

ATTACHMENT THEORY AS A PREDICTOR OF FEMALE AGGRESSION

A Dissertation

by

HELEN MINETTE BECKNER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2005

Major Subject Area: Counseling Psychology

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ABSTRACT

Attachment Theory as a Predictor of Female Aggression. (August 2005)

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A large body of research exists relative to male aggression. Studies over the past 30 years, especially as related to male-to-female intimacy violence in a domestic context, have contributed greatly to a better understanding of aggressive male behavior. However, it is suggested that a more balanced approach to research on aggression should include studies related to female aggression. A search of the current literature indicates that this process has begun; however, studies tend to report a different dynamic at work in aggressive women versus aggressive men. It appears that overall, female aggression more than male aggression, has a stronger relational component. It is the case that females can be aggressive and place substantial importance on the relationships in their lives. Attachment theory addresses the salient issue of relationships and is such a broad and complete theory that it incorporates aggressive behaviors as well. Therefore, this study seeks to expand the research related to attachment styles and associated behaviors, in particular as they pertain to the influences upon female aggressive behavior. A study of the relationship between the independent variables of gender, psychopathology/personality, and attachment style and the dependent variable of aggression was conducted. It was hypothesized that

attachment style would be a better predictor of female aggression as compared to psychopathology. Additionally, it was hypothesized that psychopathology would be a better predictor of male aggression as compared to attachment style. Significant results were obtained suggesting that attachment is a better predictor of female aggression than psychopathology, with a non-significant observation indicating the reverse being true of males. Specific gender differences related to aggression and violent behavior are presented. Current trends applicable to theories of aggression are discussed, as well as suggestions for future research.

DEDICATION

To my family ...

Jim
Joey and Heather
Laini, Trenton, and Madelyn

...who encouraged and gently nudged me every step of the way.

ACKNOWLEDGMENTS

To my husband, Jim, who earned this degree right along beside me: my thanks for your patience, support, and love. To my children, Joey and Heather, who were my cheerleaders - constantly encouraging me. To my grandchildren; Laini, Trenton, and Madelyn, who helped me keep things in perspective. To Dr. Donna Davenport and Dr. David Lawson who, at separate times, served as chairs of my committee: I thank you both for your guidance, the knowledge that you shared, and your wonderful way of teaching and mentoring others. To my committee members, Dr. Dan Brossart, Dr. Bill Rae, and Dr. Antonio Cepeda-Benito: each of you supported me in your own unique way and I am very grateful for your willingness to be a part of this effort. To the faculty of the Counseling Psychology Program at Texas A&M University; Dr. Donna Davenport, Dr. David Lawson, Dr. Dan Brossart, Dr. Michael Duffy, Dr. Collie Conoley, and Dr. Linda Castillo, who were each an integral part of this great gift of education that I have received: thank you for your time and talents. You each provided an experience that encouraged me to continue in this endeavor. I also wish to thank Arlene Parchman and Joyce Winslow of the Brazos County Community Supervision and Corrections Department for their consistent encouragement and support. Lastly, to my cohort who simply made this experience fun! Thank you – Tom, Brent, Drew, Jen, Josh, Mia, Saori, and Clint. I am a very lucky person for having had this opportunity and I do consider it a great gift in my life.

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CHAPTER I

INTRODUCTION

Gender Differences in Aggression

What contributes to an individual becoming violent or aggressive? The consequences are substantial to the perpetrator, the victim, and the community at large. Along with sex, Freud placed particular emphasis on aggression (Weiten, 1994). He viewed these two drives as especially complex and confusing. Joireman, Anderson, and Strathman (2003) wrote, “Of the many forms of self-control that must be mastered as one matures, perhaps none is more important than the control of aggressive behavior” (p. 1287).

A large body of research exists relative to male aggression. Research over the past 30 years related to male-to-female intimacy violence in a domestic context has contributed greatly to a better understanding of aggressive male behavior. It is suggested that the emphasis on male aggression is due primarily to the acknowledgement that men are more likely to cause serious injury than women due to physical differences (Cantos, Neidig, and O’Leary, 1994) and historically, that there are a higher rate of male convictions for aggressive behaviors (George, 1999).

A more balanced approach to research on aggression should include studies related to female aggression. From an evolutionary perspective, Buss and Shackelford

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(1997) stated, “If aggression is defined as inflicting costs on someone else, women’s aggression can be quite potent” (p. 615). In a more current social context, Steinmetz (1980) made reference to this by stating, “As women gain access to areas traditionally reserved for men, we may expect a wider range of criminal behavior to be exhibited” (p. 236). In 1986, Straus and Gelles compared two national surveys relative to the rate of abusive behavior as reported. Their findings include this statement about female aggression and violence, “...in marked contrast to the behavior of women outside the family, women are about as violent within the family as men” (p. 470). These statements provide support for the need to expand research related to female aggression. A search of the current literature suggests that this process has begun; however, studies tend to suggest a different dynamic at work in aggressive women versus aggressive men.

A number of studies focus on inherent characteristics in males and females. From an evolutionary psychological perspective, differences exist due to mating behaviors (Buss & Shackelford, 1997). Theoretically, men are capable of mating and reproducing with more than one woman at a time. For those men who are unable to successfully mate due to the “fortunes” of others, aggression can result. The authors indicated that men who are unmarried or lack resources are more likely to commit homicide than their more fortunate counterparts. From this same perspective, women are also considered to be aggressive. However, due to the fact that females can only reproduce with one male at a time, their aggression is focused on devaluing their competitors – other women. In a study of female-to-female assaults, Campbell,

Muncer, and Bibel (1998) made the suggestion that these assaults are often related to the female's mate selection strategy and considerations relative to economic dependence upon the male. Harris, Rushton, Hampson, and Jackson (1996) suggested that higher rates of testosterone are positively correlated with higher levels of aggression. Since males average five times the level of testosterone as females, males exhibit more aggressive behavior.

White and Kowalski (1994) presented a feminist analysis of female aggression and addressed several related theories, including (1) male-centered theories, (2) sex-specific theories, and (3) feminist theories. The first of these, male-centered theories, are based on studies of male aggression and the results were assumed to generalize to the female population. Three perspectives on female aggression are hypothesized: masculinization hypothesis, opportunity hypothesis, and economic marginalization. The masculinization hypothesis suggests that women will become more aggressive as they take on more traditionally male roles. The opportunity hypothesis implies that crimes are situational and as women move into the work force, more potential for criminal behavior is expected. Additionally, more distress is created resulting in anger, frustration, and aggression. Economic marginalization suggests that women suffer from lack of opportunity and aggressive acts follow in order to acquire more money and/or property. The second theory, sex-specific theory, implies differences between males and females in the nature, motives, and manner of aggression. This would include issues related to testosterone levels, gender identity, and reproductive ability. Women are thought to experience relational frustration leading to aggression, whereas men

experience status frustration. The third theory, feminist theory, combines several elements of each of the previous theories. This perspective notes the importance of considering the power differences and status of women in society, including restricted opportunities for women. It suggests that female aggression evolves from the interpersonal and institutionalized patterns of a patriarchal society.

Exploring aggression from a social psychological perspective, male/female differences are again apparent. Social role theory suggests that males are conditioned to behave more aggressively and subsequently develop more acceptance of these same behaviors (Eagly, 1997). Female roles are based on relationships and reciprocal behaviors. The assumption is that females are, therefore, less aggressive. Archer (1997), however, disputes social role theory as it relates to aggression. This study suggested that relationships largely contribute to female aggression.

Instrumental aggression versus expressive aggression was studied by Archer and Haigh (1997) and Campbell, Sapochnik, and Muncer (1997). These constructs relate to how one feels after aggressive behavior occurs. In instrumental aggression, it is likely that one would feel that he or she has exercised control over another. Expressive aggression results in a sense of having lost control to someone. In both studies, females scored higher than males on expressive aggression, whereas males scored higher than females on instrumental aggression.

In another study examining male and female differences on aggression, Viemero (1996) studied childhood predictors of criminal behavior. Predictors of physical aggression in adolescence showed gender differences. For males, the best predictor was

previous aggression, whereas in females it was watching violence on television. Factors related to arrests in early adulthood also were different for males and females. Male arrests were best predicted by previous aggression and exposure to violence on television. Female arrests were also predicted by exposure to violence on television, but also were predicted by female adolescent aggressive behavior, parental aggression, levels of punishment, and feelings of rejection.

Each of the previous social psychology citations is further supported in an article by Cross and Madson (1997). These authors explored the ways in which gender differences affect one's model of the self. They emphasize the importance of relationships in women's lives through their interdependent self-construal. It is reported that the female model of the self (interdependent) coupled with the closeness of the salient relationships drives certain aspects of female behavior. Baumeister and Sommer (1997) expanded upon the Cross and Madson (1997) article, by suggesting that one of the most substantial gender differences relative to aggression was that aggressive female behavior toward strangers was unlikely, whereas in male aggressive behavior, aggression toward strangers was common.

The relevance of female aggression towards those with whom they have relationships is further noted in a study by Fiebert and Gonzalez (1997). The study explored the frequency of assaults initiated by female college students and the justification that the women provided for aggressive behaviors towards their male partners. The authors reported that female aggression was driven by a need to achieve higher levels of attention from their partner, especially emotional support.

Much of the body of knowledge relative to male aggression, especially in criminal justice settings, incorporates at least one measure of psychopathology. Salekin, Rogers, and Sewell (1997) studied a comparable female sample and their relative psychopathy. Lower levels of psychopathy were found in females as compared to males. The authors suggest, "Clearly, this study demonstrates that any facile equation of female psychopathy ... with acts of aggression or other problematic behaviors is unwarranted. ...the construct of psychopathy, generated largely on male offender populations, appeared applicable to female offenders; however, their absolute rates of symptoms and severity of symptoms are lower" (p. 583). It appears possible that something other than psychopathy impacts female aggression.

In a study of the effects of parental behaviors on their child's early adult hostility and aggression, Nicholas and Bieber (1996) reported that lack of maternal support for their daughters was significantly related to increased physical aggression and fights within the family. This correlation was not present in the male participants. Further, the importance of the mother in this dynamic is notable. Due to the fact that the mother is typically considered to be the primary caregiver, expectations for support from the mother exceed the expectations for the same from the father. It is speculated that "...even though mothers were being abusive, participants reported feeling loved and supported by fathers; however, the converse was not found. When fathers were being abusive, participants reported lower love and support by mothers" (p. 1204).

Attachment Theory

It appears that overall, female aggression, more than male aggression, may have a stronger relational component. Attachment Theory addresses the issue of relationship style and quality over the life span. It suggests that certain behavioral styles relative to primary relationships with others are formed during childhood and continue “from the cradle to the grave” (Bowlby, 1979 as cited in Hazan & Shaver, 1994). Whether one develops a secure or an insecure attachment style relates to more or less subjective well-being, which in turn contributes to overall psychological and/or physical well-being (Hazan & Shaver, 1994) and may influence aggressive behaviors in females (Bowlby, 1988).

Berman and Sperling (1994) described attachment theory as developed by John Bowlby in this manner, “-a homeostatic process that regulates infant proximity-seeking and contact-maintaining behaviors with one or a few specific individuals who provide physical or psychological safety or security” (p. 5). This description specifically relates to attachment in early childhood. The authors extended attachment theory into adulthood with only slight modification. Seeking proximity and contact with an individual in order to receive safety and security—both physical and psychological—is still salient for adults. The manner in which one goes about accomplishing this is determined by internal working models of attachment that are established beginning in early childhood attachment experiences with the primary caregiver. When proximity and contact are threatened beyond acceptable limits, attachment is reflected in behavioral, emotional, and cognitive responses—either positive or negative, depending

upon the attachment style. Insecure attachments in adults often result in anger, sadness, guilt, dependency, and aggressiveness. These characteristic behaviors, of course, often manifest themselves in relationships.

Bowlby (1988), suggested that threats to proximity seeking and contact were often seen as threats of abandonment. It is from this threat that intense anger can evolve as a potentially functional effort to maintain the relationship. However, as with many behaviors, extreme examples can often become dysfunctional, and in the case of anger, lead to aggression and violence. As Bowlby explained :

This anger, the function of which is to dissuade the attachment figure from carrying out the threat, can easily become dysfunctional. It is in this light, I believe, that we can understand such absurdly paradoxical behaviour as the adolescent, reported by Burnham (1965), who, having murdered his mother, exclaimed, "I couldn't stand to have her leave me." (p. 30)

As compared to a secure attachment style, the primary insecure attachment styles more often result in a negative influence on adult relationships and the potential use of violence relative to those same relationships (Bowlby, 1984).

The present study seeks to expand the body of research relative to female aggression and to add to the previous studies that suggest gender differences in aggressive behaviors. A study of the relationship between the independent variables (IV) of gender (male/female), psychopathology/personality, and attachment style and the dependent variable (DV) of aggression was conducted. Based on previously cited research, it is hypothesized that:

(1) dimensions of attachment style will be a better predictor of female aggression than psychopathology; and

(2) psychopathology will be a better predictor of male aggression than dimensions of attachment style.

It is believed that this study adds to the previous studies that suggest gender differences in aggressive behaviors. Relative to the relationship between aggression and attachment styles, previous research exists; however, the vast majority of the studies incorporate children as participants. This study will expand the body of research relative to female aggression; but, more specifically, adult female aggression.

