aggression to solve disagreements and the belief in law abiding behaviors. Individuals with a commitment to their future and in involvement in activities promoting their commitment are predicted to be less likely to participate in deviant activities (Hirschi, 1969). Thus, the commitment and involvement categories includes school

attendance and academic performance. The attachment category includes family and friend related factors. The hypotheses focusing on victimization were also derived from the literature and the position of social ecological theory that events and situations outside of the individual's control impact the development and homeostatic functioning of the individual (Bronfenbrenner, 1977). Factors such as alcohol use and mental health concerns were derived from the previous research on the topic and are supported within the individual level of the social ecological model.

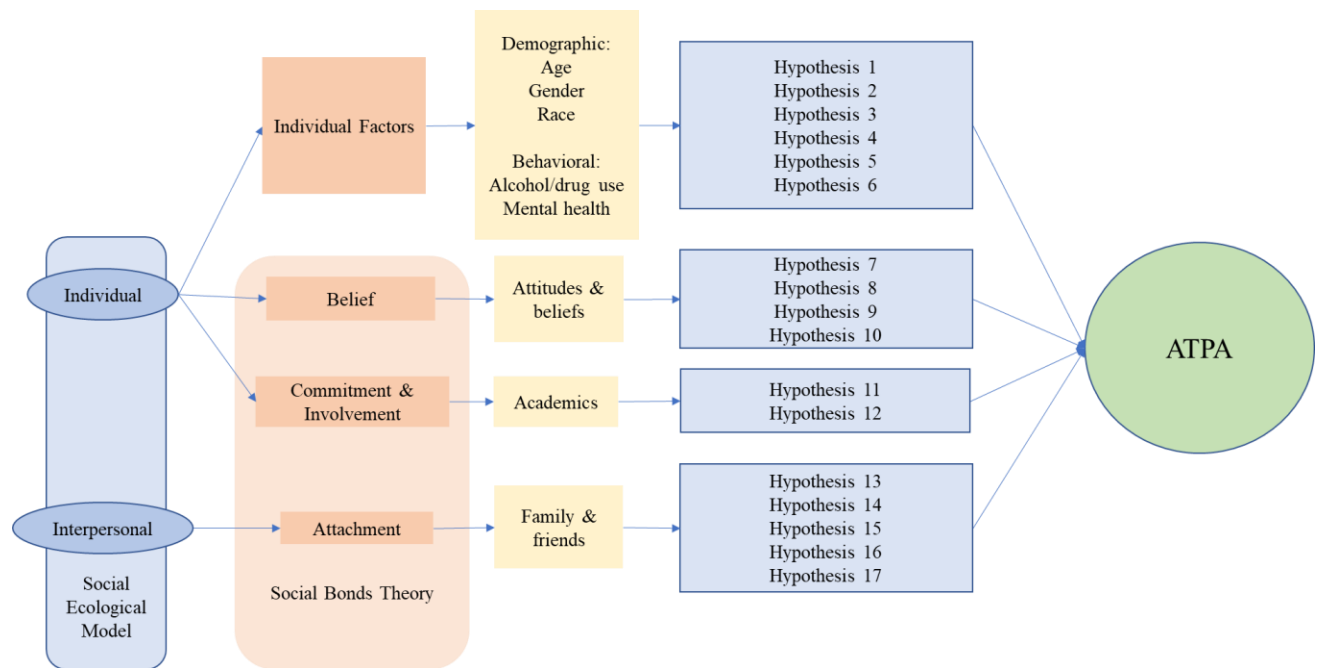


Figure 4. Organization of Hypotheses

### Individual Level – Demographic Factor Hypotheses

**Hypothesis 1.** Increase in age of the adolescent increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 2.** Male adolescents are more likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 3.** White adolescents are more likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

### **Individual Level – Behavioral Factor Hypotheses**

**Hypothesis 4.** Alcohol use increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 5.** Drug use increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 6.** History of mental health issues increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

### **Individual Level- Belief Category Hypotheses**

**Hypothesis 7.** Negative attitude towards law abiding behavior increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 8.** Acceptance of responsibility for actions decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 9.** Belief that verbal aggression is appropriate increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 10.** Belief that physical aggression is appropriate increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

#### **Individual Level – Commitment & Involvement Category Hypotheses**

**Hypothesis 11.** School attendance decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 12.** High academic performance decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

#### **Interpersonal Level – Attachment Category Hypotheses**

**Hypothesis 13.** Witnessing violence increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 14.** Being a victim of violence/abuse (at the hands of a parent) increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 15.** History of neglect increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent authority living within the household

**Hypothesis 16.** History of sexual abuse (by a family member) increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

**Hypothesis 17.** Current friendships decrease the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.



## **CHAPTER 4. RESEARCH METHODOLOGY**

This section describes the research methodology utilized within this study. The research design, sample and data collection, description of variables, and the data analysis method will be detailed.

### **Research Design**

This study was an exploratory study, with a cross sectional design, utilizing a secondary data source. The data were gathered and provided by the Florida Department of Juvenile Justice (FL-DJJ). The sampling frame included all youths, aged 12 to 17, who had been arrested for the first time for a violent misdemeanor from June 2007 to June 2016. The data for analysis were drawn from the Community Positive Achievement Change Tool (C-PACT), a pre-screen assessment tool used by FL-DJJ for all youth arrests. The data from this screening tool allows for the exploration of risk factors identified in the previous research, with a focus on the youth involved with the FL-DJJ. The exploration of individual risk factors, derived from theory discussed in the previous section, allowed for the identification of risk to inform policy changes and/or the creation of behavioral interventions. The inclusion of all youth arrested for the same charge, but with different victims residing within the home, allowed for the identification of risk factors associated with ATPA.

### **Population and Sample Selection**

The population of this study was youth arrested in Florida for a first-time violent misdemeanor, such as assault, battery, or domestic violence. The victims were either a biological parent or a non-parent (e.g., an acquaintance, an ex or current girlfriend/boyfriend, a

neighbor, a non-parent relative, a schoolmate, a sibling (biological or step), a teacher, or a stranger. The final sample included 18,548 cases.

### **Data Collection**

All youth referred to the FL-DJJ are assessed through a semi-structured interview process, guided by the questions on the Community Positive Achievement Change Tool (C-PACT) (Baglivio & Jackowski, 2013). A pre-screen is administered to every youth, and, depending upon their score, some youth are then administered the full C-PACT. The assessment tool was created to assess the likelihood of juveniles re-offending. Therefore, each domain measures a behavior, characteristic, or attribute that may impact the likelihood of committing a crime. Upon further examination of the available data, FL-DJJ found most of the requested cases for this study (first offense, misdemeanor arrests) did not require the full PACT assessment; therefore, the C-PACT pre-screen scores were used for this study.

The C- PACT pre-screen is a condensed version of the C- PACT, containing 46 questions separated into 4 domains: Domain 1: Record of Referrals; Domain 2: Social History; Domain 3: Mental Health; Domain 4: Attitude/Behavior Indicators. These items are included in the full C-PACT, along with 80 other, more in depth questions. The C-PACT (including the elements of the pre-screen) was assessed for validity in the tool's ability to measure risk level (Baglivio, 2009; Baglivio & Jackowski, 2013). Area under the curve (AUC) statistics were used to establish the predictive ability of the tool. An AUC analysis is used to determine if a model predicts the actual outcome. Baglivio (2009) found the C-PACT correctly and moderately predicted the recidivism rate of both females and males (AUC scores of .614 for females and .632 scores for males). The reliability of the instrument was found to have an acceptable internal consistency

( $\alpha=0.706$ ) and greater than 90% agreement in inter-rater reliability (Winkour Early, Hand, & Blankenship, 2012).

There is a process to completing the C-Pact pre-screen set by the FL-DJJ. All staff members are first required to complete trainings on Motivational Interviewing (MI) and use of the C-Pact. Staff members use MI techniques to help gather information from the youths during the completion process. There are five steps for completing the C-PACT; record review, interview of the youth, review of collateral sources, data entry, and review of the results. Information is not only gathered from the adolescent, but also family members, other FL-DJJ staff members, school personnel, or anyone with pertinent information concerning the adolescent. FL-DJJ staff are required to use MI techniques in a face to face interview of the youth to gather information and build rapport. Based on all the information gathered, the C-PACT is completed and the scores are compiled for each youth.

Based on a request by this researcher, specific data, identified below, were pulled and assembled into a data set by a FL-DJJ data analyst. The request followed the FL-DJJ protocol of gaining approval through the university's Institutional Review Board (IRB) and the FL-DJJ IRB. Upon approval, the requested data points were compiled by the FL-DJJ staff member. The request was for C-PACT scores gathered from juveniles who had been arrested for the first-time for a misdemeanor assault or battery between June 2007 and June 2016. The data request included the relationship of the victim to the adolescent, age at time of arrest, year of arrest, race, gender, and each C-PACT question representing the variables.

