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An Examination of the Relationship Between Attachment Organizations and Personality Characteristics in a Sample of Young Female Offenders

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An Examination of the Relationship Between Attachment Organizations and Personality Characteristics in a Sample of Young Female Offenders

by

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Dedication

For My Husband, with whom I am blessed beyond all measure to be united. He is the reason I look toward to the future with excitement and anticipation.

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Mental health services for women in correctional settings have long been overlooked. The result is that while these women often need help, their unique needs are unmet. The purpose of this dissertation is to elucidate some of the specific characteristics of this population that is poorly understood. Due to the distinct relational needs of female offenders, it is proposed that an understanding of the attachment characteristics of this population is particularly valuable, and should perhaps be the basis for approaching treatment. Therefore, this study examined the relationship between personality characteristics, attachment organizations, and psychological distress in a sample of young female offenders who were incarcerated at Texas Youth Commission. Based on the research findings of Espelage et al. (2003) that describe personality characteristics in this population, and the attachment framework of Bartholomew and Horowitz (1991), it was expected that participants in this study would primarily be characterized by antisocial and borderline personality features (as measured by the MCMI-III; Millon, 1994). In addition, it was proposed that participants characterized by antisocial personality features

would exhibit a dismissing style of adult attachment and a lack of psychological distress while participants with borderline personality features would exhibit a fearful style of adult attachment and an expression of psychological distress.

Results provide support for the prominence of antisocial and borderline personality features in this sample of female offenders. However, there was no relationship between personality characteristics, attachment style and psychological distress. In order to further examine the nature of attachment in this sample, exploratory results investigated the relationship between attachment style and gang membership, and found that endorsement of gang membership was related to secure attachment, and to a lesser degree, preoccupied attachment. Implications of these findings were further discussed. Limitations and contributions of this study in addition to suggestions for future were also explored. In particular, it was suggested that future research examine these same characteristics of personality and attachment from a broader and more nuanced lens, which would reflect the complexities inherent in the population of female offenders.

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CHAPTER ONE

INTRODUCTION

Although female offenders continue to constitute the minority of overall inmates in correctional institutions in the United States (Federal Bureau of Investigation, 2002), they are often thought to be the most difficult, attention-seeking, and psychologically disturbed of all inmates by corrections officers, medical staff, and even clinicians. As a result, women in correctional settings seem to have developed a stigma of being difficult and 'untreatable' (Gorsuch, 1998). But is there any truth to this reputation that has developed of female offenders? Are female offenders somehow different from male offenders?

Because most research regarding the offender population has been conducted with males, treatment programs for both males and females in correctional settings have predominantly been based upon male research. However, a small base of research is just now beginning to emerge concerning the characteristics of females, and this research does in fact suggest that female offenders as a population are in many ways qualitatively distinct from their male counterparts (Denno, 1994: Silverthorn & Frick, 1999; Espelage, Cauffman, Broidy, Piquero, Mazerolle, & Steiner, 2003). Developmentally, male and female offenders travel different pathways to delinquency, and have different offending trajectories (Fergusson & Horwood, 2002). Most notably, females are more likely to have backgrounds filled with victimization and trauma (Dixon, Howie, & Starling, 2004).

In addition, studies consistently show high rates of mental health problems among incarcerated females, often with females exhibiting significantly more problems than do males (Teplin, Abram & McClelland, 1996). Studies of psychiatric illness among female offenders also reveal a continuity of this trend into adulthood (Pajer, 1998).

Due to this emerging understanding of the distinctiveness of the female offender, it is becoming apparent that male focused research does not adequately generalize to women in correctional settings. Programs that are effective in treating women must instead be based upon research specific to their characteristics and needs. For example, it is believed that a significant part of understanding the gender difference in pathways to delinquency is considering the crucial role of relationships in female development. However, treatment programs in correctional facilities have historically focused on skill deficit models (ex. anger management, social skills training, decision making), while ignoring the specifically relational needs of females in treatment. Since relationship plays such an instrumental role in the development of female offenders, it is vitally important to assess this aspect of functioning and to perhaps approach treatment from this unique angle.