Factors related to aggression have therapeutic implications relative to the appropriate treatment for the consequences that often follow aggressive behaviors. Whether attachment issues or psychopathology are salient to one's difficulties with aggression impacts the approach to therapy and a more complete understanding of the behaviors and related emotions. Fiebert and Gonzalez (1997) report, "There is a clear trend in the national surveys which indicate that from 1975 to 1992 severe assaults by men toward women have decreased, while the rate of assaults by women have remained the same" (p. 584). This statement illustrates the importance of developing a better understanding of female aggression. It is hoped that this study will contribute to that effort.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter briefly describes the evolution of theories related to general aggression from the early 1900s and the Freudian psychoanalytic perspective to the early 2000s and the integrative approach of the General Aggression Model. A review of the literature specific to female aggression addresses the myths associated with female aggressive behavior and provides support for the notion that females can be as aggressive as their male counterparts. The tenets of attachment theory, as outlined, provide a framework from which the motivation of females to be aggressive can be viewed.

General Aggression

Aggression, as it relates to this study, is associated with negative behaviors acted out towards another individual with the intent to do harm. Research on aggression supports this association. Bjork, Dougherty, and Moeller (1997) define aggression as “the deliberate presentation of an aversive stimulus to another” (p. 34). The attempt to harm or injure and aggressor intent are considered salient to the concept of aggression (Campbell et al., 1997). Multiple theories have evolved over time that contribute to our current understanding of why individuals engage in aggressive behavior.

Psychoanalytic Theory

As noted previously, in addition to sex, Freud viewed aggression as an important component in the study of human behavior (Weiten, 1994). However, this was not his early viewpoint. In Siann (1985), Freud was described as associating aggression with

the consequences of one's internal conflict resulting from the frustration of unfulfilled erotic urges (e.g., Oedipal complex). His early attention was focused on the concept of sadism, the pleasurable act of inflicting pain on another individual. Sadism was considered by Freud to be experienced by children early in their development. Biting, as an example, was considered to provide a sense of satisfaction to the child when the erotic urges went unattended. Sadism, as a pathological behavior, came later in life when cathexis occurred or one's libidinal thoughts became attached to an object. If one were to be fixated at a particular stage of development (oral, anal, or phallic), it could lead to sadistic behaviors associated with the fixation and acted out upon the object of interest. Throughout his early writings, he subjugated feelings of hate, anger, and rage to the overriding influence of sadism. In 1909, Freud wrote, "I cannot bring myself to assume the existence of a special aggressive instinct alongside of the familiar instincts of self-preservation and of sex, and on equal footing with them" (Fromm, 1977 cited in Siann, 1985, p. 100).

However, Freud's thoughts about aggression were to change. In 1930, he wrote, "But I can no longer understand how we have overlooked the ubiquity of non-erotic aggressivity and destructiveness and can have failed to give it its due place in our interpretation of life" (Fromm, 1977 cited in Siann, 1985, p. 98). Several influences on Freud's life are given for this change in perspective (Siann, 1985). The advent of World War I increased the salience of aggression and conflict into Freud's worldview, as well as that of his patients, who had previously been more concerned with issues related to repression and erotic urges rather than overt aggression. In addition, Freud

was personally having difficulty in resolving his own feelings of hostility associated with family and colleagues. Most notable, at this time, was the split with his protégé, Alfred Adler. Adler's developing views on aggression were moving away from erotic urges and libido and towards feelings of impotence leading to an "inferiority complex" and struggle for superiority and power. This represented a challenge to Freud and his theories of psychoanalysis as related to human nature.

Freud's understanding of instincts changed over time. Initially, the primary instincts contributing to thoughts that aggression might be internally driven included the sexual/pleasure-seeking instincts (id) versus the self-preserving/reality instincts (ego) (Bandura, 1973; Siann, 1985). An infant begins life in a stage of "primal narcissism" in which the child's ego is focused on satisfying its own needs and is indifferent to the outside world. However, as development occurs, the child continues to seek self-satisfaction, but experiences pain from both internal and external sources. At this point, according to Freud, one moves from love/indifference to love/hate. Aggression is no longer a consequence of unfulfilled erotic impulses, but is associated with one's sense of survival. The gravity of the aggression and conflict associated with World War I influenced Freud to theorize a new set of competing instincts – the life instinct (Eros) and the death instinct (Thanatos). It is from this dichotomy that Freud's final thoughts relative to aggression evolved. He suggested that these two instincts represented fundamental qualities associated with living beings and resided within each living cell. The death instinct promotes self-destruction while it is the life instinct's purpose to counter this effort. This is accomplished by diverting the death instinct outward towards

the external world. In its final version, for Freud, aggression became described as follows (Freud, 1933, quoted in Fromm, 1977, cited in Siann, 1985):

It really seems as though it is necessary for us to destroy some other thing or person in order not to destroy ourselves, in order to guard against the impulse to self-destruction. A sad disclosure indeed for the moralist. (p. 103)

Current psychoanalytic theory acknowledges the influence of instinctual drives related to aggression, but has moved away from the suggestion that individuals carry an innate death instinct whose goal is self-destruction (Bandura, 1973). However, Freud's thoughts relative to aggression have continued in the form of subsequent theories that have helped advance the understanding of why humans become aggressive.

Frustration-Aggression Hypothesis

In 1939, Dollard and his colleagues reintroduced into the body of knowledge on aggression Freud's earlier suggestions that aggression is a consequence of frustration; however, to these theorists, aggression originated from drives rather than instincts (Bandura, 1973; Siann, 1985). In its simple form, their hypothesis stated that there was a causal relationship between frustration and aggression, with frustration preceding aggression. Bandura (1973) elaborated further:

The frustration-aggression hypothesis contended that interference with goal-directed activity induces an aggressive drive which, in turn, motivates behavior designed to injure the person toward whom it is directed. Infliction of injury was assumed to reduce the aggressive drive. (p. 32-33)

The implication that frustration inevitably led to aggression was criticized and, subsequently, modified over time (Bandura, 1973; Berkowitz, 1969; Renfrew, 1997). Later studies gave consideration to alternate sources of aggression and differing outcomes related to frustration. There is no doubt that frustration often leads to aggression. However, Renfrew (1997) suggested that the arousing effect of the stimuli, or frustration, is often an influence on aggression due to other factors including cognitive and/or emotional elements present within the individual or the environment.

Social Learning Perspective

Contemporary learning theory has been built upon early experiments that studied the way in which children learned aggressive behaviors by the observance of others (Renfrew, 1997). The Bobo doll studies conducted by Albert Bandura and his colleagues in the 1960s were landmark studies relative to aggressive behaviors and observational learning. The studies placed children in a situation in which they initially observed an adult interacting with a weighted inflatable plastic toy (Bobo doll). The interaction included several aggressive behaviors towards the toy. The children were later given the opportunity to play with the Bobo doll and then subsequently frustrated when their play was interrupted. Following the frustration, they were again allowed to play with the toy and were observed to interact in a way that imitated the adult aggressive behavior. The study concluded that the similarity in the behaviors was not due to coincidence, but rather to a modeling process in which the behavior was learned by the children (Bandura, 1973; Renfrew, 1997; Weiden, 1994).

Bandura's work included earlier thinking relative to learning theory including classical conditioning and operant conditioning; however, the cognitive influence upon learning was salient to Bandura's concept of social learning theory (Renfrew, 1997). Bandura (1973) suggested that human cognitive abilities allow individuals to define events with either a positive or negative valence by pairing the event with associated thought-related emotions. In other words, if one perceives that an anger provoking incident was due to inadvertent or accidental circumstances, one might not associate the event with the need to become aggressive. Of course, the reverse can be true, as well. Bandura's studies tended to focus on the antecedents to behaviors rather than the consequences. In Bandura (1973), he wrote, "When diverse social influences produce correspondingly diverse behaviors, the inner cause implicated in the relationship cannot be less complex than its effects" (p. 40).

Origins, Instigators, and Maintainers: Social learning theory suggests that aggression stems not just from frustration, but from many other factors (Bandura, 1973; Renfrew, 1997). These factors can best be described by three major influences – origins, instigators, and maintainers. Much like social learning theory itself, these factors represent a broad perspective on those things that affect human thoughts and behaviors.

Origins encompass those environmental influences that contribute to aggression (Bandura, 1973; Renfrew, 1997). Fundamentally, an aggressive individual is influenced by observational learning or modeling and is possibly reinforced for this behavior. However, the influences of memory and rehearsal are also important to the learned behavior and the acting out of the modeled aggression. Several other contributing

factors include the individual's ability to engage in the aggressive behavior such as physical qualities and resources, familial perspective on aggression, subcultural/community beliefs as to what is socially labeled as aggressive, and symbolic modeling such as those relevant to television, movies, and music.

Bandura suggested that the acquisition or learning of the aggressive behavior was separate from the acting out of the behavior (Bandura, 1973; Renfrew, 1997). The act of aggression is predicated upon an instigator which is also typically learned. Individuals learn through experience and modeling to recognize threats, perceived enemies, and situations in which aggression is likely to be reinforced. Emotional arousal such as anger or frustration can serve as an instigator, as well as verbal or physical assaults. However, aggression in these situations is more likely to occur if it is determined that it will be beneficial to one's self or applicable to the situation. Otherwise, the cognitive influence on the social learning theory suggests that problem-solving skills are more likely to be deemed most appropriate and utilized by the individual (Renfrew, 1997). Other instigators include psychopathology that involves delusions, hallucinations, and paranoid thinking; feelings of being oppressed or disenfranchised such as those associated with social and/or economic deprivation; and obedience or instructional control as might be exemplified by military combat.

Maintainers function to sustain aggressive behaviors and are affected by reinforcement or consequences (Bandura, 1973; Renfrew, 1997). Social learning theory suggests that aggression is impacted by three forms of reinforcement – direct external reinforcement, vicarious reinforcement, and self-reinforcement.

Direct external reinforcement is achieved through material acquisition, increased social status, inflicting pain/injury on others, and alleviation of aversive treatment (Bandura, 1973). Through aggression, criminal individuals can forcibly derive material support for their lifestyle. Improvement in lifestyle can also be obtained through increased social status. Aggression is salient to increased social status in situations such as certain sports activities, military combat, and the more antisocial gang activity. Relative to inflicting pain/injury on others, research suggests that aggression can be considered as satisfying an internal drive or increased self-esteem. Drive theories express the belief that inflicting pain/injury on others reduces the tension and anxiety associated with the conflict. Another interpretation suggests that physical retribution can enhance one's self-evaluation given a certain view as to the overall acceptance of aggressive behaviors. One who is not willing to fight back might be considered as weak or a coward. Alleviation of an aversive treatment is best defined as defensive aggression. From a social learning perspective, this form of aggression is reinforced as a means of removing the source of pain and anticipating consequences.

Vicarious reinforcement increases aggressive behavior when an individual observes that another's aggressive behavior was rewarded (Bandura, 1973, Renfrew, 1997). This concept of maintaining aggression relates to the observational learning basis of social learning theory. In the presence of reinforcement and the absence of punishment, one is considered more likely to behave in a similar fashion. It is important to remember, however, that the origins of aggression are many and varied. Therefore, even with the observation of rewarded aggression, the overall context of the aggression

might not serve to maintain the observer's own aggression. As Bandura (1973)

observed:

A vicarious reinforcement event may vary in a number of aspects, including the characteristics of the aggressors and those who respond to them, the type and intensity of consequences, their justification, the situations in which the outcomes occur, and the counter-actions of aggressors. The mechanisms that are operative in any given instance will therefore depend upon the nature and combination of these various factors. (p. 204-205)

Previous discussion has involved aggression influenced by external rewards and punishment. Self-reinforcement completes the theory by addressing those internal factors that contribute to aggressive behaviors by increasing one's sense of self-worth and satisfaction (Bandura, 1973; Renfrew, 1997). Modeling contributes to the way in which one evaluates their own behavior and the associated feelings. An adolescent whose parents and/or social support value certain aggressive behaviors is more inclined to find those behaviors self-reinforcing and a sense of pride. It is important to note the potential effects that such processes dependent on self-mediation can render. Once one detaches from external input and begins to rationalize behavior that might otherwise be maladaptive, it is not much of a stretch to begin to justify increased aggression (Renfrew, 1997).

Bandura's work on the social learning basis of aggression built upon the previous theories by incorporating a cognitive component to the overall understanding of learning and the way in which individuals self-regulate their own behaviors. His

work, in part, contributed to the current work on the General Aggression Model (Anderson & Bushman, 2002; Anderson & Carnagey, 2004).

General Aggression Model

The General Aggression Model (GAM) provides an integrative framework for the study of aggression. It incorporates social-cognitive and developmental theories and has an overall view of aggression that includes situational, individual and biological variables (Anderson & Bushman, 2002; Anderson & Carnagey, 2004; Joireman, Anderson & Strathman, 2003). The GAM proposes that when certain proximate causes or input are experienced (individual traits, values, and beliefs; biological factors; environmental/situational cues), outcome (action/behavior) is affected by way of interactive routes (current affective state, cognitions, appraisal, and evaluation/judgment). The final outcome is then recycled as part of the social interaction and becomes a part of one's life experience and, therefore, the input relative to the next encounter. In Anderson and Carnagey (2004), the GAM model and its processes were described as follows:

In sum, all social behavior, including aggression, is the result of the proximate convergence of situational factors (i.e., instigators or inhibitors of aggression) and personological factors (i.e., propensity or preparedness to aggress or to avoid aggression). These input variables influence social behavior by determining the present internal state and subsequent appraisal and decision processes. The emitted social behavior, in turn, moves the social encounter along to its next episodic cycle. (p. 177)

The model extended from certain knowledge structures that include perception, interpretation, decision making, and action which are derived from experience (Anderson & Bushman, 2002; Anderson & Carnagey, 2004). The model suggested that these knowledge structures influence the automaticity of certain cognitive and affective responses. Three knowledge structures are identified. The first is one's perceptual schemata, which functions to identify certain phenomena, from the simple to complex. The second knowledge structure is the person schemata, which incorporates one's beliefs about another individual or group of individuals. The third knowledge structure is the behavioral script, which informs as to the behaviors of individuals given a certain environment or situation. Knowledge structures impact affect in several ways. They initiate an interaction that connects the experience with the affective component; therefore, when anger is initiated, anger is felt. Secondly, the influence of the knowledge structures informs the individual as to how this feeling should be experienced and processed, including judgments about adaptive versus maladaptive components, appropriateness, and subsequent behaviors. Lastly, the knowledge structure can influence behavior through scripts that suggest certain behaviors become likely given certain circumstances. For example, a script might indicate that when one is angered by the actions of another, aggression will be initiated only if it is determined that the action was intentionally meant to offend or harm.