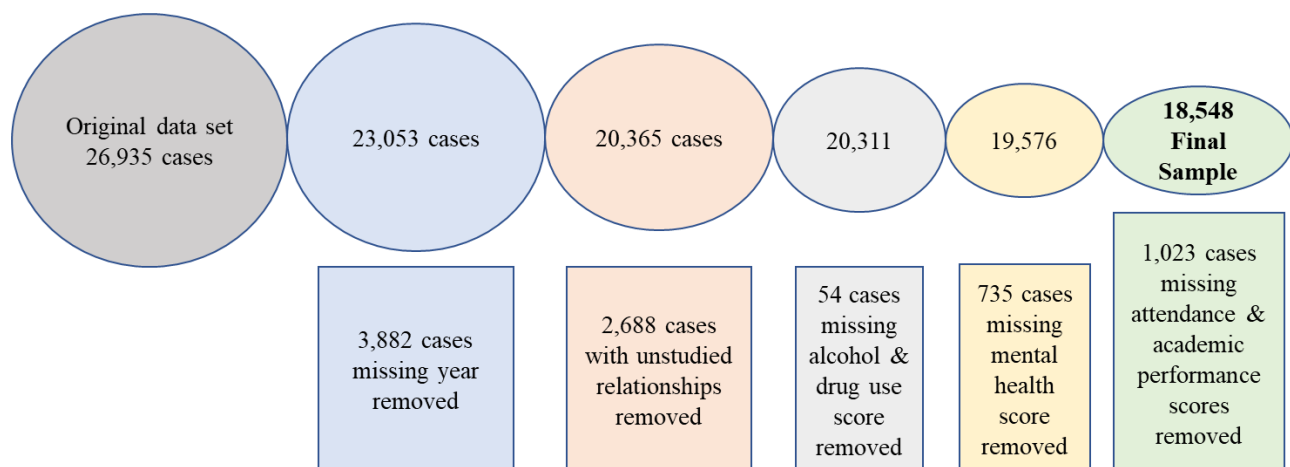


Figure 5. Case Removals and Creation of Final Sample

The original data set secured was comprised of 26,935 cases. Upon receiving the data, the researcher cleaned the data by removing cases and re-coding some of the scores. Figure 5, above, depicts the process of case removal and the final sample. In order to control for year, any cases without an arrest date were removed. There were 3,882 such cases, bringing the case total to 23,053. The researcher then removed cases where the victim relationship was not being studied. For example, cases where the victim was a child of the adolescent's girlfriend or boyfriend or if the victim was the adolescent's own child were removed because the victimology represents a different type of violence (child abuse). Similarly, if the victim was a husband or a wife, the cases were removed. Non-biological parents (step-parent or foster parent), grandparents, foster parents, and guardians were removed because, based on the data alone, the status of the relationship could not be determined. The total number of cases removed based on the victim relationship was 2,688 (child of girlfriend or boyfriend, 16; daughter, 6; foster parent, 88; grandparents, 570; guardian, 297; husband, 8; law enforcement officer, 62; other relative,

504; son, 9; staff in DJJ program, 22; step-father, 808; step-mother, 269; wife, 2; youth in DJJ program, 27). These removals left 20,365 cases.

Within the sample, there were also cases removed based on missing data on individual scores of C-PACT items. Cases missing both the alcohol score and the drug score (n=54 cases) were removed, leaving 20,311 cases. Cases missing the mental health score (n=735 cases) were then removed, leaving 19,576 cases. Lastly, 1,028 of the cases were missing both the attendance and academic performance scores, so those cases were removed leaving 18,548 cases. In total, 8,387 cases were removed from the original data set, representing 31% of the original data set. A chi-square analysis was run to test for any significant differences between the original data set and the final data set and revealed no significant differences in demographic characteristics between the original and final data set. Thus, the final sample still contained similar distribution in the demographic characteristics.

### **Measurement of Study Variables**

The selection of variables to be included in the exploratory study was based on the literature, guiding theories, and constraints of the C-PACT pre-screen tool. A table containing the variables, variable type, and the C-PACT pre-screen question can be found in Appendix A and includes the variable definitions, attributes, and corresponding C-PACT pre-screen questions.

### **Dependent Variable**

The dependent variable in this study was whether the youth had been arrested for ATPA or arrested for a violent misdemeanor against a non-parent. The variable was dichotomous,

“yes” or “no”. “Yes” included cases in which the arrest was for a misdemeanor assault or battery against a biological mother or father. “No” included cases in which the arrest was a misdemeanor assault or battery against a non-parent. The non-parent group included cases in which the victim was an acquaintance, an ex or current girlfriend/boyfriend, a neighbor, a non-parent relative, a schoolmate, a sibling (biological or step), a teacher, or a stranger. This question was not included in the C-PACT pre-screen but delineated by the FL-DJJ based on the victim portion of the arrest record.

### **Control Variable**

Year of arrest was included as a control variable to test for whether historical changes in the FL-DJJ policies and procedures over the time span in which the sample was drawn affected the study findings.

### **Independent Variables**

Each individual risk factor served as an independent variable. The variables were organized based on level (individual or interpersonal) and category (beliefs, commitment and involvement, and attachment), guided by previous literature and the theoretical models described in the previous section. The recoding of the independent variables also followed Baglivio (2009) and the rationales for the coding is explained below.

#### **Individual Level – Demographic Factors**

Age at time of arrest was included as a study variable and the original coding of the scores was utilized. Thus, age was coded as an ordered grouped variable with five levels. Gender was included and re-coded to conform to the coding used by Baglivio (2009), i.e., where

0=Female and 1=Male. Race/ethnicity was dummy coded into four different variables; white and all others, black and all others, Hispanic and all others, and other and all others.

### **Individual Level – Behavioral Factors**

Alcohol use was measured as a dichotomous variable distinguishing current use of alcohol from not currently using alcohol. Similarly, drug use was defined as a dichotomous variable distinguishing between current drug use or not currently using drugs. The original scores included options for impact of alcohol or drug use on family life, school, and other life system measurements. All use of alcohol was recoded into the dichotomous use/no use code because the study was only exploring the impact of use on ATPA, as opposed to other parts of the adolescent's life. The last factor included in this factor group was mental health, defined as the youth's history (within six months) of mental health problems. Mental health problems were measured dichotomously and represented either no history of mental health issues or a history of mental health issues. The scores for this question before recoding included options describing current treatment being received for a mental health diagnosis. The scores were recoded to ensure the scores were mutually exclusive.

### **Individual Level – Beliefs Category**

A person's belief in social norms, and the strength of that belief, is a measure of likelihood of adhering to social norms. A person's attitude towards law abiding behavior was the first variable within this category and was defined as the person's attitude toward responsible, law-abiding behavior. The variable was measured as ordered categorical variable, with each level representing an increase in risk. The subsequent variables measuring belief were treated the same. The second variable was the person's belief in responsibility for anti-social behavior.

Anti-social behavior is any act that violates the social norms for behavior (Kingston & Thomas, 2017). The final two variables measuring beliefs were the person's belief in the use of verbal or physical aggression to resolve conflict.

**Individual Level – Commitment and Involvement Category.** School attendance was defined as the youth's attendance in the most recent term and re-coded into three ordered categories: good attendance with few or no absences (previously two score options, few absences or no absences), some partial-day or full-day unexcused absences (previously two score options, some partial day or some full day absences), or habitual truant. The response options were collapsed to differentiate the levels of attendance (no unexcused absences, unexcused absences, and truancy). School attendance is an important influence on a youth's school bond and related to their general commitment through the institution (Eith, 2005; Hirschi, 1969; Jenkins, 1997). Similarly, an adolescent's academic performance is related to his or her commitment to his or her future. Academic performance was defined as the adolescent's academic standing based on their grade point average in the most recent school term.

**Interpersonal Level – Attachment Category.** Previous research informed the following variables based on the relationships between adolescents and their family or friends. The first variable, witness to violence, was included based on the supposition that witnessing domestic violence in the home could be a risk factor for ATPA. The variable included three categories for not witnessing violence, witnessing violence inside the home, and witnessing violence outside of the home. The third category was included because witnessing violence outside of the home does not have the same hypothesized impact as witnessing domestic violence inside the home.



The variables victim of abuse and victim of sexual abuse were included based on the previous research concerning the retributionist nature of ATPA, i.e., that an abused child might retaliate against the abuser or the parent that did not “protect” them. The variables victim of abuse and victim of sexual abuse were both re-coded into three categories, not a victim, victim of abuse outside the home, and victim of abuse in the home. For the abuse and sexual abuse/rape variables, the coding did not follow Baglivio (2009) because the non-family member category was included. An incident outside of the family may have a different impact than an incident within the family.

The variable victim of neglect was included and coded not victim of neglect or a victim of neglect. Lastly, a variable concerning the friendships of adolescents was included. Current friendships were measured and coded as having pro-social friends, having anti-social friends, and having no friends.

### **Data Analysis**

Using the IBM SPSS Statistics version 25 software variables were first analyzed utilizing frequency and distribution statistics to describe the data set. Chi-square analyses were then conducted to assess the strength of association between the risk factors and the dependent variable. Logistic regression was chosen to explore possible predictors of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent. The analysis method allows for the determination of how much of the variance can be attributed to the individual risk factors. Results from the descriptive analysis, chi-square analysis, and regression analysis are presented in the next chapter.

## **Assumptions**

Several assumptions must be met to utilize a logistic regression analysis. First, the dependent variable in a logistic regression must be dichotomous. The dependent variable in this study was measured and coded as an assault/battery against a biological parent versus an assault/battery against a non-parent. The data and variable met the first assumption.

Second, the data must contain one or more independent variables. The variables can be either continuous or categorical. The scores for the independent variables used for this study were categorical, meeting the assumption.

Third, each variable must have an independence of observations (the cases cannot have multiple response options) and the dependent variable must be mutually exclusive and exhaustive. Variables within this study met the assumption.

The fourth assumption was that the sample size will meet the model requirements. It is recommended to have a minimum of 15 cases per independent variable, with some recommendations of 50 cases per independent variable (Agresti, 2007). This study utilized 17 independent variables. Based on the recommendations, the sample size should be a minimum of 255-850. The sample size 18, 548 meets and exceeds this assumption.

To meet the fifth assumption, continuous independent variables must have a linear relationship with the dependent variable. There were not any continuous variables in the study, therefore the assumption was met.

The sixth assumption, lack of multicollinearity was met after the analysis of a correlation matrix (all independent variables had correlations under 0.80). Table 1 displays the tests of Variance Inflation Factor (VIF) and tolerance. According to O'Brien (2007), a VIF score should

be below 5.0 and the tolerance statistic should be higher than .20. Scores not within those limits would indicate multicollinearity between variables. As all variables were within the limit, the assumption of multicollinearity was met.

Table 1. Results of Multicollinearity Tests on Independent Variables

	Tolerance	VIF
Age	.908	1.102
Gender	.943	1.061
Race/ethnicity	.974	1.026
Alcohol use	.752	1.331
Drug use	.725	1.380
Mental health	.934	1.071
Attitude towards law abiding behavior	.660	1.515
Accepts responsibility for behavior	.681	1.469
Belief in yelling and verbal aggression to resolve conflict	.543	1.840
Belief in fighting and physical aggression to resolve conflict	.529	1.892
Attendance	.815	1.227
Academic performance	.826	1.211
Witness to violence	.731	1.368
Victim of abuse	.736	1.358
Victim of neglect	.952	1.051
Victim of sexual abuse	.914	1.094
Friendships	.985	1.015

The final assumption to be met before completing the regression was to be sure the data did not contain any outliers. This researcher examined each of the study variables using boxplots. Outliers were not detected; therefore, the assumption was met.