But before treatment programs can be tailored to fit the needs of female offenders, empirical studies that systematically and comprehensively evaluate their psychological characteristics are much needed. There is currently a paucity of psychological research pertaining to the characteristics specific to female offenders and as such this population is poorly understood. It is hoped that a broader and more accurate understanding of this population will provide a basis on which to build gender specific treatment options that

correctional facilities need in order to be more effective. Thus, in an effort to provide a comprehensive picture of the characteristics of female offenders, this study explores personality and attachment characteristics of young women in a correctional setting. Chapter Two reviews the literature starting with an overview of empirical studies of the psychopathology of female offenders, followed by a brief review of attachment literature. As this study largely builds upon the work of Espelage, Cauffman, Broidy, Piquero, Mazerolle, and Steiner (2003), the groundwork is set for the present study at the end of Chapter Two by a discussion of personality and attachment theory as it relates to the findings of Espelage and her colleagues. Chapter Three outlines the methodology used in this study. The measures used to assess personality characteristics and attachment styles are described, and the research design is proposed. The study examines the personality characteristics of a sample of female offenders, and attempts to further delineate the nature of these personality traits by examining how they relate to attachment styles and depression. Based on results of previous research (Espelage et al., 2003), it is hypothesized that the sample will primarily be characterized by two distinct personality types: an antisocial personality style and a borderline personality style. Based on the attachment work of Bartholomew and Horowitz (1991), it might be expected that the attachment styles of females with the two different personality types would also vary. The group characterized by antisocial personality features is expected to exhibit a dismissing relational style and a denial of depressive symptoms, while the group characterized by borderline features is expected to exhibit a fearful relational style and an endorsement of depressive symptoms. The data analyses and the outcome of the

hypotheses will be reported in Chapter Four. Finally, the discussion of the results, limitations of the study, and implications for future research will be presented in Chapter Five.

CHAPTER TWO

LITERATURE REVIEW

This dissertation study examines the nature of the female offender. The purpose of the study is to identify the personality characteristics that are common among the population of serious female offenders, and then to examine how these groups with differing personality characteristics vary in their attachment organizations and report of depressive symptoms. To this end, the literature review begins with an overview of empirical research that show the personality traits and psychological symptoms that commonly occur in the population of female offenders and in similar clinical populations. In the next section, a brief overview of attachment theory is presented, followed by empirical studies describing what is known about the quality of attachment in female offenders and similar populations. As this dissertation study builds upon the previous work of Espelage, Cauffman, Broidy, Piquero, Mazerolle, and Steiner (2003), their findings will be presented and a discussion of the intersection of personality and attachment theory will ensue as it pertains to the premises of the current study. The literature review is followed by a review of the rationale for the current study including an outline of the methodology.

PSYCHOLOGY OF FEMALE OFFENDERS

Research findings describing the commonly observed personality traits and psychiatric symptoms of female offenders will be reviewed in this section. An effort will be made to present a developmental perspective on the empirical traits of female offenders by reviewing research pertaining to both juveniles and adults in the hope of creating a more comprehensive picture of this population. Moreover, the paucity of research devoted solely to the characteristics of any one category of female offenders calls for consolidating a literature review to be of sufficient breadth.

Keenan and Shaw (1997) have shown that sex differences in problematic behavior do not appear until age four, after which time female behavior problems remain low relative to males until adolescence. In fact, females generally tend to have a delayed onset of offending as compared to males (Fergusson & Horwood, 2002; Silverthorn & Frick, 1999; Warren & Rosenbaum, 1986). Within the juvenile population, girls account for approximately one-quarter of all juvenile arrests (Office of Juvenile Justice and Delinquency Prevention, 2002). Since behavior problems and criminal activity in youth have been viewed as a male problem, research has focused mostly on boys. Only recently have studies begun to examine the psychology of girls who offend; even so, these studies have primarily examined the differences between boys and girls with few focusing specifically on the psychological traits of girls. Of these, most studies consistently show high rates of mental health problems among incarcerated girls, often with girls displaying significantly more problems than do boys (Teplin, Abram, and McClelland, 1996; Denno, 1994; Silverthorn & Frick, 1999, Espelage et al., 2003).

Studies of psychiatric illness among female offenders also reveal a continuity of this trend into adulthood. Women in prison settings typically exhibit multiple Axis I and Axis II disorders over their lifespan, and it has been argued that especially due to the categorical nature of the DSM classification system, multiple diagnoses are needed to capture the extent of this population's psychopathology (Coid, 1992). Overall rates of psychiatric illness among a sample of 1272 pre-adjudicated women in one study revealed 80% met criteria for at least one lifetime psychiatric illness and 70% had exhibited symptoms within the last six months (Teplin et al., 1996). In adulthood, there also continues to be an empirical discrepancy between rates of overall psychiatric illness in male and female offenders. For example, Maden, Swinton, and Gunn (1994) compared male and female sentenced offenders and found 36% of women had a history of psychiatric treatment in adulthood compared with 19% of the men. At least one ICD-9 diagnosis was received by 57% of the women compared with 38% of the men. And recommendations for follow-up treatment or assessment were made for 44% of women compared with 24% of the men.