The GAM views aggression from the perspective of one's personality. In Anderson and Carnagey (2004), personality was defined as "...the sum of a person's knowledge structures, constructed from countless experiences throughout the life span,

influenced by biological factors as well as situational ones” (p. 177-178). The aggressive personality stems from a series of learning experiences that move an individual towards aggression or violent behavior given certain circumstances. The development of aggression begins with the learning, rehearsal, and reinforcement of aggression-related knowledge structures. Identified aggressive personality components directly affected by social learning include aggressive beliefs and attitudes, aggressive perceptual schemas, aggressive expectation schemas, aggressive behavior scripts, and aggression desensitization. The impact of the described knowledge structures and aggressive personality components is an increase in the overall aggressive personality which influences the input-routes-outcomes-recycle paradigm described previously. Thus the present social behavior (e.g., aggression) interacts with past experiences and influences the future.

Female Aggression

The myth that females are not aggressive is being challenged in the literature, as well as the statistical evidence that influences society’s view relative to the existence of the problem, underlying issues, and treatment implications (Bjorkqvist & Niemela, 1992; Campbell, 1993; Denfeld, 1997; Federal Bureau of Investigation, 2004; Jack, 1999; Leschied, Cummings, Van Brunschot, Cunningham & Saunders, 2001; Prinstein & La Greca, 2004). Male dominance, as expressed through aggression, has been historically supported by a patriarchal society that viewed female aggression as a threat and, as an extension, unnatural and atypical (Denfeld, 1997; Jack, 1999; Steinmetz, 1980). Dating back to at least 2500 B.C., women were considered subservient to men

and were punished for any indiscretions. A women's punishment for speaking to her husband in a verbally abusive manner "was to have her name engraved on a brick which would then be used to knock out her teeth" (Steinmetz, 1980, p. 334). These humiliations were written into ancient Greek and Roman laws as well. Given the consequences of acting aggressively, women have learned to disguise their overt aggression and to appear more passive. However, times have changed. Women now participate in combat, work in law enforcement, compete in the corporate world, and fight for social justice. Jack (1999) wrote, "And women hurt others. They abuse, kill, inflict harm on the human spirit, and dominate others through pain and intimidation....Violence is not limited to men" (p. 20-21).

Of particular relevance is the increased rate that women appear to be engaging in aggressive and violent acts. FBI statistics (Federal Bureau of Investigation, 2004) support this phenomenon (see Appendix A). Ten-year arrest trends differentiated by sex from the year 1994 through 2003 indicate that overall crime committed by males declined by 6.7% while offenses committed by females increased by 12.3%. Aggravated assaults involving males as the perpetrator declined by 17.3% while the rate for female offenders increased by 14.0%. Other assaults trended in the same manner with males committing 3.8% fewer assaults and females committing 32.1% more assaults. Offenses against the family and children increased for both males and females; however, the rate for females far exceeded males (41.2% versus 4.0%). Similar trends were cited by Prinstein and La Greca (2004) for juveniles. The authors wrote:

Between 1988 and 1997, the rate of adolescent girls' arrest for delinquent crimes

increased by 83%, whereas boys' arrest rates increased by 39% (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 2000). Of these crimes, there has been a 155% increase in the number of person-directed crimes committed by girls, which is nearly twice that of boys.... (p. 104)

Leschied et al. (2001) reported the same outcomes in Canada. They wrote, "Violence with adolescent girls is the only area consistently showing an increase in reported rates of violent offending (considering both age and gender) in Canada (Statistics Canada, 1999)" (p. 201). Although it is important to note that males continue to commit the majority of crimes (Federal Bureau of Investigation, 2004; Leschied et al., 2001; Prinstein & La Greca, 2004) and can cause more serious injury to a woman than a woman to a man (Cantos, Neidig, & O'Leary, 1994), these reported trends relative to female aggression are no less disturbing.

As noted earlier, Freud and psychoanalytic theory were influential in the evolution of theories related to aggression. The influence of World War I on Freud's views increased his perception that aggression was mostly male and was instinctual (Jack, 1999). Women functioned as a calming effect on the aggressive and/or sexual drives that moved men to violent behavior. Those women who did not repress their anger were considered masculine, thus perpetuating the belief that women who aggressed were an anomaly. From a societal perspective, this assumption that aggression is an inherent characteristic to males, as passivity is to females, has perpetuated a patriarchal structure that was dominant until the feminist movement of the 1970s and still influences certain aspects of society today (Campbell, 1993; Jack, 1999).

It has been used to justify such social issues as male on female domestic violence and economic disparities due to lack of innate female competitiveness. Women who were aggressive were labeled irrational and in need of psychotherapy.

From an evolutionary perspective, Darwin viewed early, primitive species as bisexual- having both male and female reproductive functions within themselves (Jack, 1999). He suggested that the success of human evolution was due, in large part, to the differences between males and females. As an extension, any blurring of gender lines became problematic. A female who exhibited perceived masculine characteristics (e.g. aggression), or a male who had feminine characteristics, were considered to be reminiscent of less developed species. Considering the views related to aggression of such early influential theorists and intellectuals as Freud and Darwin, there is no difficulty in understanding how females were considered to be non-aggressive, since the aggressive female was considered to be abnormal. Accordingly, female aggression was considered less salient to the study of aggression and its impact on the understanding of human behavior.

Research Related to Female Aggression

As a result of the aggressive female being considered essentially an outlier throughout the first half of the 20th century, research pertaining to female aggression is lacking (Archer, 2004; Bjorkqvist & Niemela, 1992; Leschied et al., 2001; Prinstein & La Greca, 2004; Werner & Crick, 1999). Bjorkqvist & Neimela (1992) suggest that a “male perspective” has biased research related to aggression. The operationalization of aggression has focused on more physical forms of aggression that historically have

involved more male perpetrators. Children have often been the subjects of studies relative to aggression and, therefore, observed behaviors (e.g. physical aggression) have been part of the methodology. Observational studies of aggression in adults have been primarily laboratory studies that utilized such aggression stimuli as loud noises or the “teacher-learner” paradigm in which the participants were asked to administer an “electric shock” to a “victim” that was actually a confederate. Bjorkqvist and Niemela (1992) suggested that generalizations associated with physical aggression or psychological harm are difficult to obtain from such studies given the context in which aggression, especially female aggression, typically occurs. The authors reported that the trend in studies of female aggression was moving away from whether females are less aggressive than males and toward the phenomenon of female aggression, including its influences and manifestations. A more complete study of aggression in females should consider various forms of aggression, both direct and indirect. Jack (1999) commented on the issue:

Almost all of what psychologists have thought and felt about aggression has been shaped by a male perspective. This means that we understand aggression from the point of view of those who have been dominant. It also ensures that men’s fears of women’s aggression, as well as men’s projections and desires, have been built into our concepts and conclusions. Since women’s aggression develops within a different social reality than men’s, women’s accounts may offer a new perspective on this human problem. (p. 3)

Much of the research that has been conducted on female aggression has been associated with domestic violence or violence perpetrated on a significant other. Research on male-to-female violence over the past 30 years has contributed to a substantial body of knowledge relative to the issue of domestic violence. It is widely acknowledged that due to physical differences, men can cause more serious injury to a woman than a woman to a man (Cantos, Neidig, & O'Leary, 1994). However, this research does not exclude female-on-male violence and mutual violence from the family violence dynamic. This, too, is well documented, but has received little attention. According to Steinmetz and Lucca (1988), there are several possible reasons for this. First, men avoid reporting any female perpetration of abuse of violence because they feel that they will be stigmatized. Second, men are more likely to have the necessary resources to get help without reporting their victimization. Third, "selective inattention" exists within the media and researchers. Lastly, the potential for more severe injury to women makes their victimization more visible.

Straus and Gelles (1986) compared two national surveys relative to the rate of abusive behavior as reported. The first survey was conducted in 1975 and had a total of 2,143 married or cohabitating participant couples. The second survey was conducted a decade later, in 1985, and had a total of 3,520 married or cohabitating participant couples. In comparing overall violence, male-on-female violence declined; however, female-on-male violence increased. Neither measure was significant*, however, the authors found the female violent behavior notable. They wrote:

In addition to the trends, the violence rates in part B reveal an important and distressing finding about violence in American families – that, in marked contrast to the behavior of women outside the family, women are about as violent within the family as men. This highly controversial finding of the 1975 study is confirmed by the 1985 study and also by findings on other samples and by other investigators, (p. 470)

It is obvious by the comments from the authors that their findings were met with some criticism. The community was apparently not yet ready to view females as aggressive individuals, nor males as victims.

A study by Stets (1990) examined the relationship between verbal aggression and physical aggression. Study participants were a part of the National Family Violence Re-Survey conducted in 1985. There were 3,370 participants in the verbal aggression portion of the study and 2,636 participants in the physical aggression portion. The findings reported that more females inflict verbal and severe physical aggression than males. The overall results of the study were consistent with the model that suggests individuals move from a state of no aggression to a state of verbal aggression. However, an anomaly associated with females was observed relative to the process of aggressive escalation. It is thought that physical aggression follows verbal aggression. Females do not differentiate between verbal aggression and minor physical aggression. It was suggested that when females inflict minor physical aggression, they are most likely committing no more harm than with verbal aggression; therefore, it is not seen to be deviant by a female. For a male, due to his greater physical strength, it is more likely

that he will inflict injury with the use of minor physical aggression; therefore, it is seen as more deviant by a male and likely to be aligned with physical aggression rather than verbal aggression. One of the most valuable outcomes from this study is that verbal aggression is seen as a “seed” of physical aggression later in relationships. Females were found to be quite capable of committing verbal aggression. If the findings are correct and verbal aggression is an antecedent to physical aggression, perhaps this factored into the increase in female use of severe physical aggression as well.

Cantos, Neidig, and O’Leary (1994) studied conflict tactics and injuries with a sample of 180 military couples referred for domestic violence treatment. Physical aggression on the part of both husband and wife was reported in 82% of the couples. Out of this group, 65% reported some injury, with 22% being sustained by both partners as a result of the same incident. The couples reported that of the reported injuries, 76% required no medical attention. There were no permanent injuries. This study supports female-on-male violence as well as mutual violence. The authors found that violent incidents where females inflicted injuries on their male partners often involved the use of weapons or objects. Similarly, a study by Langhinrichsen-Rohling, Neidig, and Thorn (1995) examined 199 military couples mandated to domestic violence treatment. The findings reported that in 83% of the couples both husband and wife reported being physically aggressive.

In an article by Flynn (1987), a model of relationship violence was proposed that took into account premarital relationships as well as marital relationships. The

model stated the following:

- (a) Premarital and marital relationships share characteristics which contribute to the occurrence of violence within those relationships;
- (b) The forms and frequency of violence in courtship and in marriage are remarkably similar; and
- (c) Violence in premarital relationships may serve as a training ground for marital violence. (p. 295)

Some of the support for this model was based on conditioning; that is, as a learned behavior, if violence occurs in one setting, then it is more likely that it will also occur in similar settings (courtship versus marriage). Violence in premarital relationships may cause attitudes toward violence in relationships in general to be less negative, increasing the likelihood of violence in marital relationships.

A longitudinal study conducted in 1982 tapped into the model of relationship violence as proposed by Flynn (1987) and from this study three articles relative to partner violence from premarital to marital evolved. In O'Leary, Barling, Arias, Rosenbaum, Malone, and Tyree (1989), 272 couples were assessed for physical aggression against their partners. Measurements were taken at intervals of 1 month prior to marriage, 18 months after marriage, and 30 months after marriage. At each interval, females reported more physical aggression against their partners than males. Statistical significance was obtained at the premarital interval (44% versus 31%) and the 18 month interval (36% versus 27%). Whereas females reported more aggression at the 30 month interval as well, it was not significant (32% versus 25%). Murphy and O'Leary (1989) used the same longitudinal data to examine psychological aggression as a predictor of

physical aggression. For this study, those participants from the sample that had previously engaged in physical aggression against a partner were eliminated from the study. This left 213 males and 184 females as participants. Assessments were conducted 1 month prior to marriage plus 6 months, 18 months, and 30 months after marriage. The study gave support to psychological aggression as a predictor of physical aggression and also suggested that both partners contributed to increased conflict in the early stages of the marital relationship. In O'Leary, Malone, and Tyree (1994), various predictors of physical aggression were examined. For this study, assessments were conducted at intervals of 1 month prior to marriage, 18 months after marriage, and 30 months after marriage. Predictors were found to be different for males and females. For both males and females with aggressive and defensive personalities who are experiencing dissatisfaction in their relationship, the tendency was to become psychologically aggressive towards their partner. This, in turn, led to physical aggression. For females, an additional predictor variable was noted. For those females with impulsive personalities, marital dissatisfaction led directly into physical aggression, circumventing the psychological aggression. There were also different direct paths to domestic violence. For males, family of origin violence was shown to predict marital violence. For females, personal violent behaviors in their past appeared to be predictive of continued violence towards their partners.