## CHAPTER 5. RESULTS

The following chapter reports the results of the study. Descriptive statistics were used to explore the distribution of all the study variables. Measures of association (chi-square tests) were used to explore bivariate associations between each independent variable and the dependent variable.

### Results of Distribution and Bivariate Associations

The dependent variable (arrest for ATPA vs. arrest for a violent misdemeanor against a non-parent) is presented below. The data set contained a total of 18,548 adolescents arrested for the first time for assault/battery. A total of 10,065 adolescents (45.7%) were arrested for assault/battery against a parent between June 2007 and June 2016.

Table 2. Frequency of Dependent Variable

Presence of ATPA	Frequency	Percentage
Non-ATPA	8483	45.7
ATPA	10065	54.3

The following section will display and discuss the frequencies, percentages, and associations found through bivariate analysis of the variables. A chi-square test of association was conducted to explore the associations of the independent variables to the dependent variable. Based on the statistical significance of the association and the strength of the association, variables were chosen for inclusion in the regression model. The strength of association was based on the Cramer's  $v$  score. Variables included in the regression were based on the degrees of freedom and the Cramer's  $v$ , following the guidelines of Cohen (1988). Variables with a

weak, moderate, or strong association were kept in the regression model. As the study was exploratory in nature and sought to determine which factors had the strongest impact on arrest for ATPA versus arrest for a violent misdemeanor against non-parent, the weak associations were also included to allow for a full exploration. Variables that did not meet the weak threshold (described further below) were not included in regression model. The following guidelines were utilized to find the level of association.

Table 3. Cramer's v Guidelines for Inclusion in Regression Model

	Below Weak – Not Included	Weak – Included	Moderate – Included	Strong - Included
df=1	Cramer's v < .099	Cramer's v = .10-.29	Cramer's v = .30-.49	Cramer's v $\geq$ .50
df=2	Cramer's v < .069	Cramer's v = .07-.20	Cramer's v = .21-.34	Cramer's v $\geq$ .35
df=3	Cramer's v < .059	Cramer's v = .06-.16	Cramer's v = .17-.28	Cramer's v $\geq$ .29
df=4	Cramer's v < .049	Cramer's v = .05-.14	Cramer's v = .15-.24	Cramer's v $\geq$ .25
df $\geq$ 5	Cramer's v < .049	Cramer's v = .05-.12	Cramer's v = .13-.21	Cramer's v $\geq$ .22

## Distribution and Bivariate Associations of Individual Level Factors

### Individual Level - Demographic Variables

Table 4 depicts the results for the individual level – demographic variables (age, gender, and race/ethnicity).

**Age.** The largest percentage of overall offenses took place when the adolescent was 13 to 14 years old (37.1%), followed by 15 years old (21.7%). The ATPA subgroup also exhibits the

highest percentages in the 13 to 14 age group (35.6%) and the 15-age group (23.4%). When comparing the ATPA sub-group to the overall group, higher percentages were found in the 16-year-old age group (overall 17.1%; ATPA sub-group 19.3%). The ATPA sub-group also has higher percentages in the 15-years old, 16 years old, and over 16 groups than the non-ATPA sub-group. Based on these results, a slightly larger percentage of adolescents were arrested at 15 years old or over for ATPA versus arrest for a violent misdemeanor against a non-parent.

A chi-square test for association was conducted between age and ATPA. There was a statistically significant association between age and ATPA  $\chi^2(4) = 228.104$ ,  $p < .000$ . The association between age and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was weak,  $df=4$ ,  $\phi = .111$ ,  $p < .000$ , therefore age was included in the regression model.

Table 4. Distribution of and Bivariate Associations of Individual Level Variables with Dependent Variable

	Total Sample n=18548		ATPA Subgroup n=10065		Non-ATPA Subgroup n=8483		Pearson Chi-square values	DF	Cramer's V
<b>Age</b>							228.104*	4	.111*±
<=12	2413	13.0	1042	10.4	1371	16.2			
13-14	6884	37.1	3584	35.6	3300	38.9			
15	4021	21.7	2360	23.4	1661	19.6			
16	3164	17.1	1939	19.3	1225	14.4			
>16	2066	11.1	1140	11.3	926	10.9			
<b>Gender</b>							127.115*	1	.083*
Female	8508	45.9	4998	49.7	3510	41.4			
Male	10040	54.1	5067	50.3	4973	58.6			
<b>Race/ethnicity</b>							995.0*	3	.232*±
White	8557	46.1	5540	55.0	3017	35.6			
Black	6790	36.6	2678	26.6	4112	48.5			
Hispanic	3055	16.5	1762	17.5	1293	15.2			
Other	146	.8	85	.8	61	.7			

\*Significant at  $p < 0.05$

±Included in regression model

**Gender.** Within the overall sample, 54.1% of the cases were male adolescents and 45.9% were female adolescents. When comparing between the sub-groups, a larger percentage of females were arrested for a violent misdemeanor against a parent (49.7%) versus against a non-parent (41.4%). The percentage of females arrested for ATPA was also larger than the overall sample. A smaller percentage of males were arrested for ATPA (50.3%) versus against a non-parent (58.6%). Based on these results, the percentage of females arrested for ATPA is higher than the percentage of females arrested for a violent misdemeanor against a non-parent and the percentage of males arrested for ATPA is less than the percentage of males arrested for a violent misdemeanor against a non-parent.

A chi-square test for association was conducted between gender and ATPA. There was a statistically significant association between gender and ATPA  $\chi^2(1) = 127.115$ ,  $p < .000$ . The association between gender and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was lower than weak,  $df=1$ ,  $\phi = .083$ ,  $p < .000$ , so gender was not included in the regression model.

**Race/ethnicity.** Within the entire sample and ATPA sub-group, the largest percentage of perpetrators were white (overall 46.1%, ATPA 55%), while the non-ATPA sub-group had a lower percentage of white perpetrators (35.6%). The percentage difference of white perpetrators was higher in the ATPA sub-group when compared to the non-ATPA subgroup (a 19.4% difference) and the percentage of non-ATPA black adolescents was higher than the black adolescents in the ATPA sub-group (a 21.9% difference). Based on these percentages, white adolescents were arrested more for ATPA versus black adolescents.

A chi-square test for association was conducted between race/ethnicity and ATPA. There was a statistically significant association between race/ethnicity and ATPA. There was a

statistically significant association between race/ethnicity and ATPA  $\chi^2(3) = 995.0, p < .000$ .

The association between race and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was moderate,  $df=3, \phi = .232, p < .000$ , so ethnicity was included in the regression model.

### **Individual Level – Behavioral Factors**

**Alcohol/Drug Use and Mental Health.** Table 5, below, displays the variables found within the individual level, behavioral factors. Alcohol (9.5%) and drug use (17.3%) were not frequent in the included cases. The non-ATPA subgroup reported alcohol use at a lower percentage (6.4%) than the ATPA subgroup (12.2%). The percentage of adolescents reporting drug use (21.3%) in the ATPA sub-group was higher than the percentage (12.6%) in the non-ATPA subgroup. Based on the percentages, more adolescents perpetrating against a parent participate in the use of alcohol and/or drugs than adolescents that were arrested for a violent misdemeanor against a non-parent. Important to note, the amount of alcohol consumed in a setting, the amount of drug use, and the type(s) of drug(s) being used was not available in the dataset, but future research could include those variables in study.

A chi-square test for association was conducted between alcohol use and ATPA. There was a statistically significant association between alcohol use and ATPA  $\chi^2(1) = 180.101, p < .000$ . The association between alcohol use and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was lower than weak,  $df=1, \phi = .099, p < .000$ , therefore alcohol use was not included in the regression model. There was also a statistically significant association between drug use and ATPA  $\chi^2(1) = 239.912, < .000$ . The association between drug use and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was weak,  $df=1, \phi = .114, p < .000$ , therefore drug use was included in the regression model.



Table 5. Distribution of Study Variables and Bivariate Associations with Dependent Variable – Individual Level Behavioral Factors

Study Variables – Individual Level	Total Sample n=18548		ATPA Subgroup n=10065		Non-ATPA Subgroup n=8483		Pearson Chi-square values	DF	Cramer's V
<b>Alcohol Use</b>							180.101*	1	.099*
Not using	16778	90.5	8837	87.8	7941	93.6			
Using	1770	9.5	1228	12.2	542	6.4			
<b>Drug Use</b>							239.912*	1	.114*±
Not using	15332	82.7	7922	78.7	7410	87.4			
Using	3216	17.3	2143	21.3	1073	12.6			
<b>Mental Health</b>							223.046*	1	.110*±
No mental health issue	15279	82.4	7905	78.5	7374	86.9			
Mental health issue	3269	17.6	2160	21.5	1109	13.1			

\*Significant at  $p < 0.05$

±Included in the regression model

Of the non-ATPA subgroup, fewer cases reported a history of mental health problems (13.1%) than the ATPA group (21.5%). The mental health diagnoses were not available in the data set. Future research should include a focus on the diagnoses because there are many different mental health issues with many different manifestations. A chi-square test for association was also conducted between history of mental health problems and ATPA. There was a statistically significant association between history of mental health problems and ATPA  $\chi^2(1) = 223.046$ ,  $p < .000$ . The association between mental health problems and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was weak,  $df=1$ ,  $\phi = .110$ ,  $p < .000$ , therefore history of mental health problems was included in the regression model.

## **Individual Level, Beliefs Category**

Table 6 displays the frequencies and chi-square results for the variables organized within the beliefs category. The majority of cases (66.8%) stated they abided by social conventions. Of the ATPA cases, 64.4% reported abiding by conventions/values, while 69.6% of the non-ATPA group reported the same. The frequency distributions across the subgroups were all similar.

Overall, 67.5% of the cases stated they accept responsibility for their behaviors. Less than 1% of the cases were proud of their negative behaviors and 29.3% minimized, denied, or blamed others for their behaviors. Of the ATPA cases, less accepted responsibility (65.2%) than the non-ATPA group (70.2%).

Most cases (51.1%) stated verbal aggression is rarely appropriate and 41% said verbal aggression was sometimes appropriate when resolving a disagreement or conflict. The ATPA group percentages were higher in the sometimes appropriate (42.7%) and the often appropriate (9.2%) scores versus the non-ATPA group (39% and 6.4%).