Although there is a consistency in the literature that suggests a strikingly high rate of overall mental health concern in both juvenile and adult female offenders, there is less agreement about the specific psychological issues common to female offenders. Various studies have found a prevalence of personality disorders as a primary characteristic of this population (Gorsuch, 1998; Salekin, Rogers, & Sewell, 1997). Others have found internalizing disorders and mood disorders to be of primary concern (Calhoun, 2001; Timmons-Mitchell, Brown, Schultz, Webster, Underwood & Semple, 1997). Still others

have found substance abuse disorders to be among the most common problem (Daniel, Robins, Reid, and Wilfley, 1988; Shearer, 2004). Despite this lack of uniformity, most studies do find consensus on the alarming rate of victimization in the female population, whether this victimization was physical or sexual in nature, or was experienced in childhood or adulthood.

Victimization

One of the most prevalent and distinct issues common to female offenders is physical and sexual victimization. Although males in correctional settings may also have a background of victimization, studies show a marked gender difference in the rates of victimization, especially sexual victimization. In a descriptive study of the mental and physical health of 30 incarcerated women in a rural detention center, Kane and DiBartolo (2002) found that 70% of the women acknowledged a history of physical abuse and half acknowledged sexual victimization. Another survey study found that 64% of female adolescent offenders reported sexual abuse as opposed to 13% of the males. In this study, 81% of the females reported being raped while none of the males reported this experience (Miller, 1992). Interestingly, when female offenders are compared to female nonoffenders, there is also a large difference in victimization experience. Dixon, Howie, and Starling (2004) compared a sample of female juvenile offenders with a matched sample of nonoffenders and found a 49% rate of self-reported physical abuse in the offender sample compared to a 9% rate in the nonoffender sample. There was a 50% rate of sexual abuse in the offender sample compared to a 6% rate in the nonoffender group.

In addition, 30% of the offenders had been the victim of a violent crime while only 4% of the nonoffenders had had a similar experience, and 52% of offenders had been witness to domestic violence while 15% of the nonoffenders reported this experience. This study provides some insight into the unique background experiences of women who offend. As a result of their study, Dixon et al. concluded that the particularly high rates of personal victimization among female offenders along with the corresponding high rates of posttraumatic stress disorder lead to further susceptibility to trauma and symptomology in this population.

Internalizing Disorders

In addition to victimization experiences, female offenders also appear to experience high rates of internalizing disorders such as mood and anxiety disorders. Studies find internalizing disorders to be more prevalent for females in general and particularly so for the female offender population (Calhoun, 2001; Espelage et al. 2003). In fact, depression and anxiety tend to be among the most frequent diagnoses for female offenders (Timmons-Mitchell et al., 1997). Timmon-Mitchell et al. found a diagnosis of mood disorder in 88% of incarcerated juvenile girls, while Myers, Burket, Lyles, Stone, and Kemph (1990) found that major depression had a lifetime diagnosis rate of 67% among female juvenile offenders. Among the adult population, mean depression levels of incarcerated women, as measured by the Center for Epidemiology Studies Depression Scale, have been noted to be twice that of the general population (Fogel & Martin, 1992).

Observably, the rates of depressive disorders among incarcerated females are high, and although incarcerated males may also frequently be diagnosed with depression, there does appear to be a marked gender difference. In providing support for the gender difference in internalizing and externalizing disorders, Aalsma and Lapsley (2001) studied the typology of adolescent offending that corresponds to life-persistent and adolescent-limited trajectories, and also examined general sex differences in adolescent offending. Archival psychosocial interviews of 174 participants ages 13 to 18 were used. In a cluster analysis of measures of psychosocial development, males and females were evenly spread across the 'well-adjusted' cluster, females primarily comprised the 'internalizing' cluster (indicating poorer relationships with caregivers, greater incidence of suicide attempts, and a more extensive history of abuse), and males primarily comprised the 'externalizing' cluster (indicating higher rates of substance abuse, suspensions, early age of sexual activity). On the MMPI-A, the internalizing group scored highest on scales 6, 7, 8, 9 and the F-scale. In addition, females in the internalizing group exhibited higher scores on scales 2 and 4. Similarly, Calhoun (2001) examined the differences between 88 male and female youth who were on probation and currently receiving court or probation-referred counseling. Males and females were compared on scores on the Behavioral Assessment System for Children-Self Report of Personality-Adolescent. Girls reported higher levels of anxiety, depression, and stress regarding interpersonal relationships; girls reported lower self-esteem than boys; and girls reported a more external locus of control, indicating a perception that events are determined by circumstances and people outside of themselves; and they reported