In another longitudinal study, Magdol, Moffit, Caspi, Newman, Fagan, and Silva (1997), gender differences and other predictors related to partner violence were studied. The participants in this study were a birth cohort of 21-year-olds that are a part of the

Dunedin Multidisciplinary Health and Development Study being conducted in New Zealand. There were a total of 861 participants (425 females and 436 males) who had been in an intimate relationship within the year prior to the study. Females were found to have significantly higher perpetration rates relative to partner violence in each of the four main categories – verbal aggression, minor physical violence, severe physical violence, and any physical violence. Males were found to have significantly higher victimization rates in three of the four main categories relative to partner violence – verbal aggression, severe physical violence, and any physical violence. The results suggested that females could be more aggressive toward males than the reverse.

These results were compared with two studies from the United States, the National Family Violence Survey conducted in 1985 and the National Youth Survey conducted in 1983 and the results were found to be consistent. Even though the findings supported the conclusion that females are more aggressive than males, the study also found that male perpetrators were more deviant than females. This deviance was related to polysubstance abuse, antisocial personality disorder, and depression. Male perpetrators were also more likely to be poorly educated, chronically unemployed, and lacking in social support. Female victims were found to suffer from symptoms of anxiety disorder more than males who were victims. These results indicate that therapeutic interventions relative to male-on-female violence should be different from female-to-male violence.

Ehrensaft, Moffitt, and Caspi (2004) utilized “clinically abusive,” “nonclinically abusive,” and “nonabusive” groups of males and females involved in relationships to

study the heterogeneity of developmental risk factors associated with partner abuse, as well as gender differences in perpetrators of abuse and victims of abuse. The developmental risk factors included family-of-origin characteristics, parenting, child behavior problems, adolescent psychiatric disorders, and adolescent personality traits. The clinical group criteria involved violence resulting in injury, medical treatment, police intervention, assistance sought from another agency/entity, or a conviction for assaultive behavior. The nonclinical group was comprised of participants who had endorsed certain injuries, but did not report them and did not have a record of conviction. Participants were involved in the Dunedin Multidisciplinary Health and Development Study, a longitudinal study of health and behavior being conducted in New Zealand. The study involved a community sample from an unselected birth cohort rather than a sample derived from a woman's shelter, police reports, or emergency rooms which more typically represent "patriarchal terrorism," or male-on-female violence that is "culturally sanctioned violence intended to force females' compliance" (p. 258). The authors suggested that this would enable the results to be more representative of the general population, including those affected by "patriarchal terrorism," as well as other forms of domestic violence not typically reported to official entities.

Gender differences were found in the frequency of perpetration and victimization. In the nonclinical group, females reported significantly higher frequency of being the perpetrator of physical abuse than did the males and less frequency of being the victim. In the clinical group, there were no gender differences found in either

perpetration of physical abuse or victimization through physical abuse. In comparison to females in nonabusive relationships, females involved in abusive relationships, both clinical and nonclinical groups, were reported to have experienced more changes in primary caregivers in childhood, to have been parented by a single parent for a longer duration, and to have received a diagnosis of conduct disorder during adolescence. Males in abusive relationships as adults did not exhibit the family-of-origin risk factors as were observed in females. They did, however, tend to have childhood and adolescent behavioral problems, an adolescent diagnosis of conduct disorder, and attention deficit disorder. Relative to childhood factors, the males in the nonclinical group were similar to those in the nonabusive group. When examining the perpetration of aggression within the abusive relationship only, males and females were shown to have histories of aggressive behaviors; however, the males exhibited more pathology than the females, especially in clinically abusive relationships. When discussing their overall results, the authors commented, “This prompts the novel hypothesis that woman-to-man abuse is the common default, but escalation beyond this common pattern, to a more severe level involving injuries and official intervention, requires a male partner who has a history of psychopathology” (p. 268).

Another form of aggression and violent behavior often associated with females is that of child abuse. However, as is the case with much of the research on female aggression, studies are lacking that investigate the female perpetrator. An exception to this would be mothers with substance abuse problems, abuse which confounds any underlying issues. Emphasis in research on child abuse appears to be placed with the

victim, the consequences of the abuse, and treatment implications. Whereas it is understood that knowledge in this area is of utmost importance, are we not missing a substantial piece of the puzzle by not looking at the perpetrator with the same vigor in an effort to reduce the offense in the first place? Is this another artifact associated with the myth of female aggression as mentioned previously? As noted, the arena of domestic violence research appears interestingly to have provided much of the research on female aggression although the roots of this work were in male battering behaviors toward females. Salient to the issue of child abuse as committed by females is that the research does point to involvement in partner domestic violence as one of the best predictors of maternal abuse towards their children (Borrego, Timmer, Urquiza, & Follette, 2004; Hien & Honeyman, 2000; Hien & Miele, 2003; Lutenbacher, 2002; Siegel, 2000). One explanation offered for such a tragic interpersonal breakdown as child abuse is that the mother views the precipitant behavior of the child as an attempt to manipulate and control (Campbell, 1993), similar to issues associated with domestic violence situations.

In pursuit of a greater knowledge relative to female aggression, it is apparent that domestic violence, at various levels, should not be overlooked. It is important to note that the emphasis on female aggression associated with domestic violence is not to diminish the gravity of the severe male-on-female violence referred to as battering. Ehrensaft et al. (2004) suggest that the two are “qualitatively different samples of abusers and victims” (p. 258). In Straus (1978), the author wrote:

The particularly brutal form of violence known as wife-beating is only likely to

end with a change in the cultural and social organizational factors underpinning parent-to-child, child-to-child, and wife-to-husband violence, as well as husband-to-wife violence. (p. 449)

In McNeely and Robinson-Simpson (1987), the authors appeared to complete the thought, “But concerted efforts in all of these areas are unlikely to be effective unless society realizes that domestic violence is a two-way street” (p. 488).

Jack (1999) interviewed sixty women relative to their aggressive behavior and history. From this effort, the author suggested several factors that contributed to female aggression. In line with social learning theory and the general aggression model, those that experienced childhoods in which physical aggression and abusive behaviors were practiced, “learned their way into the human family through violence” (p. 158). The view of how to connect with others often included physical violence, even when intimacy was the intended outcome. Other environmental factors included poverty, substance use, and parental mental illness. The interviews suggested five possible antecedents to destructive aggression in females, including (a) an effort towards connection even though likelihood of a positive relational outcome was reduced, (b) a counter-response intended to revenge emotional pain and/or betrayal, (c) an action taken when alternative efforts intended to influence others have failed, (d) a compulsive act over which one has no control, and (e) a survival strategy.

As was previously noted, female aggression has a greater relational component than does male aggression. The question then becomes, why do females who place great

value on interpersonal relationships utilize aggressive behaviors most frequently within that same context? Jack (1999) responded in this manner:

Aggression is a type of relatedness, a particular form of interaction, a way of connecting. It is an interactive event, it occurs in the relational space between people, it arises from the inevitable clashes of people's wishes, desires, and wills. For the present, let us define aggression as forcefully bringing one's will, desires, and voice into relationship to oppose or displace those of another, for either constructive or destructive purposes. (pp. 43-44)

It is the duality of anger and aggression, both functional and/or dysfunctional, that positions the emotion and subsequent behavior in the midst of relational issues (Bowlby, 1973; Jack, 1999). Bowlby (1973) suggested that anger and aggression stemmed from a sense of loss or separation from one with whom attachment was salient. Anger evolved into functional aggression when the goal was to precipitate a reunion or to deter any further separation. Dysfunctional aggression resulted when the anger was so intense as to break the relational bond and efforts to deter became efforts to revenge.

Attachment Theory has thus advanced the body of knowledge contributing to the understanding of relationship dynamics across the life span. Considering the importance of relationships to females in general, it is especially relevant to consider the suggestion that attachment is a better predictor of female aggression than of male aggression (Roberts & Noller, 1998).

Attachment Theory

Attachment theory provides a theoretical framework that addresses issues related to social and emotional development “from cradle to grave” (Bowlby, 1979 as cited in Hazan & Shaver, 1994). The work of John Bowlby on attachment has influenced the growing body of knowledge that encompasses relationships from that of the parent-child dyad to the close relationships of adolescents and adults (Cassidy & Shaver, 1999). It is posited that the interpersonal attachment styles developed between a caregiver (e.g. mother) and a child is stable over time and manifests itself in adult romantic and intimate relationships.

John Bowlby began his career as a child psychiatrist trained in the psychoanalytic tradition. However, he struggled with the emphasis placed on internal issues with little regard for the effects of environment and personal experiences (Bowlby, 1988; Hazan & Shaver, 1994). The psychoanalytic position was that of two drives related to the mother-child dyad, primary and secondary. The primary drive involved the provision of food and satisfaction of the hunger drive provided by the mother. The secondary drive involved the personal relationship that develops from the association drawn from the mother’s presence and pleasure experienced by the infant when fed (Cassidy, 1999). Bowlby found the primary drive in the mother-child relationship as incongruent with his observations of children who were homeless and/or institutionalized in London during the first half of the 20th century. His experience suggested that some of the children failed to thrive even though they were fed and provided for by others within the institution.

In 1944, Bowlby published “Forty-Four Juvenile Thieves: Their Characters and Home Life,” an article that described consequences for young boys who had been separated from their mothers (Bowlby, 1988; Cassidy, 1999; Hazan & Shaver, 1994). In the article, Bowlby hypothesized a strong relationship between maternal separation in the early infant/toddler years and delinquency during boyhood. In 1950, Bowlby presented a report to the World Health Organization (WHO) that suggested maternal deprivation at an early age led to increased risk of physical and mental illness. However, at that time, Bowlby did not theorize as to why or how this correlation occurred. He began to find his answers in evolutionary thinking and ethological studies (Bowlby, 1988; Cassidy, 1999; Hazan & Shaver, 1994). Survival of the species dictated the need for mother-child proximity in order to provide food, information about the environment, and protection from predators.

The importance of proximity to the protector/caregiver is fundamental to attachment theory (Hazan & Shaver, 1994). Adult protection and care are necessary to the survival of human infants. When infants perceive any deterrent to proximity maintenance, they are likely to experience anxiety which results in attachment behaviors associated with reestablishing proximity to the protector/caregiver, typically the mother, who exhibits a complementary behavior. The attachment behavioral system consists of social behaviors that serve as a biological function necessary to regain proximity to the attachment figure (Bowlby, 1982). As one grows into adulthood, the same motivation to seek proximity exists; however, the attachment figure becomes one with whom a “pair-bond” relationship has been established, including romantic and

marital relationships (Cassidy & Shaver, 1999). In mother-child attachment, the relationship is complementary. The child seeks proximity from the relationship, but does not provide the same. In adult attachment, the relationship is reciprocal with proximity being both received and provided by the pair. The important psychological component of feeling secure is physically manifested in children through actual contact, whereas in adults, it is “felt” (Hazan & Shaver, 1994).

Generally speaking, attachment can be viewed from two perspectives or attachment styles –secure and insecure (Hazan & Shaver, 1994). The work of researcher, Mary Ainsworth, and the “Strange Situation” further defined individual differences in attachment styles. Her work with infants confirmed Bowlby’s view of a secure attachment and further divided insecure attachment into anxious/ambivalent and avoidant styles. The secure attachment incorporates proximity maintenance, with the attachment figure staying near and providing minimal separation. From that position, a safe haven is more likely created that provides comfort, support, and reassurance. A secure base is developed that allows the individual to engage in non-attachment behavior successfully and without distress. Emotions such as security, love, and confidence develop in such individuals. Insecure attachment, conversely, arises when the attachment figure is not sufficiently available and/or responsive.

Anxious/ambivalent attachment occurs when the attachment figure responds inconsistently. Subsequent emotions include fear and anxiety. Related behaviors in children are motivated by preoccupation with the primary caregiver, and include visual checking, calling, pleading, and clinging (Hazan & Shaver, 1994). The avoidant

attachment style is prevalent in those children whose attempts at close contact and comfort with the primary caregiver have been denied or ignored. Emotionally, these children become defensive and manifest these feelings by avoiding contact with their primary caregiver.

The idea that these working models of attachment (secure, anxious/ambivalent, and avoidant), that are developed in the first few years of life affect relationships from childhood into adulthood was somewhat controversial (Hazan & Shaver, 1994). The stability of attachment styles over time has received more recent support in the literature (Bowlby, 1973; Crowell, Treboux, & Waters, 2002; Hazan & Shaver, 1987, 1994; Roisman, Madsen, Hennighausen, Sroufe, & Collins, 2001; Rothbard & Shaver, 1994). This does not exclude the possibility that overt change can occur, but rather suggests that underlying working models will persist. Hazan and Shaver (1994) addressed the stability issue as follows:

Attachment theory does not dictate absolute stability of individual differences induced during infancy. Nevertheless, as with any cognitive construction, internal working models are resistant to change, in part because they tend to be overlearned and operate out of awareness, and in part because the default strategy for processing incoming information is to assimilate it to existing schemes rather than modify the schemes to accommodate the information. (p. 7)

Rothbard and Shaver (1994) cite the work of Hazan and Shaver in support of the similarities and continuity of the attachment behavioral system and working model/style over the life span. They suggest that adults, like children, seek and work to maintain

proximity to a romantic or intimate partner. Adults continue to seek comfort from their partner when threatened physically or emotionally, rely on the partner's availability, and become distressed when separated or experience threats to the relationship or loss. The same three distinct styles as described by Ainsworth appear to apply to adults as well. Securely attached adults are comfortable with the closeness of others and are reliant upon them for comfort. They do not ruminate on being abandoned by their partner. The anxious/ambivalent adult often perceives others as reluctant to get close and, in their attempt to compensate, scare people away. They fear abandonment by their partner and frequently worry about not being loved or about the failure of the relationship. The avoidant adult attachment style describes those who are uncomfortable being close to others, lack trust, and are unable to depend on them for comfort and support. The relationship often suffers because of their difficulty with intimacy.