Similarly, 40.9% of cases believed physical aggression is never appropriate when resolving a disagreement or conflict. The ATPA group (29.4%) believed a physical resolution is rarely appropriate and the non-ATPA group (30.4%) responded in a similar fashion. As all cases had been arrested for a physically aggressive charge, these frequency results are interesting. Further research on the precipitating factors of the aggression and the adolescents' other beliefs in social norms would further inform the topic of ATPA.

Chi-square tests for association were also conducted between the four belief variables and ATPA. The significant association results were as follows: attitude towards law abiding behavior  $\chi^2(3) = 62.217$ ,  $p < .000$ , accept responsibility for behaviors  $\chi^2(3) = 53.918$ ,  $p < .000$ ,

belief in yelling and verbal aggression to resolve conflict  $\chi^2(2) = 97.723$ ,  $p < .000$ . Belief in physical aggression to resolve conflict did not have a significant relationship with ATPA,  $\chi^2(3) = 4.740$ ,  $p = .016$ .

Table 6. Distribution of Study Variables and Bivariate Associations with Dependent Variable – Individual Level, Beliefs Category

Study Variables - Beliefs	Total Sample n=18548		ATPA Subgroup n=10065		Non-ATPA Subgroup n=8483		Pearson Chi-square values	DF	Cramer's V
<b>Attitude towards Law Abiding Behavior</b>							62.217*	3	.058*
Abides by conventions	12381	66.8	6481	64.4	5900	69.6			
Sometimes apply	5618	30.3	3239	32.2	2379	28.0			
Does not apply	422	2.3	259	2.6	163	1.9			
Resents or is hostile	127	.7	86	.9	41	.5			
<b>Responsibility for Behavior</b>									
Accepts responsibility	12514	67.5	6563	65.2	5951	70.2	53.918*	3	.054*
Minimizes	5436	29.3	3139	31.2	2297	27.1			
Accepts bad behavior	513	2.8	315	3.1	198	2.3			
Proud behavior	85	.5	48	.5	37	.4			
<b>Verbal Aggression</b>							97.723*	2	.073*±
Rarely appropriate	9473	51.1	4843	48.1	4630	54.6			
Sometimes	7606	41.0	4297	42.7	3309	39.0			
Often	1469	7.9	925	9.2	544	6.4			
<b>Physical Aggression</b>							4.740	3	.016
Never	7578	40.9	4150	41.2	3428	40.4			
Rarely	5545	29.9	2964	29.4	2581	30.4			
Sometimes	4691	25.3	2532	25.2	2159	25.5			
Often	734	4.0	419	4.2	315	3.7			

\*Significant at  $p < 0.05$

±Included in the regression model

The association between attitude towards law abiding behavior and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was less than weak,  $df=3$ ,  $\phi = .058$ ,  $p < .000$ , so attitude towards law abiding behavior was not included in the regression model. The association between responsibility for behavior and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was also found to be below weak,  $df=3$ ,  $\phi = .054$ ,  $p < .000$ , so responsibility for behavior was not included in the regression model. The association between the use of verbal aggression to resolve conflict and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was weak,  $df=2$ ,  $\phi = .073$ ,  $p < .000$ , therefore verbal aggression was included in the regression model. As association between the use of physical aggression to resolve conflict and ATPA was not significant, so the variable was not included in the regression model.

### **Individual Level, Commitment and Involvement Category**

Table 7 displays the frequencies and chi-square results for the variables organized in the commitment and involvement category. More cases responded as having good attendance with few or no absences (overall 62.8%, ATPA sub-group 61.3%, and non-ATPA sub-group 64.6%). Habitual truancy was reported in 6% of the overall cases, but 7.1% of the cases in the ATPA sub-group reported habitual truancy. More adolescents arrested for ATPA reported habitual truancy than adolescents perpetrating against a non-parent (4.7%).

A chi-square test for association was conducted between attendance and ATPA. There was a statistically significant association between attendance and ATPA  $\chi^2(2) = 53.353$ ,  $p < .000$ . The association between attendance and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was below weak,  $df=2$ ,  $\phi = .054$ ,  $p < .000$ , therefore attendance was not included in the regression model.

The academic performance of the overall cases had a higher percentage in the 2.0-2.9 (44.3%) and 1.0-1.9 (24.4%) ranges. The ATPA sub-group had similar percentages in the 2.0-2.9 range (41.3%) and the 1.0-1.9 range (24.3%) when compared to the overall cases, as did the non-ATPA sub-group. The below 0.09 range was higher in the ATPA sub-group (9.4%) compared to the non-ATPA sub-group (7.4%).

Table 7. Distribution of Study Variables and Bivariate Associations with Dependent Variable – Individual Level, Commitment and Involvement Category

Study Variables – Commitment & Involvement	Total Sample n=18548		ATPA Subgroup n=10065		Non-ATPA Subgroup n=8483		Pearson Chi-square values	DF	Cramer's V
<b>Attendance</b>							53.353*	2	.054*
Good attendance	11646	62.8	6165	61.3	5481	64.6			
Some unexcused absences	5787	31.2	3185	31.6	2602	30.7			
Habitual truant	1115	6.0	715	7.1	400	4.7			
<b>Academic Performance</b>							123.954*	4	.082*±
≥4.0	574	3.1	379	3.8	195	2.3			
3.0-3.9	3656	19.7	2137	21.2	1519	17.9			
2.0-2.9	8216	44.3	4157	41.3	4059	47.8			
1.0-1.9	4531	24.4	2448	24.3	2083	24.6			
≤0.9	1571	8.5	944	9.4	627	7.4			

\*Significant at  $p < 0.05$

±Included in the regression model

A chi-square test for association was conducted between academic performance and ATPA. There was a statistically significant association between attendance and ATPA  $\chi^2(4) = 123.954$ ,  $p < .000$ . The association between academic performance and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was weak,  $df=4$ ,  $\phi = .082$ ,  $p < .000$ , therefore academic performance was included in the regression model.

## Individual Level, Attachment Category

Table 8 displays the frequencies and chi-square results from the attachment category variables. More cases had not witnessed violence (overall 45.7%, ATPA sub-group 43.3%, non-ATPA sub-group 48.6%). A higher percentage of adolescents arrested for ATPA witnessed violence in the home (40.8%) when compared to the adolescents arrested for a violent misdemeanor against a non-parent (16.8%). A chi-square test for association was conducted between witness to violence and ATPA. There was a statistically significant association between witness to violence and ATPA  $\chi^2(2) = 1573.968$ ,  $p < .000$ . The association between witness to violence and ATPA (based on the degrees of freedom and the Cramer's  $\phi$ ) was moderate,  $df=2$ ,  $\phi = .291$ ,  $p < .000$ , therefore witness to violence was included in the regression model.

With respect to be a victim of abuse, 85.9% of the overall cases had not been a victim of abuse. The majority of the non-ATPA sub-group were not victims of abuse (90.6%), as were the ATPA sub-group (82%). The main difference between sub-groups was found in the victim of abuse by a family member score. Within the ATPA sub-group, 13.4% were victims, but 5.1% of the non-ATPA sub-group were victims. A chi-square test for association was conducted between victim of abuse and ATPA. There was a statistically significant association between victim of abuse and ATPA  $\chi^2(2) = 366.636$ ,  $p < .000$ . The association between victim of abuse and ATPA (based on the degrees of freedom and the Cramer's  $\phi$ ) was weak,  $df=2$ ,  $\phi = .141$ ,  $p < .000$ , therefore victim of abuse was included in the regression model.

The majority of cases were also not a victim of neglect, with percentages over 95% across the sub-groups. A chi-square test for association was conducted between victim of neglect and ATPA. There was not a statistically significant association between victim of

neglect and ATPA  $\chi^2(1) = 1.509$ ,  $p=.219$ . Victim of neglect was not included in the regression model.

Sexual abuse victimization had similar frequencies, across the groups, but the ATPA subgroup reported sexual abuse or rape by a family member (3.2%) more than the non-ATPA group (1.8%). A chi-square test for association was conducted between victim of sexual abuse and ATPA. There was a statistically significant association between victim of sexual abuse and ATPA  $\chi^2(2) = 104.187$ ,  $p< .000$ . The association between victim of sexual abuse and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was weak,  $df=2$ ,  $\phi = .075$ ,  $p< .000$ , therefore victim of sexual abuse was included in the regression model.

Table 8. Distribution of Study Variables and Bivariate Associations with Dependent Variable – Interpersonal Level, Attachment Category

Study Variables – Attachment	Total Sample n=18548 %		ATPA Subgroup n=10065 %		Non-ATPA Subgroup n=8483 %		Pearson Chi-square values	DF	Cramer's V
<b>Witness</b>							1573.968*	2	.291*±
Not witness	8482	45.7	4363	43.3	4119	48.6			
Witness in the community	4531	24.4	1596	15.9	2935	34.6			
Witness at home	5535	29.8	4106	40.8	1429	16.8			
<b>Victim of Abuse</b>							366.636*	2	.141*±
Not a victim	15939	85.9	8254	82.0	7685	90.6			
Victim - non- family member	825	4.4	463	4.6	362	4.3			
Victim – family member	1784	9.6	1348	13.4	436	5.1			
<b>Victim of Neglect</b>							1.509	1	.219
Not a victim	17815	96.0	9651	95.9	8164	96.2			
Victim	733	4.0	414	4.1	319	3.8			
<b>Victim of Sexual Abuse</b>							104.187*	2	.075*±

Study Variables – Attachment	Total Sample		ATPA Subgroup		Non-ATPA Subgroup		Pearson Chi-square values	DF	Cramer's V
	n=18548	%	n=10065	%	n=8483	%			
Not a victim	17435	94.0	9297	92.4	8138	95.9			
Victim – in the community	636	3.4	445	4.4	191	2.3			
Victim - at home	477	2.6	323	3.2	154	1.8			
<b>Friends</b>							16.452*	2	.030*
Pro social	15950	86.0	8583	85.3	7367	86.8			
Anti-social	846	4.6	451	4.5	395	4.7			
No friends	1752	9.4	1031	10.2	721	8.5			

\*Significant at  $p < 0.05$

±Included in the regression model

Most of the overall cases (86%) reported having pro-social friends. The percentages were similar between the subgroups (ATPA 85.3%, non-ATPA 86.8%). The percentages were also similar across sub-groups for having anti-social friends or having gang affiliation (ATPA 4.5%, non-ATPA 4.7%). A slightly larger percentage within the ATPA sub-group had no friends (10.2%) when compared to the non-ATPA sub-group (8.5%). A chi-square test for association was conducted between current friendships and ATPA. There was a statistically significant association between current friendships and ATPA  $\chi^2(2) = 16.452$ ,  $p < .000$ . The association between friendships and ATPA (based on the degrees of freedom and the Cramer's  $v$ ) was below weak,  $df=2$ ,  $\phi = .030$ ,  $p < .000$ , so current friendships was not included in the regression model.

### Results of Logistic Regression

**Research Question.** Which risk factor(s) have significant independent effects on the likelihood of being arrested for ATPA versus being arrested for a violent misdemeanor against a non-parent?



Logistic regression was used to answer the research question. The variables included in the regression model were age, race, drug use, mental health, belief in the use of yelling to resolve conflict, academic performance, witness to violence, victim of abuse, and victim of sexual abuse and the model controlled for year of arrest. All relationships were found to be statistically significant ( $p < .05$ ).

Table 9 displays the results of the logistic regression for the presence of ATPA. The Nagelkerke R-square for the model was 15% and Cox and Snell R-square was 11%, suggesting the model explains 11-15% of the variance in ATPA. This percentage of explanation is low, suggesting there are other possible factors not included in this analysis that predict arrest for ATPA versus arrest for a violent misdemeanor against a non-parent. As all the cases were arrested for a violent misdemeanor, the small variance could be due to the lack of a non-perpetrating comparison group. Future research options are suggested in the discussion section.

Table 9. Results of Logistic Regression

Variable	Regression Coefficient ( $\beta$ )	Std error	Odds ratio
Year of arrest	.050	.007	1.052*
Age	.071	.013	1.073*
Race/Ethnicity			
White			
Black	-.927	.035	.396*
Hispanic	-.228	.044	.796*
Other	-.223	.173	.800
Drug use	.398	.044	1.488*
Mental health	.371	.043	1.449*
Belief in yelling to resolve conflict	.137	.026	1.147*
Academic performance	-.082	.017	.921*
Witness to violence	.289	.021	1.335*
Victim of abuse	.196	.031	1.216*
Victim of sexual abuse	.126	.047	1.135*

\*Significant at  $p < 0.05$

Of the demographic variables included in the regression model, age was found to be statistically significant. Age at time of arrest was a significant predictor of ATPA ( $\beta=.071$ ;  $OR=1.073$ ). The odds of being arrested for ATPA versus being arrested for a violent misdemeanor against a non-parent increase 1.073 times as the adolescents' age at arrest increases. Black and Hispanic perpetrators, when compared to white perpetrators, were found to be statistically significant. The variable representing black perpetrators was a significant predictor of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent ( $\beta=-.927$ ;  $OR=.396$ ). Black adolescents were .396 times less likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent, when compared to the other categories of race/ethnicity. The variable representing Hispanic perpetrators was a significant predictor of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent ( $\beta=-.228$ ;  $OR=.796$ ). Hispanic adolescents were .796 times less likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent, when compared to white perpetrators. The other category variable was not statistically significant.

Drug use and mental health were included in the regression model (based on the associations found in the chi-square analysis). Drug use was found to be a significant predictor of arrest for ATPA ( $\beta=.398$ ;  $OR=1.488$ ) versus arrest for a violent misdemeanor against a non-parent. Adolescents using drugs had 1.488 times higher odds of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent. Mental health was a significant predictor of arrest for ATPA ( $\beta=.371$ ;  $OR=1.449$ ) versus arrest for a violent misdemeanor against a non-parent. Adolescents with a history of mental health problems had 1.449 times higher odds to be arrested for ATPA versus being arrested for a violent misdemeanor against a non-parent.

Only one of the variables representing beliefs was included in the regression model. Adolescents belief in the use of yelling to resolve conflict was statistically significant ( $\beta=.137$ ;  $OR=1.147$ ). As the belief in yelling increases from rarely, to sometimes, to often appropriate, the odds of being arrested for ATPA versus an arrest for a violent misdemeanor against a non-parent increases 1.147 times.

In the commitment and involvement category, only academic performance was included in the regression model. Academic performance was a significant predictor of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent ( $\beta=-.082$ ;  $OR=.921$ ). As the adolescent's grades decrease, the odds of being arrested for ATPA versus a violent misdemeanor against a non-parent increase.

The variables categorized as attachment included in the regression model were witness to violence, victim of abuse, and victim of sexual abuse. The witness to violence variable was a significant predictor of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent ( $\beta=.289$ ;  $OR=1.335$ ). The odds for adolescents who had witnessed violence to be arrested for ATPA were 1.335 higher than the odds than being arrested for a violent misdemeanor against a non-parent. The victim of abuse variable was a significant predictor of ATPA ( $\beta=.196$ ;  $OR=1.216$ ). The odds of adolescents that had been abused being arrested for ATPA were 1.216 times higher than being arrested for a violent misdemeanor against a non-parent. The sexual abuse variable was also significant ( $\beta=.126$ ;  $OR=1.135$ ), those that had been sexually abused or raped were more likely to have been arrested for abusing a parent versus an arrest for a similar violent misdemeanor against a non-parent.

## Results of Hypothesis Testing

The following section reports a summary of the hypothesis testing. Tables 10-14 display which hypotheses were supported by the data, organized by category. An X indicates the hypothesis was supported and a hyphen (-) indicates the hypothesis was not supported.

Table 10. Results of Hypothesis Testing - Individual Level – Demographic Factors

<b>Hypothesis 1.</b> Increase in age of arrest of the adolescent increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X
<b>Hypothesis 2.</b> Male adolescents are more likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-
<b>Hypothesis 3.</b> White adolescents are more likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X

**Hypothesis 1.** Increase in age of the adolescent increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was supported by the data. The relationship between age and ATPA was significant ( $p < .000$ ). The odds of being arrested for ATPA increased 1.073 times as the adolescents' age increases

**Hypothesis 2.** Male adolescents are more likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was not supported by the data. Based on the results of the chi-square analysis, the relationship between gender and ATPA did not meet the threshold for inclusion in the regression model.

**Hypothesis 3.** White adolescents are more likely to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was partially by the data. The relationship between black and Hispanic adolescents and ATPA was significant ( $p<.000$ ). The odds of being arrested for ATPA decreased .604 times if the adolescent was black and .204 times if the adolescent was Hispanic.

Table 11. Results of Hypothesis Testing - Individual Level – Behavioral Factors

<b>Hypothesis 4.</b> Alcohol use increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-
<b>Hypothesis 5.</b> Drug use increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X
<b>Hypothesis 6.</b> History of mental health issues increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X

**Hypothesis 4.** Alcohol use increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was not supported by the data. Based on the results of the chi-square analysis, the relationship between alcohol use and ATPA did not meet the threshold for inclusion in the regression model.

**Hypothesis 5.** Drug use increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was supported by the data. The relationship between drug use and ATPA was significant ( $p<.000$ ). The odds of being arrested for ATPA increased 1.488 times with the use of drugs.

**Hypothesis 6.** History of mental health issues increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

The analysis results found the presence of mental health issues ( $p<.000$ ) to be statistically significant. The odds of an adolescents with a mental health problem being arrested for ATPA

versus arrest for a violent misdemeanor against a non-parent increased 1.449 times. This hypothesis was supported by the data.

Table 12. Results of Hypothesis Testing - Individual Factors – Belief Category

<b>Hypothesis 7.</b> Negative attitude towards law abiding behavior increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-
<b>Hypothesis 8.</b> Acceptance of responsibility for behavior decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-
<b>Hypothesis 9.</b> Belief that verbal aggression is appropriate increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X
<b>Hypothesis 10.</b> Belief that physical aggression is appropriate increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-

**Hypothesis 7.** Negative attitude towards law abiding behavior increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was not supported by the data. Based on the results of the chi-square analysis, the relationship between a negative attitude towards law abiding behavior and ATPA did not meet the threshold for inclusion in the regression model.

**Hypothesis 8.** Acceptance of responsibility for behavior decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was not supported by the data. Based on the results of the chi-square analysis, the relationship between the acceptance of responsibility for behavior and ATPA did not meet the threshold for inclusion in the regression model.

**Hypothesis 9.** Belief that verbal aggression is appropriate increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

Belief in the use of yelling or verbal aggression to resolve conflict was statistically significant ( $p < .000$ ). As belief in the use of yelling increased, the odds of being arrested for

ATPA versus an arrest for a violent misdemeanor against a non-parent increased 1.147 times.

This hypothesis was supported by the data.

**Hypothesis 10.** Belief that physical aggression is appropriate increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

The belief in the use of physical violence to resolve conflict was not statistically significant ( $p=.192$ ) in the chi-square analysis and was not included in the regression model.

This hypothesis was not supported by the data.

Table 13. Results of Hypothesis Testing - Individual Factors – Commitment & Involvement Category

<b>Hypothesis 11.</b> School attendance decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-
<b>Hypothesis 12.</b> High academic performance decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent	X

**Hypothesis 11.** School attendance decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

This hypothesis was not supported by the data. Based on the results of the chi-square analysis, the relationship between school attendance and ATPA did not meet the threshold for inclusion in the regression model.

**Hypothesis 12.** High academic performance decreases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

Witnessing violence was statistically significant ( $p<.000$ ). The odds of adolescents being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent decreased .921 times as the grade increased. This hypothesis was supported by the data.

Table 14. Results of Hypothesis Testing - Individual Factors - Attachment Category

<b>Hypothesis 13.</b> Witnessing violence increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X
<b>Hypothesis 14.</b> Being a victim of abuse increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X
<b>Hypothesis 15.</b> History of neglect increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-
<b>Hypothesis 16.</b> History of sexual abuse increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	X
<b>Hypothesis 17.</b> Current friendships decrease the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.	-

**Hypothesis 13.** Witnessing violence increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

Witnessing violence was statistically significant ( $p < .000$ ). The odds of adolescents who witnessed violence being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent increased 1.335 times. This hypothesis was supported by the data.

**Hypothesis 14.** Being a victim of abuse increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

Being a victim of abuse was statistically significant ( $p < .000$ ). The odds of adolescents who reported being victims of abuse being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent increased 1.216 times. This hypothesis was supported by the data.