The Ainsworth tripartite model of attachment styles continues to be a major influence in current research involving attachment and relationships. However, some modifications and variations are notable. A fourth attachment style, disorganized/disoriented attachment, has been identified by researchers (Main & Solomon, 1990 as cited in Hazan & Shaver, 1994). This pattern blends the avoidant and anxious/ambivalent behaviors to the degree that the individual is not able to develop a strategy to defend against their anxiety. It is suggested that this style occurs when the child's primary caregiver is severely mentally ill or abusive.

Bartholomew and Horowitz (1991) have proposed a four-category model for adult attachment. As would be expected, the authors cite the work of Bowlby as the basis of their work:

Bowlby (1973) identifies two key features of these internal representations or *working models* of attachment: “(a) whether or not the attachment figure is judged to be the sort of person who in general responds to calls for support and protection; [and] (b) whether or not the self is judged to be the sort of person towards whom anyone, and the attachment figure in particular, is likely to respond in a helpful way” (p.204). The first concerns the child’s image of other people; the second concerns the child’s image of the self. (p. 226)

The four-model category incorporates two types of internal working models—an internal model of others and an internal model of the self. Both internal models are dichotomized as positive or negative. The positive image of others would suggest that other individuals are viewed as trustworthy versus the negative image which indicates a perspective in which others are unreliable and rejecting. A positive image of the self reflects one who is worthy of love, comfort, and support versus the negative image of one who is not. These two dichotomized internal models allow for four attachment patterns labeled as secure, preoccupied, dismissing, and fearful. A secure attachment style (positive sense of self and others) is indicative of feelings of lovability and worthiness, as well as response to and acceptance of others. The preoccupied pattern (negative sense of self, positive sense of others) represents feelings of unworthiness and unlovability in combination with a positive perspective on others. One who exhibits a

preoccupied pattern is likely to seek self-worth and self-acceptance through the acceptance of others. Fearful attachment (negative sense of self, negative sense of others) predicts that one will experience a sense of unworthiness and unlovability in addition to feeling that others will be rejecting and are not to be trusted. Behavior in relationships becomes avoidant in order to protect from expected rejection. The last category, dismissing attachment (positive sense of self, negative sense of others), suggests those who wish to maintain a sense of independence and invulnerability. However, they guard against being disappointed by others by avoiding or dismissing close or intimate relationships. The four-category model of attachment is becoming an integral part of the way in which attachment is measured and described in adults (Bartholomew & Horowitz, 1991; Brennan, Clark, & Shaver (1998).

Bowlby viewed intimate emotional bonds as important as food and sex (Bowlby, 1988). In discussing his perspective on the importance of relationships and the effect on overall well-being he noted, "... The capacity to make intimate emotional bonds with other individuals, sometimes in the careseeking role and sometimes in the caregiving one, is regarded as a principal feature of effective personality functioning and mental health" (p. 121). Hazan and Shaver (1994) described relationships as a source of subjective well-being and suggested that lack of interpersonal relationships creates negative stressors due to the failure to satisfy the innately human needs as social creatures.

In attachment theory the self is more appropriately considered a self-in-relation; however, it is important to acknowledge that this does not denote a self being attended

by others, but rather a self engaged in a dynamic interaction or way of being (Batgos & Leadbeater, 1994). The authors suggest that a greater sense of self is achieved through the increased ability to interact appropriately with others. The child develops an intrapsychic representation of the self as a self-in-relation to others through his or her attachment to their primary care-giver. As children grow into adolescence and adulthood, their self-in-relation abilities expand in order to allow for a more active part in the dynamic. The relational context of the self and others was termed a “primary source for growth” (Batgos & Leadbeater, 1994, p. 159). The early interaction of self and others was thought to be more important to females than males, inasmuch as they are more likely to be encouraged in the development of empathic abilities and attention to relationships (Batgos & Leadbeater, 1994). The authors continued, “Indeed, a girl’s sense of self-efficacy may be bound up with her emotional connections to others, and with her ability to negotiate and affect those connections” (p. 159).

Bowlby suggested that the strength of the attachment relationship with the attachment figure is unrelated to the quality of the relationship (Henderson, Bartholomew, & Dutton, 1997). The idea that abuse can strengthen attachment (insecure) bonds evolves from the social-psychological theory of pair bonding which incorporates a power imbalance and intermittency of abuse. The power imbalance contributes to the abused individuals reduced sense of self while the abuser develops a perception of increased power. Intermittency of abuse creates alternate episodes of negative and positive experiences. These two factors combine to strengthen the insecure emotional bond and interfere with the abused individual’s ability to permanently leave

the relationship. The attachment system is activated by the strong bonding, leading the abused to seek proximity to the attachment figure, at times the abuser. This unfortunate attachment is considered one of the contributing factors to abused children remaining attached to their abusive caregivers. The function of the attachment behavior is protection. Roberts and Noller (1998) attribute the reason women are more likely to commit violence in a private context rather than a public context to the presence of attachment insecurities in the private situation.

The role of anger in the attachment relationship is suggested by Lyons-Ruth and Jacobvitz (1999). These authors suggested that anger was a typical response to frustration and functioned as a critical communication skill with the attachment figure. Anger might serve to perpetuate the attachment relationship. If, however, the attachment figure does not respond, one might sense rejection or lack of security, fear sets in, and physical responses take over the interaction. Given that proximity seeking and maintenance are critical to healthy attachment behaviors, it is understandable that threats to the relationship, abandonment issues, and separation work to evoke anger, anxiety, and the associated maladaptive behaviors (Bowlby, 1988; Kobak, 1999). It is notable that repeated threats to abandon or perception of abandonment can be as instrumental in activating the attachment behaviors, including aggression (Bowlby, 1973, 1988). In Bowlby (1973), extreme examples were reported:

One, an adolescent who murdered his mother, exclaimed afterwards “I couldn’t stand to have her leave me.” Another, a youth who placed a bomb in his mother’s luggage as she boarded an airliner, explained “I decided that she would

never leave me again.” The hypothesis proposed makes these statements less paradoxical than they appear. (p. 251)

Kobak (1999) suggested that the defining components of a threat to attachment could change over time with age and better affect regulation. However, he believed that the fundamental emotional response to a perception of threat remained the same over the life span.

Hypotheses

Kobak (1999), noted that the great body of research associated with attachment had focused primarily on the relationship of internal working models/styles of attachment and personality. He proposed that knowledge of attachment could be advanced through the study of adult attachment relationships and behavior. His study looked at the relationship between attachment and aggression, specifically female aggression – another area that appeared to be lacking in a strong research base (Archer, 2004; Bjorkqvist & Niemela, 1992; Leschied et al., 2001; Prinstein & La Greca, 2004; Werner & Crick, 1999). It is the case that females are aggressive and place substantial importance on the relationships in their lives. Attachment theory addresses the salient issue of relationships and is such a broad and complete theory that it incorporates aggressive behaviors as well. Therefore, this study seeks to expand the research related to attachment and behaviors, in particular as it pertains to the influences associated with female aggressive behavior.

The present study seeks to expand the body of research relative to female aggression and to add to the previous studies that suggest gender differences in

aggressive behaviors. A study of the relationship between the independent variables (IV) of gender (male/female), psychopathology/personality, and attachment style and the dependent variable (DV) of aggression was conducted. Based on previously cited research, it is hypothesized that: (1) dimensions of attachment style, as measured by the Adult Attachment Scale (Collins, 1996) and the Experiences in Close Relationships–Modified (Brennan, Clark, & Shaver, 1998), will be a better predictor of female aggression than psychopathology as measured by the Millon Clinical Multiaxial Inventory-III (MCMI-III) (Millon, T., Davis, and Millon, C., 1997); and (2) psychopathology as measured by the MCMI-III will be a better predictor of male aggression than dimensions of attachment style as measured by the Adult Attachment Scale and the Experiences in Close Relationships instruments.

CHAPTER III

METHODOLOGY

Methods

Participants

A total of 154 participants 18 years of age and above initially participated in the study. Twelve participants were eliminated due to incomplete responses or invalid data. Five of these participants were from the non-adjudicated group and 7 were from the adjudicated group.

Non-Adjudicated Group . Sixty individuals (males = 14, females = 46) 18 years of age and older participated in the study. The participants were selected from a university and community population. Participation in this study was voluntary and participants each received a \$5.00 gift certificate to a local eating establishment. Solicitation to participate was conducted by verbal request. The university sample was comprised of undergraduate students from Texas A&M University in College Station, Texas. The community sample was solicited through a group of employees of a large accounting firm in Houston, Texas. The participants in the non-adjudicated group had no known history of aggressive behavior.

Adjudicated Group . Eighty-two individuals (males = 45, females = 37) 18 years of age and older participated in the study. The participants were selected from Brazos County, Texas Community Supervision and Corrections Department (adult probation) and were required to be under supervision for an assaultive crime which is considered to represent aggressive behavior or have a documented history of aggressive

behavior. Permission from the agency to solicit participants was obtained. Participation in this study was voluntary and participants each received a set amount of community service restitution credit for their involvement in the study. The level of credit was established at 2 hours by the probation department.

Materials

Aggression Questionnaire (AQ) (Buss & Warren, 2000). This instrument is comprised of 34 items measuring five subscales related to aggression – physical aggression (PHY), verbal aggression (VER), anger (ANG), hostility (HO), and indirect aggression (IND). These five subscales combine into a total score on aggression (AQ Total). Additionally, an inconsistent responding (INC) index score is available to consider validity of scores. The AQ is an updated version of the Buss-Durkee Hostility Inventory, a long-time standard for assessing anger and aggression. Each AQ item describes a characteristic related to aggression, and the individual taking the test rates the description on a scale from 1 = “Not at all like me” to 5 = “Completely like me.” The items can be read and understood easily by anyone with at least a 3rd grade reading ability. The norms for the AQ are based on a standardization sample of 2,138 individuals, ages 9-88.

For the purposes of this study, the AQ Total scores were used to assess aggression. Buss and Warren (2000) suggested that scores 5 or greater on the Inconsistent Responding (INC) Index Score should be interpreted with caution, as there is a strong likelihood that the responses were not consistently based on the content of the items. Any participant in non-adjudicated group that scored 5 or greater on the

Inconsistent Responding (INC) Index Score was eliminated from the study. One participant (male) was excluded on this basis. Those in the adjudicated group who scored 5 or greater on the INC were left in the study, as their likelihood of behaving aggressively had been determined by their offense or history. Five participants were included in this category. The instruments were hand scored using the scoring instructions and the AQ scoring worksheet included in the AQ AutoScore Form.

Reliability data for the AQ indicate acceptable stability for the scores. The internal consistency estimate for the AQ Total Score is .94. Estimates for the AQ subscale scores are adequate, ranging from .71 for the IND score to .88 for the PHY score (median = .77). Test-retest reliability is .80, and the correlations between their subscale scores range from .72 to .80 (median = .74). Utilizing a sample of 1,253 college students, concurrent validity was reported between the AQ Total Score and measures of other personality characteristics including emotionality (.35), impulsiveness (.46), sociability (-.12), assertiveness (.43), competitiveness (.46), public self-consciousness (.20), private self-consciousness (.25), and self-esteem (-.35). Additionally correlations between scores obtained on the first version of the AQ and peer nominations for 98 college students included physical aggression (.45), verbal aggression (.20), anger (.29), hostility (.24), and AQ Total (.31). Correlations between the AQ Total score and other related measures include the Novasco Anger Scale (.74) and the Provocation Inventory (.59) (Buss & Warren, 2000).

Millon Clinical Multiaxial Inventory-III (MCMI-III) (Millon, T., Davis, and Millon, C, 1997). This instrument contains 175 items (true versus false) and is designed

to assist in the diagnosis of personality disorders and clinical syndromes (psychopathology). Scores are provided on 28 validity, personality, and clinical scores (Plake & Impara, 2001). In a review of the MCMI-III, Choca (2001) reports, “Compared with other instruments designed to measure personality traits ... the MCMI is a clinical inventory. It conceptualizes personality in the way clinicians think, using prototypes that have been part of the clinical literature for years” (p. 765).

The MCMI-III was used as a measure of psychopathology. Base rate (BR) scores in excess of 75 are indicative of the presence of personality or clinical disorders. Participants were eliminated from the study if they endorsed as true two or more of the items 65 “I flew across the Atlantic 30 times last year,” 110 “I was on the front cover of several magazines last year,” or 157 “I have not seen a car in the last ten years” as included in the Validity Index (VI). The VI is sensitive to random responding, confusion, or reading disorders. Additional criteria for elimination pertained to the Disclosure Scale (Scale X) which assesses whether the patient is reporting a sufficient amount of information to produce a valid profile. Those participants with raw scores less than 34 and greater than 178 were eliminated, as the scale indicated that they showed a strong tendency to either under report or over report personal problems, symptoms, and negative feelings (Craig, 1999). One participant from the non-adjudicated group and four participants from the adjudicated group were eliminated from the study based on invalid profiles on the MCMI-III. Profile reports and scores were generated through the computer scoring process.

Relative to psychometric properties (Choca, 2004), the test-retest reliability correlations ranged from .82 for the Debasement Scale to .90 for the Somatoform Scale. Internal consistency has been considered good. The reported alpha coefficients range from .66 for the Compulsive scale to .90 for the Major Depression scale. The alpha coefficients exceed .80 in 20 of the 26 scales.