**Hypothesis 15.** History of neglect increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

History of neglect was not statistically significant ( $p = .219$ ) in the chi-square analysis and was not included in the regression model. This hypothesis was not supported by the data.



**Hypothesis 16.** History of sexual abuse increases the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

A history of sexual abuse was found to be statistically significant ( $p=.007$ ). The odds of adolescents who had been sexually abused or raped to have been arrested for ATPA versus a violent misdemeanor against a non-parent increased 1.135 times. The hypothesis was supported by the data.

**Hypothesis 17.** Current friendships decrease the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent.

Based on the results of the chi-square analysis, current friendships did not meet the threshold for relationship strength and was not included in the regression model. The hypothesis was not supported by the data.

## **CHAPTER 6. DISCUSSION**

### **Introduction to Discussion**

This study explored risk factors associated with the presence of ATPA. The findings of this study have practice implications, can inform the formation of policy in family violence, and inform the body of research on ATPA.

### **Key Findings**

The following section will discuss the key findings of the study, based on the guiding theories. Social ecological model and social bonds theory guided the study through the assumption that a person is influenced by their own internal elements (e.g., mental health), actions (e.g., alcohol/drug use), and beliefs, which are supported through four levels of social bond. These bonds include how a person is influenced by their interpersonal relationships (e.g., friends and parents) and outside systems and institutions (e.g., school). Furthermore, influences on the person's development can impact whether the person participates in delinquent activity, per social bond theory. If an attachment represented by a personal relationship (friends or parents) is broken, by abuse for instance, the likelihood of participating in delinquent activity increases.

This study utilized a sample of adolescents with first-time violent misdemeanor arrests, i.e., assault, battery, or domestic violence, against either a biological parent or a non-parent (e.g., an acquaintance, an ex or current girlfriend/boyfriend, a neighbor, a non-parent relative, a schoolmate, a sibling, a teacher, or a stranger), to explore factors that may have a greater impact on an adolescent abusing a parent. The analysis showed that drug use and a history of mental health problems increased the odds of ATPA arrests versus being arrested for a violent

misdemeanor of a non-parent. The analysis showed that belief in yelling or verbal aggression to resolve conflict increased the odds ATPA arrests. Adolescent commitment, measured by academic performance, was also a significant predictor of an of ATPA arrest. Lastly, weakened attachments, measured by victimization (witness to violence, victim of abuse, and victim of sexual abuse), were significant predictors of ATPA arrests. The findings and their implications are discussed below.

### **Individual Level – Demographic Factor Findings**

**Age.** There were 10,165 adolescents arrested for a first-time violent misdemeanor against a parent between June 2007 and June 2016 in the state of Florida. Of those arrested, the largest percentage of the adolescents were between 13 and 14 years old at the time of arrest, and the percentage differences between the ATPA sub-group and the non-ATPA sub-group increased over the age of the adolescent at the time of their arrest. These findings align with previous research that found the rates of ATPA increase over age in adolescents (Kennair & Mellor, 2007). According to previous research, on behavior of adolescents, youth between 14 and 17 are more likely to act irresponsibly, but this is also the age parents begin to expect the adolescent to take on more responsibility (e.g., caring for siblings, having a job, handling their own expenses (Modecki, 2008). The clash of expectations held by the parent and the desires of the adolescent can cause conflict between the parent and the adolescent, increasing the risk of violence toward a parent.

**Gender.** In examining the frequencies of gender, a higher proportion of males were arrested for a violent misdemeanor against a parent when compared to females. However, gender was not included in the regression model because the chi-square analysis did not find a

significant relationship between gender and ATPA. These findings align with the previous literature in that there is little distinction between male and female adolescents abusing their parent, but males are more likely to be perpetrators of ATPA (Hong et al., 2012; Ibabe et al., 2013). Female perpetrators of violent crime tend to be less in number compared to males (Baskin, 2018) and the typology of female-perpetrated ATPA also tends to be more verbal and emotional and less violent (Ibabe et al., 2013). Further research on the gender differences in ATPA is needed.

**Race/Ethnicity.** White adolescents were found more likely than black or Hispanic adolescents to be arrested for ATPA versus arrest for a violent misdemeanor against a non-parent. Within black and Hispanic families, there is a large value placed on the importance of family and the respect youth should have for their parents and elders (Dixon, Graber, & Brooks-Gunn, 2008). Such values may influence the adolescent-parent relationship and help explain the lower percentage of ATPA among black adolescents. Further research on the impact of ethnicity/race and ethnicity on ATPA is needed.

### **Individual Level – Behavioral Factor Findings**

**Substance Use.** Alcohol and drug use were not theory driven constructs within this study, but alcohol and drug use can be considered both predictors of delinquency and delinquent activity. In this study, drug use increased the likelihood of being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent. Previous research has found that substance use can be reciprocal, meaning substance use predicts ATPA and ATPA also predicts substance use (Calvete, Orue, & Gamez-Guadix, 2015). Adolescence is a time of growth and self-discovery, which often comes with exploration of alcohol and drugs. There is also an influx of peer

pressure to participate in activities surrounded by substance use (Buckley, Sheehan, & Chapman, 2009). Some adolescents also begin self-medicating with alcohol and drugs to cope with stressors and/or when mental health problems arise (Wilens et al., 2010). Further, alcohol and drug use can also reduce executive functioning, which could decrease problem solving skills and increase the likelihood of using violence to diffuse conflict. Such use of violence to diffuse conflict could become present in the parent-child relationship, leading to ATPA. The loss of executive function could lead to the inability to recognize that violence is not the acceptable mechanism to resolve conflict.

Although not directly studied here, witnessing substance use in the home creates a norm of behavior that tells the adolescent the activity is acceptable and eliminates the injunctive norm that tells the adolescent the activity is wrong (Barman-Adhikari, et. al, 2017). In other words, the adolescent sees their parent participate in substance use, so he or she believe it is also appropriate to participate in the same type of activities as their parents (Song, Smiler, Wagoner, & Wolfson, 2012). This harkens back to anti-substance use advertisements targeting parents through statements from the child such as, “I learned it from watching you, dad.” A non-punitive approach to discussing and treating the use of alcohol and drugs with adolescents could potentially decrease the propensity towards violence against biological parents.

**Mental Health.** Mental health problems have been shown to be a predictor of delinquency and previous findings suggest perpetrators of ATPA have more mental health problems than other delinquents or non-perpetrators (Ibabe, Arnoso, & Elgorriaga, 2014). This study hypothesized a positive relationship between a reported history of mental health problems and the presence of ATPA. The results suggest that adolescents with a history of mental health problems are more likely to perpetrate against a parent versus a non-parent. The findings align

with the previous findings of mental health and ATPA (Calvete, et. al, 2013; Ghanizadeh & Jafari, 2010; Nock & Kazdin, 2002). Adolescents struggling with a mental health disorder often are unable to regulate moods or behaviors, which in turn can increase abusive actions towards a parent. Although this study did not allow for exploration of the particular mental health diagnoses, oppositional defiant disorder and conduct disorder manifest aggressive and violent behaviors. Such diagnoses may increase the risk for ATPA, and warrant further research because mental health treatment could be used as a preventive measure.

Receiving mental health services has been shown to reduce the level of violence (as defined by the use of weapons and the forms of violence) (Kuay et al., 2016). Treatment for a mental health disorder is a protective factor towards delinquency, therefore the results support the use of mental health interventions. The use of evidence based practices, such as trauma-focused cognitive behavior therapy, child-parent psychotherapy, and wraparound services, have been shown to have significant benefits and outcomes for adolescents (Shipman & Taussig, 2009). Further research on the impact of mental health diagnoses and mental health treatment on the presence of ATPA should focus on particular diagnoses (e.g. depression, anxiety, oppositional defiant disorder, conduct disorder, attention deficit hyperactivity disorder) and the efficacy of particular mental health interventions.

Although this study sought to distinguish between the risk factors and assess the impact of each single factor, there is a link between the impact of trauma (through abuse or other incidents) on mental health. The cumulative impact of trauma and mental health problems could further impact the adolescent's probability of engaging in violent behavior towards a parent. Further research on these cumulative effects is necessary.

## **Individual Level – Belief Category Findings**

This study explored four beliefs that were posited as impacting the risk of ATPA: acceptance of responsibility for actions, attitude towards law abiding behavior, the belief that yelling is appropriate when resolving conflict, and the belief that physical aggression is appropriate when resolving conflict. Of those beliefs, the only significant predictor of ATPA was the belief that yelling or verbal aggression was an appropriate way to resolve conflict. Communication is a learned, transactional process and the family communication style is the first point children learn how to relay information (Galvin, Braithwaite, & Bylund, 2015). If yelling is the means of conflict resolution in a family, the child would likely utilize the same pattern. Similarly, if yelling is the mechanism used by parents to discipline, this falls in the harsh parenting category. Harsh parenting has been shown to increase the risk of aggression in adolescents and has been identified as a risk factor for ATPA in other studies (Pagani et al., 2004; Ibabe & Bentler, 2016). The cognitive schemas of adolescents who experience verbal aggression from a parent change to accept aggression as the norm (Ponce, Willimas, & Allen, 2004).

The other beliefs variables (attitude towards law abiding behavior, responsibility for behaviors, and belief in the use of physical aggression) were not significant predictors of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent. This was surprising because early criminological research of delinquent attitudes found individuals with attitudes approving of delinquent activity were more likely to participate in delinquent acts (Sutherland, 1947) and these findings have been upheld by current researchers (Thomas, 2018; Jones, Boykin, Feliz, & Miller, 2018). Recent research has begun to investigate the relationships between

adolescents' attitudes of law abiding behavior and the attitudes of the adolescents' family and social spheres. A link between the parents' view of law abiding behavior and the adolescent's view has been found and supported by modeling and social learning theories, in that if parents share views or actions that disregard the law (as evidenced through their own delinquent behaviors), adolescents will also disregard the law and have negative views towards law abiding behavior (Bandura et al., 2011; Cavanagh & Cauffman, 2015). If a child sees the parent participating in violent activities, the child may use such violent tactics towards a parent.

The results of this study did not support the effects of belief about law abiding behavior and ATPA. Since the sample contained only adolescents who had been arrested for a violent act, this study may not have been able to detect the impact of beliefs about law abiding behavior. Normative beliefs concerning aggression, law abiding behavior, and responsibility for actions had yet to be researched in the realm of ATPA before this study. It has been a long held position that normative beliefs concerning aggressive behavior have an association with aggressive acts (Huesmann & Guerra, 1997) and adolescents who believe aggressive acts are a normal response have higher rates of violent or aggressive acts (Jouriles, Rosenfield, & McDonald, 2013). Further research on the normative beliefs held by adolescents that perpetrate against a parent would further inform the knowledge base of ATPA.

### **Individual Level – Commitment & Involvement Findings**

This study hypothesized that good school attendance and academic performance decreases the likelihood of an adolescent being arrested for ATPA, but the data only supported the hypothesized relationship between academic performance and ATPA. Hirschi (1969) and Eith (2005) both posit that the institution of school fulfills the commitment and involvement



requisite within social bond theory. As social bonds are impacted by poor academic performance, the likelihood of participating in delinquent activity may increase. The adolescent's social bond of commitment is exemplified in their academic performance and engagement in academic activities and can be a protective factor against aggression and violence (Hirschi, 1969; Fontaine et al., 2009). Adolescents that do not exhibit a commitment to their future (through their academic performance) lose that pillar of social bond and increase their likelihood of participating in delinquent activity.

Academic performance is one of the main antecedents for arguments between an adolescent and a parent (Allison, 2000). When an adolescent is not meeting academic or familial expectations (set forth by parents or the school), a volatile situation can be created between a parent and an adolescent. Often, academic performance is related to other non-school stressors, such as the inability to keep up with homework due to home life concerns or non-school related stressors, such as relationship issues (Mallett, 2016). Academic performance concerns would be a point for institutional response and intervention related to the prevention of aggression and violence.

### **Interpersonal Level – Attachments Findings**

**Witness to violence.** Witnessing violence was a statistically significant predictor of ATPA, supporting previous research (Hunter, Nixon, & Parr, 2010; Kitzmann, Gaylord, Holt, & Kenny, 2003; Walsh & Krienert, 2009). Child abuse and domestic violence often intersect and share many of the same risk factors towards future aggression and violence from the adolescents towards others (Herrenkohl & Moylan, 2008). Child abuse diminishes the social bond between a parent and a child, as does witnessing violence between parents as supported by Ogden and

Fisher (2015). The child could have a diminished bond with the abusive parent because he or she feels protective towards the parent receiving the abuse. On the other hand, the child may have a diminished bond with the parent being abused because he or she views that parent as weak or unable to protect themselves or the child. Abusing the parent also being abused by the other parent could be viewed as protection against the abuser, similar to a team mentality.

Current interventions for children in homes in which domestic violence is present focuses on eliminating the transference of the learned behaviors into further relationships and treating children exposed to trauma for post-traumatic stress disorder. Other programs, such as child-parent psychotherapy utilizes an evidence based therapeutic intervention with the child and the non-offending parent. The goal is to support the development of adaptive protective factors as a shared journey between the child and the parent (Chamberlain, 2014). Therefore, the children exposed to domestic violence should also be targeted with interventions that prevent reoccurring violence from occurring as the child reaches adolescence.

**Child Abuse/Child Sexual Abuse.** Both abuse and sexual abuse were found to be significant predictors of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent, supporting previous literature (Agnew & Huguley, 1989; Browne & Hamilton, 1998; Cottrell, 2001; Holt, 2013; Pagani et al., 2004). Abuse and sexual abuse are well documented as factors that will diminish the social bond between a child and parent (Baglivio et al., 2016; Boxer, Gullan, & Mahoney, 2009; Lyons, Bell, Frechette, & Romano, 2015). The attachments creating a social bond between a child and parent would not be found in an adolescent that had been abused by their parent. Not only would there be little social bond, there would be fear, confusion, and pain associated with the relationship.

These findings are relevant to how practitioners and social service agencies respond to child abuse and sexual abuse allegations, investigations, and substantiations. In general, a victim of child abuse is treated in a therapeutic setting with the treatment goal of alleviating mental health concerns and aggressive behaviors. Treatment strategies also focus on leading the child in sharing their experience without shame or embarrassment, working with the child to strengthen healthy coping mechanisms and to form new attachments, and focus on the cognitive mechanisms of blame (shifting the blame from themselves to the parent) (Lipvosky & Hanson, n.d.). Another aspect of treatment includes the use of a safety plan and teaching protection strategies. Findings from this study, as well as the previous research findings, support the value of intervening with children who have been victims of abuse. This would include treatment for children and adolescents even if the report is unsubstantiated. There are times that parental aggression does not fall into the statute driven criteria for abuse, but the adolescent may still respond to aggression in an abusive manner (Margolin & Baucom, 2014).

**Neglect.** Contrary to the hypothesis and previous research (Ibabe & Bentler, 2016), neglect did not have a statistically significant association with ATPA. Child neglect is often categorized with child abuse, but presents in a different way at the time and has distinct long-term impacts. Child neglect does not always have a physical manifestation and is thus a more hidden form of abuse. Cases of child neglect are difficult to substantiate and are often underreported. Much of the research focuses on abuse *and* neglect or abuse alone, not on neglect alone (Stoltenborgh, Bakermans-Kranenburg, & van Ijzendoorn, 2013). Research has found that neglect in early childhood does predict aggression in later childhood and adolescence (Kotch et al., 2008). A major concern for the treatment of victims of neglect are the lack of interventions and the available evaluation of the few interventions being used (Allin, Wathen, & Macmillan,

2005). Of the interventions evaluated and embraced by the research, barriers to implementation have been found ranging from training of practitioners to proper referral of the children (Wilson, 2012). Adolescents may react to neglect as freedom from rules and authority and seek out activities away from home that may lead to further delinquent activity, but not delinquent activity related to ATPA.

**Friendships.** The measure of current friendships was a theoretically-driven variable but was not found to be a significant predictor of arrest for ATPA versus arrest for a violent misdemeanor against a non-parent. Previous research supported the hypothesis that pro-social friendships decreased the likelihood of aggressive and/or delinquent behaviors (Prinstein & Dodge, 2008; Williams & Anthony, 2015). Similarly, Hirschi (1969) posited that any friendship is a social bond and decreases the likelihood of participating in delinquent behaviors. The findings of this study, differing from previous research, likely stems from the use of adolescents that had been arrested for similar acts, therefore the entire sample is comprised of delinquent adolescents. Further research on the impact of friendships on ATPA should include a non-delinquent comparison group.

## **Social Work Contributions and Future Directions**

### **Social Work Practice and Policy Contributions**

The results of this study support the creation and implementation of programs and services directed towards early intervention with adolescents who have demonstrated aggression towards a parent. Perpetrators of ATPA exhibit similar delinquent behaviors and have similar risk factors as perpetrators against a non-parent, but because of the negative impact ATPA has on the child-parent relationship, ATPA requires special attention. The results of this study support

the idea that ATPA prevention is best approached by early intervention, and early intervention should include focus on the multiple risk factors for ATPA. For example, when treating an adolescent with substance issues the child-parent relationship should also be a focus in the therapeutic process. Mental health problems are often complicated by substance abuse (and vice versa) (Chan, Dennis, & Funk, 2008). As both substance abuse and mental health are risk factors for ATPA, multi-focused intervention approaches designed to improve the child-parent relationship while simultaneously treating the presenting problem may reduce the risk of ATPA.

Mental health intervention can decrease the rate of perpetrating against a parent and reduce recidivism rates of abuse against a parent (Hein, Square, Chapman, Geib, & Grigorenko, 2017). Awareness of programs/services available for parents and youth, as well as mental health options, would give parents a resource and option when faced with an aggressive and abusive adolescent child.

Movement is being made on a grass roots level to increase the support for parents experiencing ATPA in their homes. In Florida, Senate Bill 1694: Support for Parental Victims of Child Domestic Violence, was passed by the 2017 Legislature and signed into law by Governor Rick Scott. The bill legislates a collaboration between the Florida Department of Children Families, the Florida Department of Juvenile Justice, and the Florida Board of Education to create training for law enforcement officers to include the handling of situations when the child/adolescent is the perpetrator. The bill also legislates the creation of easily disseminated information for parents, containing resources and information and what to do if the parent is being victimized by their child/adolescent. This research can support both goals, training and information, by including risk factors to look for within the family situation.

These findings also support the value of further exploration of the effect of witnessing violence, child abuse, and child sexual abuse on ATPA risk and on ways to effectively intervene when adolescents are known to have witnessed violence and abuse. The findings are an addition to a growing knowledge base of risk factors for ATPA. The findings can be used to inform the creation of new interventions, new treatment options for victims of abuse, and the creation of policies surrounding the response to abuse and/or neglect reports.

### **Study Limitations**

The results of this study show the model only predicts 11-15% of the variance, suggesting there are other factors that differentiate the risk associated with being arrested for ATPA versus arrest for a violent misdemeanor against a non-parent (Neter, Kutner, Nachtsheim, & Wasserman, 1996). With the large sample size used in this study, the likelihood that statistically significant relationships would be found by chance is increased and the variance of the model has decreased. Similarly, the analysis utilized data gathered from adolescents who had all been arrested and scored using a risk assessment tool. The risk assessment tool is designed to screen for factors already identified as increasing the risk for adolescents to participate in delinquent activities and behaviors. This study provides reason to believe that additional risk factors need to be identified to further differentiate the distinctions between adolescents that are arrested for ATPA versus arrest for a violent misdemeanor against a non-parent. Such factors may include parenting style (Miller-Graff, Cater, Howell, & Graham-Bermann, 2016; Ibabe & Bentler, 2016; Pagani et al., 2004), family instability (D. Lee & Mclanahan, 2016; Lewis, Cramer, Elliott, & Sprague, 2014; Provenzi, Olson, & Tronick, 2016), and general personality characteristics of the adolescent.

The data source for this study utilized records of juveniles arrested for assault/battery in Florida between June 2007 and June 2016. The analysis is limited to the slice of time represented by the time these adolescents were arrested and assessed with the C-PACT pre-screen. The data did not allow for the researcher to ascertain if the incident leading to arrest was the first time the adolescent had exhibited aggressive or abusive behaviors.