Based on the factor analyses performed for Choca, Peterson, and Shanley (1986) on the MCMI and by Craig and Bivens (1998) on the MCMI-III which reported a similar three factor structure, the factors described as General Maladjustment, Paranoid-Detached, and Antisocial were used as scores on the MCMI-III. The General Maladjustment factor score was obtained by totaling the base rate scores for the subscales Depressive (2B), Major Depression (CC), Dysthymia (D), Avoidant (2A), Somatoform (H), Schizoid (1), Dependent (3), Borderline (C), Anxiety (A), Histrionic (4), and Narcissistic (5). The Paranoid-Detached factor score was obtained by totaling the base rate scores for the subscales Delusional Disorder (PP), Paranoid (P), Schizotypal (S), Bipolar:Manic (N), Thought Disorder (SS), Post-Traumatic Stress (R), and Negativistic (8A). The Antisocial factor score consists of the base rate scores on the subscales Antisocial (6A), Drug Dependence (T), Alcohol Dependence (B), Sadistic (6B), and Compulsive (7).

Adult Attachment Scale (Collins, 1996). This instrument assesses adult/romantic attachment styles and behaviors. In this study, the instrument was utilized to measure attachment as it relates to the participant's contemporary relationships with significant others. The instrument is based on Hazan and Shaver's (1987) three attachment

classifications. It consists of 18 individual statements. Participants are asked to rate each statement on a 5-point Likert scale ranging from (1) “not at all characteristic of me” to (5) “very characteristic of me”. Scores were obtained through a syntax applicable to this instrument and a SPSS program. The instrument assesses dimensions of attachment styles with three scales: Close, Depend, and Anxiety. The Close Scale measures the extent to which a person is comfortable with closeness and intimacy. The Depend Scale measures the extent to which a person feels he or she can depend on others to be available when needed. The Anxiety Scale measures the extent to which a person is worried about being rejected or unloved. Each subscale is scored by six items with scores on each subscale ranging from 6 to 30. Cronbach alpha coefficients are as follows: Avoidance of dependency (.78), discomfort with closeness (.77), and anxiety over abandonment (.85). Intercorrelations include: Close and depend ($r = .53$), anxiety and close ($r = -.34$), and anxiety and depend ($r = -.46$) (Collins, 1996).

Experiences in Close Relationships –Modified (Brennan, Clark, & Shaver, 1998). This instrument assesses dimensions of adult/romantic attachment styles and behaviors, but was revised (see Appendix B) to accommodate the measurement of adult to parent attachment (J. Simpson, personal communication, April 29, 2003). This instrument is a 36-item self-report measure of attachment style developed from a factor analysis of a majority of the self-report measures of adult romantic attachment. Scores were obtained through a syntax applicable to this instrument and a SPSS program. The measure creates two subscales. The first is Avoidance or discomfort with closeness and discomfort depending on others. The second is Anxiety or fear of rejection and

abandonment. The scores are dimensional and rated from low to high on each subscale. Brennan et al. stated that this instrument relates conceptually to Bartholomew's four category typology, but represents stronger relationships than those between Bartholomew's self-report instrument and the same relevant variables. Internal validity on this instrument was high as compared to other self-report measures of attachment style with an alpha coefficient on Anxiety equal to .91 and on Avoidance equal to .94 (Brennan et al).

Design and Procedure

This study was approved by the Institutional Review Board (IRB) at Texas A&M University on 2/16/04 (Protocol Number 2004-0025).

Participants for the non-adjudicated group were selected from a university and community population. Participation in this study was voluntary and participants each received a \$5.00 gift certificate to a local eating establishment. Solicitation to participate was conducted by verbal request. The university sample was comprised of undergraduate students from Texas A&M University in College Station, Texas. The community sample was solicited through a group of employees of a large accounting firm in Houston, Texas. The participants in the non-adjudicated group had no known history of aggressive behavior.

Participants for the adjudicated group were selected from the Brazos County Community Supervision and Corrections Department (adult probation) and were under supervision for an assaultive crime which is considered to represent aggressive behavior or have a documented history of aggressive behavior. Identification of potential

participants was obtained through referrals to anger management evaluations and/or therapy, as well as offense descriptors noted on the probation department's monthly report of incoming defendants who had been placed under supervision. Permission from the adult probation department was obtained relative to the solicitation of participants. Individuals were contacted by letter regarding their participation. This study was voluntary and participants each received a set amount of community service restitution credit for their involvement in the study. The level of credit was established by the probation department at 2 hours.

Procedure

The participants in the non-adjudicated group were approached verbally relative to their interest in volunteering for the study. The study was explained and a brief introduction and explanation of the instruments was presented. Once interest was expressed, they were given a packet with each of the instruments inside and asked to return them once completed. All packets were monitored for return and they were given their \$5.00 gift certificate. The participants in the adjudicated group were required to attend a scheduled group administration of the instruments which lasted approximately 1–2 hours. The participants were asked to provide responses to the previously described instruments during the session. Each participant from both groups signed Informed Consent and Confidentiality statements.

It is not believed that any risks were present in this study. No deception or coercion was used.

CHAPTER IV

RESULTS

This chapter presents the statistical analyses conducted for the present study. Separate analyses were performed relative to the male participants and the female participants. Multiple regression analyses were utilized to test the hypotheses. Total aggression was the dependent variable as measured by the Aggression Questionnaire (AQ). Aggression was predicted by the independent variables of attachment style and psychopathology. Adult/romantic attachment style was measured by the three scales (Anxiety, Close, Depend) of the Adult Attachment Scale (AAS). Adult participant to primary caregiver attachment style was measured by the two scales (Avoidance, Anxiety) of the Experiences in Close Relationships (ECR). Considering the participant to variable ratio reflected in this study, the bootstrapping method was utilized to obtain greater confidence in the results.

Analyses Pertaining to Male Participants

Descriptives and Correlations

Descriptives and correlations for model variables are represented in Tables 1 and 2.

Testing the Assumptions of Multiple Regression

Assumptions relevant to the use of the multiple regression procedure were investigated for the male sample. The residuals were shown to be normally distributed, an examination of the predicted and standardized residuals suggested relatively constant error variance, and all correlations between independent variables and residuals were

non-significant. The tolerance and the variance inflation factor indicated that multicollinearity was not problematic for this data.

Table 1

Descriptive Statistics for Model Variables

Total Male Sample (N = 59)

| | Sample Mean | Standard Deviation | Range |
|----------------------------------|-------------|--------------------|-----------|
| Total Aggression (AQ) | 47.78 | 10.25 | 25 - 66 |
| Anxiety (AAS) | 2.18 | .90 | 1 - 4 |
| Close (AAS) | 3.62 | .70 | 2 - 5 |
| Depend (AAS) | 3.23 | .60 | 2 - 4 |
| Avoidance (ECR) | 2.56 | 1.00 | 1 - 5 |
| Anxiety (ECR) | 2.49 | 1.03 | 1 - 5 |
| General Maladjustment (MCMI-III) | 434.85 | 201.03 | 164 - 831 |
| Paranoid-Detached (MCMI-III) | 264.02 | 162.81 | 0 - 552 |
| Antisocial (MCMI-III) | 219.39 | 74.09 | 88 - 342 |

Table 2

*Correlations among Variables**Total Male Sample (N = 59)*

| | Total Aggression (AQ) | Anxiety (AAS) | Close (AAS) | Depend (AAS) | Avoidance (ECP) | Anxiety (ECP) | General Maladjustment (MCMII-III) | Paranoid Detached (MCMII-III) | Antisocial (MCMII-III) |
|-----------------------------------|-----------------------|---------------|-------------|--------------|-----------------|---------------|-----------------------------------|-------------------------------|------------------------|
| Total Aggression (AQ) | - | .321* | -.294* | -.345** | .218 | .458** | .670** | .687** | .436** |
| Anxiety (AAS) | .321* | - | -.382** | -.399** | .345** | .631** | .385** | .486** | .233 |
| Close (AAS) | -.294* | -.382** | - | .561** | -.316* | -.353** | -.344** | -.353** | -.269* |
| Depend (AAS) | -.345** | -.399** | .561** | - | -.334** | -.417** | -.372** | -.427** | -.390** |
| Avoidance (ECP) | .218 | .345** | -.316* | -.334** | - | .601** | .321* | .326* | .284* |
| Anxiety (ECP) | .458** | .631** | -.353** | -.417** | .601** | - | .508** | .571** | .371** |
| General Maladjustment (MCMII-III) | .670** | .385** | -.344** | -.372** | .321* | .508** | - | .895** | .732** |
| Paranoid-Detached (MCMII-III) | .687** | .486** | -.353** | -.427** | .326* | .571** | .895** | - | .653** |
| Antisocial (MCMII-III) | .436** | .233 | -.269* | -.390** | .284* | .371** | .732** | .653** | - |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Identifying Multivariate Outliers

Five multivariate outliers were identified using Cook's distance. Regression analyses were conducted on the total male sample as well as the male sample excluding the outliers. One of the five participants had scores on the dependent variable (total aggression) approximately two standard deviations below the mean. Four of the five participants had scores on predictor variables two or more standard deviations away from the mean. All of these participants had extreme scores on the attachment variables. One of the participants was extreme on personality/psychopathology, as well as attachment.

Regression Analysis for the Total Male Sample

Results obtained on the total male sample were significant, $F(8, 50) = 6.59$, $p < .001$. The variables accounted for approximately 51% of the variance ($R^2 = .51$). The bootstrapped Multiple R^2 (based on 1000 replications) was consistent with these results, with a mean of 0.5753, median of 0.5763, and a 90% confidence interval of 0.4505 to 0.6901.

Standardized regression coefficients (beta weights) were not significant for any of the predictor variables (see Table 3). The non-significant standardized beta weights and the semi-partial squared correlations (sr^2) suggest that none of the predictor variables uniquely accounted for variance above 2%.

Table 3

*Attachment Style and Psychopathology as Predictors of Male Aggression**Regression Analysis for Total Male Sample (N = 59)*

| Variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> | <i>sr</i> ² |
|-----------------------------------|----------|-------------|---------|----------|----------|------------------------|
| Anxiety (AAS) | -1.10 | 1.53 | -0.10 | -0.72 | 0.48 | 0.01 |
| Close (AAS) | -0.43 | 1.82 | -0.03 | -0.24 | 0.81 | 0.00 |
| Depend (AAS) | -1.35 | 2.23 | -0.08 | -0.61 | 0.55 | 0.00 |
| Anxiety (ECR) | 1.82 | 1.60 | 0.18 | 1.14 | 0.26 | 0.01 |
| Avoidance (ECR) | -0.98 | 1.30 | -0.10 | -0.75 | 0.45 | 0.01 |
| General Maladjustment (MCMII-III) | 0.02 | 0.01 | 0.37 | 1.48 | 0.14 | 0.02 |
| Paranoid-Detached (MCMII-III) | 0.02 | 0.02 | 0.37 | 1.55 | 0.13 | 0.02 |
| Antisocial (MCMII-III) | -0.02 | 0.02 | -0.14 | -0.91 | 0.37 | 0.01 |

**p* < .05

Regression Analysis for the Male Sample Excluding Outliers

Results obtained on the male sample excluding outliers were significant, $F(8, 45) = 8.17, p < .001$. The variables accounted for approximately 59% of the variance ($R^2 = .59$). The bootstrapping procedure was conducted as noted above for the total male sample. The results for the male sample excluding outliers were again consistent with a 90% confidence interval of 0.4505 to 0.6901 as determined by the bootstrapping procedure.

Standardized regression coefficients (beta weights) were not significant for any of the predictor variables (see Table 4). The non-significant standardized beta weights and the semi-partial squared correlations (sr^2) suggest that none of the predictor variables uniquely accounted for variance above 3%.

The independent variable, Paranoid-Detached, was a non-significant ($p = .06$), but notable predictor of male aggression once the outliers were removed from the sample. It uniquely accounted for 3% of the variance in the dependent variable aggression. It is interesting, however, that the closest predictor was General Maladjustment ($p = .37$) which accounted for 1% of the variance in the dependent variable. In the male sample excluding outliers, a non-significant result appears to suggest that personality/psychopathology is a better predictor of male aggression than attachment style.

Table 4

*Attachment Style and Psychopathology as Predictors of Male Aggression**Regression Analysis for Male Sample Excluding Outliers (N = 54)*

| Variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> | <i>sr</i> ² |
|--|----------|-------------|---------|----------|----------|------------------------|
| Anxiety (AAS) | -0.03 | 1.42 | -.003 | -0.02 | 0.98 | 0.00 |
| Close (AAS) | 0.57 | 1.68 | 0.04 | 0.34 | 0.73 | 0.00 |
| Depend (AAS) | 0.73 | 2.18 | 0.04 | 0.34 | 0.74 | 0.00 |
| Anxiety (ECR) | 0.81 | 1.53 | 0.08 | 0.53 | 0.60 | 0.00 |
| Avoidance (ECR) | 0.50 | 1.18 | 0.05 | 0.42 | 0.67 | 0.00 |
| General Maladjustment (MCMI-III) | 0.01 | 0.01 | 0.23 | 0.90 | 0.37 | 0.01 |
| Paranoid- Detached (MCMI-III) | 0.03 | 0.01 | 0.49 | 1.95 | 0.06 | 0.03 |
| Antisocial (MCMI-III) | 0.00 | 0.02 | 0.03 | 0.18 | 0.86 | 0.00 |

**p* < .05

Analyses Pertaining to Female Participants

Descriptives and Correlations

Descriptives and correlations for model variables are represented in Tables 5 and 6.

Testing the Assumptions of Multiple Regression

Assumptions relevant to the use of the multiple regression procedure were investigated for the female sample. The residuals were shown to be normally distributed, an examination of the predicted and standardized residuals suggested relatively constant error variance, and all correlations between independent variables and residuals were non-significant. The tolerance and the variance inflation factor indicated that multicollinearity was not problematic for this data.