Another limitation to using arrest records is the many extra-legal factors are present when a law enforcement officer is called to a home or violent situation. Ideally, law enforcement officers act with discretion and utilize multiple decision-making mechanisms when moving forward with an arrest. In a qualitative study in which officers were observed to gather information on their process, Bonner (2015) extrapolated themes based on the adherence to rules, the extent of injury, and prior knowledge of the perpetrator. Elements such as ethnicity, age, and gender of the perpetrator, the use of a weapon, or even the time of day influence the law enforcement officer's decision to make an arrest (J. Lee, Zhang, & Hoover, 2013). Young (2015) found that police officers responding to violent situations in which a female adolescent assailant was involved were uncomfortable and described adolescent females as difficult to deal with. Although Young's study did not present conclusive evidence that more females or males were arrested, the study did support the assertion that the officers did not want to respond to calls in which a female was the perpetrator. This study's reliance on the C-PACT information only allows only for study of factors post-arrest, therefore it is unknown if the arresting officer was at all influenced by gender or any other factors. In this study a larger (although non-significant) percentage of males were arrested for ATPA; however some of the previous literature supported the trend in more females being arrested for ATPA (Walsh and Krienert, 2009). It is impossible

to determine from this study if stereotyping of perpetrators by gender could have influenced the likelihood of or types of arrests.

Other elements, such as the demeanor of the perpetrator, influence the law enforcement officer to move forward with an arrest. A disrespectful demeanor can lead to the assumption that the perpetrator is non-compliant and influence the arrest decision (Schulenberg, 2015). Officers who have been triggered by a perpetrator's demeanor, for any reason, are more likely to make an arrest (Johnson, 2017). Brown, Novak, and Frank (2009) found officers are more likely to arrest juveniles versus adults and are more influenced by a juvenile's demeanor. On the other hand, officers that are empathetic to the perpetrator are less likely to make an arrest (Jensen & Pedersen, 2017). If the officer was more likely to arrest the adolescent for ease of process or ease of diffusing the situation, that adolescent's C-PACT score might not be a valid measure of the risk associated with ATPA because he or she may not have been a true perpetrator.

Future studies would be required to have a fuller understanding of the law enforcement officer's impact on arrest, and most specifically on ATPA arrests. In Florida, the legislature passed the Support for Parental Victims of Child Domestic Violence bill (2017) requiring the state to review their training for law enforcement officers and create new training for domestic violence calls to include ATPA. The Department of Children and Families is also now required to work with law enforcement to provide resources and information to families experiencing ATPA. This could further impact the arrest decision making of law enforcement officers.

To differentiate the factors uniquely associated with ATPA (versus other forms of delinquency), only first-time arrests were utilized. The exclusion of multiple arrests limited the study to the use of data gathered on the C-PACT pre-screen. The pre-screen does not include as many questions and scores, therefore limiting the risk factor exploration. By limiting the scores



to those only found on the pre-screen, the reliability of the instrument to identify appropriate risk factors was also limited. As previously discussed, the variance of the model was low and there are likely other factors occurring to explain or predict ATPA. The full C-PACT scores could hold those other factors. Similarly, there are adolescents that exhibit ATPA behaviors and actions that have not been arrested. The design of this study did not allow for exploration of ATPA risk factors in a comparison group of non-arrested adolescents. Further studies comparing arrested to non-arrested adolescents would improve our understanding of risk factors for ATPA.

Finally, the findings of this study are limited to the state of Florida because the data is derived from Florida arrest records. Other states may utilize different tools or have a different way of responding to violent misdemeanors perpetrated by adolescents. For example, Florida utilizes the option for a law enforcement officer to provide a civil citation instead of arrested the adolescent (Nadel, Pesta, Blomberg, Bales, & Greenwald, 2018). Implementation of the civil citation protocol differs across counties in Florida. The option for a civil citation impacts who was included in the study sample. Further research on the decision making behind choosing a civil citation over an arrest in cases of ATPA are recommended. That being said, the results of this study, based on the theoretical guides, can be easily replicated with assessment tools that utilize similar domains and include similar assessment questions, used in other states. The theoretical framework combination of SEM and SBT allows for universal generalizability of the concepts.

### **Future Recommendations**

Future research should focus on the interaction between an adolescent who has abused their parent and the law enforcement officer who responds to the call. As discussed previously,

there is influence beyond the act precipitating the call and the actual arrest. A qualitative approach through interview and observation would discover the factors that influence the law enforcement officers. Such research would inform training for law enforcement for calls in which an adolescent has abused their parent.

Further study should individualize each risk factor found to be significant and utilize non-delinquent control groups to fully delineate the distinct risk associated ATPA. The comparison could be accomplished by utilizing the questions from the C-PACT or another measurement tool that assesses risk, with non-delinquent adolescents and comparing the group. The use of a control group of non-offenders would allow for further support of risk factors uniquely associated with ATPA. If adolescents who have been arrested for a violent act against a parent are compared to adolescents that have not been arrested or do not exhibit violence, the risk factors can truly be associated with ATPA as not just risk factors for delinquency.

Very little research has explored the adolescents' perspective of ATPA. Utilizing qualitative methods, such as interviews and focus groups, research may be conducted to understand the precipitating factors to ATPA. This research would include further examination of the beliefs and norms held by the adolescents and their experiences with abuse and/or neglect by a parent.

## **Conclusions**

Although some limitations existed, this study has contributed to the knowledge base of ATPA. The findings of this study have been consistent with previous research, such as the impact of mental health, child abuse, and witnessing domestic violence on the presence of ATPA. The study findings have also shown the importance of emerging risk factors, such as

academic performance and beliefs associated with the presence of ATPA within adolescents who have been arrested for ATPA. The findings of risk associated with mental health, abuse, and witnessing domestic violence strengthen the current knowledge base and support moving forward into the creation of new interventions and policies for the prevention of ATPA. This study also conferred that the research field of ATPA is still emerging and further study is needed.

**APPENDIX:**  
**VARIABLES, VARIABLE TYPES, AND C-PACT PRE-SCREEN QUESTIONS**

Variable	Type	Definition	Measurement Code	C-Pact Question
Presence of ATPA	Dependent variable	Adolescent arrested on an ATPA related charge	1=Against a biological parent 0=Against a non-parent	Gathered by FL-DJJ
Year	Control Variable	Year of arrest	No code	Gathered by FL-DJJ
Age	Independent variable – Individual level – Demographic factor	Age at time of arrest	1= 12 and under 2= 13 to 14 3= 15 4=16 5= Over 16	D1: Q1
Ethnicity/race	Independent variable – Individual level – Demographic factor		0=White 1= Black 2= Hispanic 3= Other	Gathered by FL-DJJ
Gender	Independent variable – Individual level – Demographic factor		0=Female 1=Male	Gathered by FL-DJJ
Alcohol use	Independent variable – Individual level – Behavioral factor	Youth's current alcohol use	0=Not currently using alcohol 1=Currently using alcohol	D2:Q8c
Drug use	Independent variable – Individual level – Behavioral factor	Youth's current drug use	0=Not currently using drugs 1=Currently using drugs	D2:Q8d

Variable	Type	Definition	Measurement Code	C-Pact Question
Mental health	Independent variable – Individual level – Behavioral factor	Youth’s history (within 6 months) of mental health issues	0=No history of mental health problem(s) 1=History of mental health problem(s)	D2:Q11
Law abiding behavior	Independent variable – Individual level beliefs category	Attitude toward responsible law-abiding behavior	1=Abides by conventions/values 2=Believes conventions/values sometimes apply to him or her 3=Does not believe conventions/values apply to him or her 4=Resents or is hostile toward responsible behavior	D4: Q1
Responsibility for Behavior	Independent variable – Individual level beliefs category	Youth’s acceptance of responsibility for behaviors	1=Accepts responsibility for anti-social behavior 2=Minimizes, denies, justifies, excuses, or blames others 3=Accepts anti-social behavior as okay 4=Proud of anti-social behavior	D4:Q2

Variable	Type	Definition	Measurement Code	C-Pact Question
Verbal aggression	Independent variable – Individual level beliefs category	Belief in yelling and verbal aggression to resolve a disagreement or conflict	1= Believes verbal aggression is rarely appropriate 2=Believes verbal aggression is sometimes appropriate 3=Believes verbal aggression is often appropriate	D4: Q3
Physical aggression	Independent variable – Individual level beliefs category	Belief in fighting and physical aggression to resolve a disagreement or conflict	1=Believes physical aggression is never appropriate 2=Believes physical aggression is rarely appropriate 3=Believes physical aggression is sometimes appropriate 4=Believes physical aggression is often appropriate	D4: Q4
School attendance	Independent variable – Individual level-Commitment & involvement category	Youth's attendance in the most recent term	0=Good attendance with few absences, no unexcused absences 1=Some partial-day unexcused absences, some full-day unexcused absences 2 = Habitual truant	D2: Q2c

Variable	Type	Definition	Measurement Code	C-Pact Question
Academic performance	Independent variable – Individual level-Commitment & involvement category	Youth's academic performance in the most recent term	1=Honor student (mostly A's) 2=Above 3.0 (mostly A's and B's) 3=2.0 to 3.0 (mostly B's and C's, no F's) 4=1.0 to 2.0 (mostly C's and D's, some F's) 5=Below 1.0 (some D's and mostly F's)	D2:Q2d
Witness to violence	Independent variable – Interpersonal level-Attachment category	History of witnessing violence	0=Has not witnessed violence 1=Has witnessed violence outside of the home 2=Has witnessed violence in the home	D2:Q9b
Victim of abuse	Independent variable – Interpersonal level-Attachment category	History of violence/physical abuse	0=Not a victim abuse 1=Victim of abuse outside the home 2=Victim of abuse in the home	D2:Q9a
Victim of neglect	Independent variable – Interpersonal level-Attachment category	History of neglect	0=Not victim of neglect 1=Victim of neglect	D2:Q10



Variable	Type	Definition	Measurement Code	C-Pact Question
Victim of sexual abuse	Independent variable – Interpersonal level- Attachment category	History of sexual abuse/rape	0=Not a victim of sexual abuse/rape 1=Victim of sexual abuse/rape by non-family member 2=Victim of sexual abuse/rape by family member	D2:Q9c
Current friendships	Independent variable – Interpersonal level- Attachment category	Current friends/companions	0= Pro-social friends or companions 1=Anti-social friends 2=No friends	D2:Q3b

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