Identifying Multivariate Outliers

Five multivariate outliers were identified using Cook's distance. Regression analyses were conducted on the total female sample as well as the female sample excluding the outliers. Two of the participants were approximately two standard deviations above the mean on the dependent variable (total aggression). Three of the participants had extreme scores on the independent variables associated with attachment style and two of the participants scored approximately two standard deviations from the mean on measures of personality/psychopathology.

Table 5

*Descriptive Statistics for Model Variables**Total Female Sample (N = 83)*

| | Sample Mean | Standard Deviation | Range |
|----------------------------------|-------------|--------------------|-----------|
| Total Aggression (AQ) | 50.76 | 10.18 | 25 - 72 |
| Anxiety (AAS) | 2.72 | 1.12 | 1 - 4.83 |
| Close (AAS) | 3.66 | .83 | 1.5 - 5 |
| Depend (AAS) | 3.09 | .90 | 1 - 5 |
| Avoidance (ECR) | 2.31 | 1.18 | 1 - 5.50 |
| Anxiety (ECR) | 2.71 | .97 | 1 - 4.72 |
| General Maladjustment (MCMI-III) | 440.29 | 171.34 | 202 - 822 |
| Paranoid-Detached (MCMI-III) | 257.31 | 139.75 | 31 - 563 |
| Antisocial (MCMI-III) | 244.17 | 72.46 | 89 - 359 |

Table 6

*Correlations among Variables**Total Female Sample (N = 83)*

| | Total Aggression (AQ) | Anxiety (AAS) | Close (AAS) | Depend (AAS) | Avoidance (ECP) | Anxiety (ECP) | General Maladjustment (MCMII-III) | Paranoid Detached (MCMII-III) | Antisocial (MCMII-III) |
|-----------------------------------|-----------------------|---------------|-------------|--------------|-----------------|---------------|-----------------------------------|-------------------------------|------------------------|
| Total Aggression (AQ) | - | .407** | .031 | -.274* | .207 | .487** | .437** | .487** | .495** |
| Anxiety (AAS) | .407** | - | -.316** | -.360** | .206 | .511** | .504** | .420** | .196 |
| Close (AAS) | .031 | -.316** | - | .488** | -.274* | -.134 | -.139 | -.215 | -.011 |
| Depend (AAS) | -.274* | -.360** | .488** | - | -.331** | -.274* | -.442** | -.496** | -.205 |
| Avoidance (ECP) | .207 | .206 | -.274* | -.331** | - | .445** | .240* | .355** | .288** |
| Anxiety (ECP) | .487** | .511** | -.134 | -.274* | .445** | - | .489** | .451** | .375** |
| General Maladjustment (MCMII-III) | .437** | .504** | -.139 | -.442** | .240* | .489** | - | .839** | .469** |
| Paranoid-Detached (MCMII-III) | .487** | .420** | -.215 | -.496** | .355** | .451** | .839** | - | .607** |
| Antisocial (MCMII-III) | .495** | .196 | -.011 | -.205 | .288** | .375** | .469** | .607** | - |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis for the Total Female Sample

Results obtained on the total female sample were significant, $F(8, 74) = 7.11, p < .001$. The variables accounted for approximately 44% of the variance ($R^2 = .44$). The bootstrapped Multiple R^2 (based on 1000 replications) was consistent with these results, with a mean of 0.4906, median of 0.4908, and a 90% confidence interval of 0.3584 to 0.6156.

Significant findings ($\alpha = .05$) were indicated for three of the predictor variables associated with attachment style—Anxiety (AAS), Close (AAS), and Anxiety (ECR). Additionally, significant results were obtained on the Antisocial (MCMI-III) predictor variable related to personality/psychopathology (see Table 7).

Regression Analysis for the Female Sample Excluding Outliers

Results obtained on the female sample excluding outliers were significant, $F(8, 69) = 9.43, p < .001$. The variables accounted for approximately 52% of the variance ($R^2 = .52$). The bootstrapping procedure was conducted as noted above for the total female sample. The results for the female sample excluding outliers were again consistent with a 90% confidence interval of 0.3584 to 0.6156 as determined by the bootstrapping procedure.

Significant results were obtained on the same three predictor variables associated with attachment style, Anxiety (AAS), Close (AAS), Anxiety (ECR), as observed in the regression analysis performed on the total sample. However, after removing the outliers from the analysis, statistical significance was not achieved on any

of the predictor variables indicative of levels of personality/psychopathology, including Antisocial which was significant in the total sample analysis (see Table 8).

Table 7

*Attachment Style and Psychopathology as Predictors of Female Aggression
Regression Analysis for Total Female Sample (N = 83)*

| Variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> | <i>sr</i> ² |
|----------------------------------|----------|-------------|---------|----------|----------|------------------------|
| Anxiety (AAS) | 2.10 | 1.04 | .23 | 2.03 | .046* | 0.03 |
| Close (AAS) | 2.71 | 1.29 | .22 | 2.10 | .039* | 0.03 |
| Depend (AAS) | -1.65 | 1.30 | -.15 | -1.27 | .208 | 0.01 |
| Anxiety (ECR) | 2.62 | 1.23 | .25 | 2.12 | .037* | 0.03 |
| Avoidance (ECR) | -.565 | .91 | -.07 | -.62 | .538 | 0.00 |
| General Maladjustment (MCMI-III) | -0.01 | 0.01 | -.13 | -.76 | .449 | 0.00 |
| Paranoid-Detached (MCMI-III) | 0.01 | 0.01 | .22 | 1.15 | .254 | 0.01 |
| Antisocial (MCMI-III) | 0.04 | 0.02 | .28 | 2.41 | .018* | 0.04 |

**p* < .05

Table 8

Attachment Style and Psychopathology as Predictors of Female Aggression
Regression Analysis for Female Sample Excluding Outliers (N = 78)

| Variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> | <i>sr</i> ² |
|----------------------------------|----------|-------------|---------|----------|----------|------------------------|
| Anxiety (AAS) | 2.34 | .94 | .28 | 2.48 | .016* | 0.04 |
| Close (AAS) | 2.97 | 1.18 | .27 | 2.52 | .014* | 0.04 |
| Depend (AAS) | -1.93 | 1.31 | -.18 | -1.47 | .145 | 0.02 |
| Anxiety (ECR) | 2.49 | 1.14 | .26 | 2.19 | .032* | 0.03 |
| Avoidance (ECR) | -.533 | .824 | -.07 | -.65 | .520 | 0.00 |
| General Maladjustment (MCMI-III) | -0.01 | 0.01 | -.19 | -1.13 | .264 | 0.01 |
| Paranoid-Detached (MCMI-III) | 0.02 | 0.01 | .34 | 1.75 | .085 | 0.02 |
| Antisocial (MCMI-III) | 0.03 | 0.02 | .20 | 1.68 | .097 | 0.02 |

**p* < .05

Restatement of Hypotheses

This study was conducted to explore two possible predictors of aggression and to delineate any gender differences related to these predictors-attachment style and psychopathology.

Hypothesis One: Dimensions of attachment style will be a better predictor of female aggression than psychopathology.

Attachment styles were found to predict female aggression and were the only predictors with variables able to attain significance in the female sample that excluded outliers (see Table 8). On the total female sample, the predictor variable, antisocial, which reflects a type of psychopathology, was found to be significant (see Table 7); however, it was not significant when the outliers were removed.

It is notable that two of the five female participants included as outliers had scores approximately two standard deviations outside of the means on the predictor variables General Maladjustment and Paranoid-Detached. Even though multicollinearity was determined not to be a problem in this study through examination of the Tolerance and Variance Inflation Factors in the two samples, several independent variables were found to have elevated correlations (see Tables 2 and 6). In the female sample, the independent variable, antisocial, is significantly correlated with General Maladjustment ($r = .469$) and Paranoid-Detached ($r = .607$). It is thought that the relationship associated with these variables might have contributed to the significance on the total sample analysis versus the non-significance on the sample with the outliers removed.

The attachment styles of Anxiety and Close, as measured by the Adult Attachment Scale, and Anxiety, as measured by the Experiences in Close Relationships instrument, maintain significant levels on both analyses of the female participants (see Tables 7 and 8). The Adult Attachment Scale looks at adult/romantic relationships. The Anxiety scale measures the extent to which a person is worried about being rejected or unloved. The Close scale measures the extent to which a person is comfortable with closeness and intimacy. The Experiences in Close Relationships instrument assesses the participant's relationship with their primary caregiver. The Anxiety scale reflects the model of self as it relates to others and potential abandonment issues.

Hypothesis Two: Psychopathology will be a better predictor of male aggression than dimensions of attachment style.

Statistical significance was not obtained on the regression analyses conducted on the total male sample nor the male sample with the outliers excluded. However, a notable non-statistical observation was made in the regression analysis conducted on the sample with the outliers excluded relative to the predictive value of the Paranoid-Detached variable associated with psychopathology (see Table 4). Whereas the independent variable, Paranoid-Detached, was not significant ($p = .06$), it appeared to be a substantially different predictor than any of the other independent variables included in the regression. It is also notable that none of the attachment style variables were valuable as predictors in the male sample.

In multiple regression, R^2 reflects the variance on the dependent variable accounted for by the predictor variables. In this study, the R^2 for each of the four

regressions was found to be significant, representing variance accounted for ranging from 44% to 59%. However, when the variables are viewed independently, they uniquely account for little variance; ranging from 0% to 4% (see Tables 3, 4, 7, and 8).

CHAPTER V

CONCLUSIONS AND DISCUSSION

Aggression and Attachment

The general intent of this study was to contribute to the body of knowledge and overall understanding of female aggression. However, one of the criteria necessary for any study to do so is a basic acknowledgement that the phenomenon exists in the first place. This study can now be added to the growing list of empirical challenges to the myth that females are not aggressive (Bjorkqvist & Niemala, 1992; Campbell, 1993; Denfeld, 1997; Federal Bureau of Investigation, 2004; Jack, 1999; Leschied et al., 2001; Prinstein & La Greca, 2004). Female scores on the dependent variable measuring aggression, the Aggression Questionnaire (AQ) were higher than the male scores on the same instrument (Mean = 50.76, SD = 10.18 versus Mean = 47.78, SD 10.25).

The gender differences associated with aggression were previously discussed in chapters one and two. The overriding theme appears to suggest a stronger relational component as motivation for female aggression as opposed to male aggression. To explore this theme, Attachment Theory was utilized as a potential predictor of aggressive behaviors, as it addresses the issue of relationship style and quality over the life span.

The role of psychopathology as a predictor of aggression has been widely studied (Choca, 2004; Holtzworth-Munroe & Stuart, 1994). Aggression is a behavioral component associated with the DSM-IV criteria of at least eight disorders (Renfrew,

1997). Given this background, psychopathology was also considered as a potential predictor of aggression.

The primary focus of the regression analysis was the strength of Attachment Theory as a predictor of female aggression, as compared to psychopathology. Whereas the results would not likely be considered robust, they did support the hypothesis that dimensions of attachment style would be a better predictor of female aggression than psychopathology. As indicated in chapter 4, significant results were obtained on the female sample when outliers were excluded from the analysis.

The specific attachment dimensions that were determined to be significant included Anxiety (AAS) and Close (AAS) when associated with adult/romantic relationships and Anxiety (ECR) when associated with relationships involving the participant and his or her primary caregiver. Anxiety as measured on the AAS reflects the level of fear associated with being abandoned or lonely. The Close scale on the AAS relates to how comfortable one is with closeness to others (Collins, 1996). The Anxiety scale on the ECR addresses abandonment issues as well, but within the underlying continuum of one's view of the self.

The issue of proximity to the protector/caregiver for a child or the person with whom one has a "pair-bond" relationship as an adult is salient to Attachment Theory and whether or not one is securely or insecurely attached (Cassidy & Shaver, 1999; Hazan & Shaver, 1994). Social behaviors are formed to serve as a biological function required to regain and/or maintain proximity to the attachment figure (Bowlby, 1982). When the relationship is threatened, emotions of distress and anger are intensified.

Therefore, when consideration is given to the importance that females place on relationships, issues of abandonment and proximity or closeness become frequent antecedents to aggressive behaviors. This approach to thoughts and beliefs related to female aggression were confirmed in this study.

Treatment Implications

Treatment and prevention programs structured to deal with aggressive behaviors are often psychoeducational in nature. As it relates to teaching anger management and coping skills training, this might be sufficient. However, when dealing with the issues associated with insecure attachment (e.g. abandonment issues) or personality/psychopathology characteristics, it is unlikely that this modality will meet all of the therapeutic needs of the individual in treatment (Lawson et al., 2001).

Given the predicted relational nature of female aggression and that much of the research associated with female aggression has been derived from studies of domestic violence or violence perpetrated on a significant other, it might be important to review the way in which treatment for domestic violence issues has been addressed. It is acknowledged that treatment for domestic violence has typically treated the male partner; however, as Ehrensaft et al., (2004) suggested, "... This single-sex approach is not empirically supported because both partner's behaviors contribute to the risk of clinically significant partner abuse, and both partners should be treated" (p. 268). Given certain circumstances, would group couples therapy not serve as a more effective treatment modality? As previously noted, it is important to say that male batterers and their victims are excluded from this discussion relative to aggression, as they are

considered to be “qualitatively different” in respect to the dynamics of the abuse (Ehrensaft et al., 2004).

The literature suggests that issues not dealt with by traditional group treatment approaches such as social learning theory and cognitive-behavioral theory are closely associated with understanding violence in intimate relationships in terms of attachment styles (Bowlby, 1984; Dutton, 1998). Attachment related behaviors leading to aggression and violent behavior include: mistrust, jealousy, dependency, insecurity, and shame (Dutton, 1998). According to Kobak (1999), attachment-based treatments should focus on helping the client connect the symptomatic behaviors (e.g., aggression) with insecure attachment relationships. It is not likely that the treatment of choice for domestic violence, cognitive-behavioral treatment or a psychoeducational modality, would focus on the process and/or corrective emotional experience necessary to tap into these feelings and emotions. Lawson et al. (2001) suggested a model for male partner abusers that integrates experiential and psychodynamic theory/techniques with the standard CBT/psychoeducational interventions using the group therapy modality. It is likely that this format would work as effectively for aggressive females, as well as violent couples.

Limitations of the Study

A weakness in this study is the small sample size, especially given the number of independent variables. A suggestion that would increase sample size, as well as generalizability, is to add more individuals from the community-at-large. The vast majority of the participants in the study were from either adult probation or the

university setting. These two settings are not likely to be the best representation of the community-at-large or the typical “person on the street.”

The use of self-report in this study is a potential limitation in its methodology. It is an inherent problem, particularly as it relates to those individuals who have found themselves a part of the criminal justice system. It is not atypical that honesty and insight can, at times, be lacking. Additionally, by nature of their legal situation, they might be inclined to be less than candid when answering questions related to aggression and personality/psychopathology characteristics.

The self-report responses to attachment related instruments could be problematic to the study due to the subjective nature of interpersonal relationships. In a study of childhood physical abuse (Baldwin, 1977 as cited in Bowlby, 1988), two-fifths of the parents who had been abused as children described an idealized childhood that was substantially in conflict with the experience described when specific questions were asked. Regarding this study, the question might be asked whether or not the typical university student in the non-adjudicated group defines a healthy, secure relationship in the same manner that a typical individual on probation would define it?

Future Research

It is hoped that the research base associated with the dynamics related to female aggression will continue to grow. This is particularly salient as it applies to studies related to the general population of adult females on whom studies are lacking (Archer, 2004; Bjorkqvist & Niemela, 1992; Leschied et al., 2001; Prinstein & La Greca, 2004; Werner & Crick, 1999). From a societal perspective, this has never been more important

given the previously noted statistics suggesting the increased rate in which females are committing aggressive or violent acts (Federal Bureau of Investigation, 2004; Leischied et al., 2001; Prinstein & La Greca, 2004). The integrative framework incorporated into the General Aggression Model (GAM), as previously described, provides a model in which this current trend could be studied.

Regarding Attachment Theory and related issues, Kobak (1999) commented on the need for studies exploring current appraisals of attachment related issues and associated behaviors (e.g., aggression):

What is striking about attachment research in the 1980s and 1990s is that it has almost exclusively focused on internal working models as determinants of personality and largely neglected the study of current attachment relationships and behavior. (p. 40)

Although Bowlby suggested that attachment styles are “from cradle to grave,” current research indicates that variability can be experienced through the influence of the behavior of a current attachment figure (Kobak, 1999). This emphasis on current relationships is in contrast with the personality driven model that suggests attachment styles are formed during infancy and internalized “from cradle to grave.” Given the social nature of the human condition, the relationship construct associated with attachment is certainly an area of future research.

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APPENDIX A

TEN-YEAR ARREST TRENDS BY SEX AS REPORTED BY THE FEDERAL
BUREAU OF INVESTIGATION (1994-2003)

Table 33

Ten-Year Arrest Trends

by Sex, 1994-2003

[7,592 agencies; 2003 estimated population 166,154,387; 1994 estimated population 149,051,209]

| Offense charged | Male | | | | | | Female | | | | | |
|--|-----------|-----------|----------------|-----------|---------|----------------|-----------|-----------|----------------|----------|---------|----------------|
| | Total | | | Under 18 | | | Total | | | Under 18 | | |
| | 1994 | 2003 | Percent change | 1994 | 2003 | Percent change | 1994 | 2003 | Percent change | 1994 | 2003 | Percent change |
| TOTAL ¹ | 6,384,846 | 5,958,949 | -6.7 | 1,173,624 | 910,981 | -22.4 | 1,628,948 | 1,828,638 | +12.3 | 390,725 | 378,895 | -3.0 |
| Murder and nonnegligent manslaughter | 9,931 | 6,268 | -36.9 | 1,798 | 560 | -68.9 | 1,068 | 747 | -30.1 | 115 | 59 | -48.7 |
| Forcible rape | 18,910 | 14,651 | -22.5 | 3,137 | 2,366 | -24.6 | 215 | 212 | -1.4 | 70 | 49 | -30.0 |
| Robbery | 75,729 | 55,851 | -26.2 | 23,510 | 13,262 | -43.6 | 7,640 | 6,696 | -12.4 | 2,222 | 1,383 | -37.8 |
| Aggravated assault | 257,370 | 212,913 | -17.3 | 39,028 | 26,923 | -31.0 | 48,613 | 55,426 | +14.0 | 8,460 | 8,298 | -1.9 |
| Burglary | 200,801 | 148,373 | -26.1 | 76,003 | 44,700 | -41.2 | 25,420 | 24,688 | -2.9 | 8,491 | 6,203 | -26.9 |
| Larceny-theft | 587,473 | 425,990 | -27.5 | 209,100 | 119,520 | -42.8 | 296,766 | 256,322 | -13.6 | 96,734 | 78,703 | -18.6 |
| Motor vehicle theft | 101,422 | 71,364 | -29.6 | 43,381 | 20,114 | -53.6 | 15,165 | 14,374 | -5.2 | 7,615 | 4,257 | -44.1 |
| Arson | 10,679 | 7,547 | -29.3 | 6,388 | 4,089 | -36.0 | 1,771 | 1,351 | -23.7 | 878 | 544 | -38.0 |
| Violent crime ² | 361,940 | 289,683 | -20.0 | 67,473 | 43,111 | -36.1 | 57,536 | 63,081 | +9.6 | 10,867 | 9,789 | -9.9 |
| Property crime ² | 900,375 | 653,274 | -27.4 | 334,872 | 188,423 | -43.7 | 339,122 | 296,735 | -12.5 | 113,718 | 89,707 | -21.1 |
| Other assaults | 549,316 | 528,194 | -3.8 | 90,771 | 91,865 | +1.2 | 129,530 | 171,093 | +32.1 | 32,413 | 44,043 | +35.9 |
| Forgery and counterfeiting | 40,983 | 39,420 | -3.8 | 3,384 | 1,813 | -46.4 | 24,109 | 26,637 | +10.5 | 1,971 | 1,043 | -47.1 |
| Fraud | 109,546 | 86,978 | -20.6 | 3,981 | 2,817 | -29.2 | 83,323 | 73,668 | -11.6 | 2,094 | 1,519 | -27.5 |
| Embezzlement | 5,149 | 5,256 | +2.1 | 401 | 433 | +8.0 | 3,726 | 5,292 | +42.0 | 231 | 296 | +28.1 |
| Stolen property; buying, receiving, possessing | 82,015 | 61,339 | -25.2 | 23,964 | 12,400 | -48.3 | 12,987 | 13,806 | +6.3 | 3,113 | 2,202 | -29.3 |
| Vandalism | 170,987 | 134,674 | -21.2 | 85,417 | 54,957 | -35.7 | 25,069 | 26,378 | +5.2 | 9,835 | 8,766 | -10.9 |
| Weapons; carrying, possessing, etc. | 138,622 | 88,251 | -36.3 | 35,145 | 20,230 | -42.4 | 11,848 | 7,812 | -34.1 | 2,989 | 2,343 | -21.6 |
| Prostitution and commercialized vice | 18,501 | 14,489 | -21.7 | 305 | 232 | -23.9 | 28,349 | 24,088 | -15.0 | 303 | 565 | +86.5 |
| Sex offenses (except forcible rape and prostitution) | 54,705 | 49,054 | -10.3 | 9,945 | 9,916 | -0.3 | 4,927 | 4,761 | -3.4 | 820 | 1,034 | +26.1 |
| Drug abuse violations | 621,938 | 745,452 | +19.9 | 77,691 | 87,805 | +13.0 | 128,421 | 173,091 | +34.8 | 11,829 | 18,488 | +56.3 |
| Gambling | 5,687 | 2,765 | -51.4 | 731 | 306 | -58.1 | 857 | 541 | -36.9 | 47 | 14 | -70.2 |
| Offenses against the family and children | 56,848 | 59,095 | +4.0 | 2,076 | 2,330 | +12.2 | 12,301 | 17,367 | +41.2 | 1,096 | 1,438 | +31.2 |
| Driving under the influence | 728,079 | 652,694 | -10.4 | 7,366 | 9,200 | +24.9 | 120,057 | 145,352 | +21.1 | 1,251 | 2,295 | +83.5 |
| Liquor laws | 242,837 | 263,033 | +8.3 | 54,499 | 51,646 | -5.2 | 63,581 | 92,479 | +45.5 | 22,562 | 28,348 | +25.6 |
| Drunkenness | 391,194 | 281,214 | -28.1 | 9,600 | 7,841 | -18.3 | 51,996 | 47,362 | -8.9 | 1,877 | 2,335 | +24.4 |
| Disorderly conduct | 308,177 | 260,122 | -15.6 | 72,096 | 73,573 | +2.0 | 86,291 | 89,948 | +4.2 | 22,779 | 33,301 | +46.2 |
| Vagrancy | 10,839 | 12,734 | +17.5 | 2,218 | 1,044 | -52.9 | 3,297 | 3,643 | +10.5 | 557 | 353 | -36.6 |
| All other offenses (except traffic) | 1,469,827 | 1,640,339 | +11.6 | 174,408 | 160,150 | -8.2 | 343,360 | 475,471 | +38.5 | 52,112 | 60,983 | +17.0 |
| Suspicion | 5,895 | 848 | -85.6 | 1,104 | 241 | -78.2 | 1,081 | 204 | 81.1 | 251 | 77 | -69.3 |
| Curfew and loitering law violations | 62,087 | 60,165 | -3.1 | 62,087 | 60,165 | -3.1 | 24,773 | 26,084 | +5.3 | 24,773 | 26,084 | +5.3 |
| Runaways | 55,194 | 30,724 | -44.3 | 55,194 | 30,724 | -44.3 | 73,488 | 43,949 | -40.2 | 73,488 | 43,949 | -40.2 |

¹ Does not include suspicion.² Violent crimes are offenses of murder, forcible rape, robbery, and aggravated assault. Property crimes are offenses of burglary, larceny-theft, motor vehicle theft, and arson.

APPENDIX B

Experiences in Close Relationships – Modified (Brennan, Clark, & Shaver, 1998)

Experiences in Close Relationships (Brennan, Clark, & Shaver, 1998)
 Modified - Adult to Primary Caregiver Relationship (J. Simpson, personal communication, 4/29/03)

Instructions: The following statements concern how you feel relative to your relationship with your primary caregiver. Your primary caregiver is the person who was most responsible for your care when you were a child. This could be your mother, father, grandparent, aunt, uncle, etc. We are interested in how you have generally experienced this relationship, not just what is happening currently. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided using the following rating scale:

| | | | |
|-------------------|---|---------------|----------------|
| Disagree strongly | | Neutral/mixed | Agree Strongly |
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | |

- _____ 1. I have preferred not to show my primary caregiver how I felt deep down.
- _____ 2. I have worried about being abandoned.
- _____ 3. I have been very comfortable being close to my primary caregiver.
- _____ 4. I have worried a lot about my relationship with my primary caregiver.
- _____ 5. Just when my primary caregiver has started to get close to me I have found myself pulling away.
- _____ 6. I have worried that my primary caregiver won't care about me as much as I care about them.
- _____ 7. I have felt uncomfortable when my primary caregiver has wanted to be very close.
- _____ 8. I have worried a fair amount about losing my primary caregiver.
- _____ 9. I haven't felt comfortable opening up to my primary caregiver.
- _____ 10. I have often wished that my primary caregiver's feelings for me were as strong as my feelings for him/her.
- _____ 11. I have wanted to get close to my primary caregiver, but I keep pulling back.
- _____ 12. I have often wanted to merge completely with my primary caregiver, and this sometimes scares them away.
- _____ 13. I have been nervous when my primary caregiver got too close to me.
- _____ 14. I have worried about being alone.
- _____ 15. I have felt comfortable sharing my private thoughts and feelings with my primary caregiver.
- _____ 16. My desire to be very close has sometimes scared people away.
- _____ 17. I have tried to avoid getting too close to my primary caregiver.
- _____ 18. I have needed a lot of reassurance that I am loved by my primary caregiver.
- _____ 19. I have found it relatively easy to get close to my primary caregiver.
- _____ 20. Sometimes I have felt that I forced my primary caregiver to show more feeling, more commitment.
- _____ 21. I have found it difficult to allow myself to depend on my primary caregiver.
- _____ 22. I have not often worried about being abandoned.

- _____ 23. I preferred not to be too close to my primary caregiver.
- _____ 24. If I have not been able to get my primary caregiver to show interest in me, I have gotten upset or angry.
- _____ 25. I have told my primary caregiver just about everything.
- _____ 26. I have found that my primary caregiver doesn't want to get as close as I would like.
- _____ 27. I have usually discussed my problems and concerns with my primary caregiver.
- _____ 28. When I have not been involved in my relationship with my primary caregiver, I have felt somewhat anxious and insecure.
- _____ 29. I have felt comfortable depending on my primary caregiver.
- _____ 30. I have been frustrated when my primary caregiver was not around as much as I would like.
- _____ 31. I have not minded asking my primary caregiver for comfort, advice, or help.
- _____ 32. I have been frustrated when my primary caregiver has not been available when I needed them.
- _____ 33. It has helped to turn to my primary caregiver in times of need.
- _____ 34. When my primary caregiver has disapproved of me, I have felt really bad about myself.
- _____ 35. I have turned to my primary caregiver for many things, including comfort and reassurance.
- _____ 36. I have resented it when my primary caregiver has spent time away from me.

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The typist for this dissertation was Helen Minette Beckner.