significantly poorer relations with parents than did males. Calhoun's study provides further support for the tendency of females to internalize negative emotions while lacking the interpersonal and personal resources to cope effectively with problems.

Internalizing disorders may not create as overt a symptomology as externalizing disorders and therefore may not be considered as problematic in the correctional setting where often only the most troublesome behaviors are addressed. Unfortunately, these disorders may tend then to go undiagnosed and untreated when they are among the easiest to diagnose and treat (Aalsma & Lapsley, 2001). As a result, many women go untreated for mood and anxiety disorder while incarcerated.

Substance Abuse Disorders

Although internalizing disorders are among the most common in the population of incarcerated adolescent and adult females, externalizing disorders which are so characteristic of the general offending population are also prevalent. Among these, incarcerated women frequently suffer from substance abuse disorders. Deykin, Buka, and Zeena (1992) suggest there is a relationship between depressive disorders in adolescent girls and the onset of substance abuse later in life. There is similar evidence to suggest the comorbidity of internalizing disorders and substance abuse disorders, often with the internalizing disorder preceding the occurrence of the substance abuse disorder (Abraham & Fava, 1999; Burke, Burke, & Rae, 1994; Christie, Burke, Regier, Rae, Boyd, & Locke, 1988; Deas-Nesmith, Brady, & Campbell, 1998). These data point to a complex relationship between internalizing and externalizing symptomology, especially

among girls and women in the criminal justice system because of high rates of both types of disorders.

Regarding the specific diagnoses of substance abuse and alcohol abuse disorders, Wellisch, Prendergast, and Anglin (1994) state that female offenders who have drug abuse problems are the fastest growing portion of the criminal justice system (as cited in Shearer, 2004). Kane and DiBartolo (2002) conducted a descriptive study of mental and physical health in 30 incarcerated women in a rural detention center and found a history of drug problems reported by 63% of the women and alcohol problems were reported by 80%. Delirium tremens were additionally identified in this sample. Comparing substance abuse disorders to other disorders, Daniel et al. (1988) studied the six-month and lifetime prevalence rates of psychiatric disorders among a sample of 100 female adjudicated offenders. Using the Diagnostic Interview Schedule to yield DSM-III diagnoses, they also compared the rates of psychiatric disorder in the offender sample to those in the general population. Of the entire sample, 90% received at least one diagnosis on Axis I and 67% received more than one diagnosis. Alcohol abuse and/or dependence was the most frequent diagnosis given (36%) for lifetime prevalence, and drug abuse disorders (26%) were also common. Alcohol and drug use disorders combined were the most common diagnoses and they were evenly distributed across other diagnoses.

Many researchers argue that female substance abusers experience a different constellation of mental health problems than their male counterparts (e.g. Cosden & Cortz-Ison, 1998; Gomberg & Nirenberg, 1993). For example, female substance abusers are more likely to have a history of trauma and use drugs and alcohol as a coping

mechanism for stress resulting from such trauma (Peugh & Belenko, 1999). In addition, women who are intravenous drug users are more likely to engage in high risk sexual behavior than men, and to engage in sex for money or drugs (Hartel, 1994 as cited in Shearer, 2004). This leads to increased risk of exposure to sexually transmitted diseases and other health complications. These studies suggest that the precipitating circumstances that lead to substance abuse and perhaps the consequences of substance abuse differ for men and women. As such, it is important for correctional facilities to view the etiology and treatment of female substance abuse in a gender specific manner.

Personality Disorders

It has been estimated that Axis II diagnoses of personality disorders may be present in 70% of certain samples of female offenders, with comorbidity of personality disorder (mixed personality disorders) present in 61% (Strick, 1989). Other studies estimate a diagnosis of personality disorder as the primary diagnosis for 90% of psychiatrically disturbed women who are incarcerated (Gorsuch, 1999). It appears to be the prevalence of problematic personality functioning that gives this population the reputation of being difficult and even 'untreatable,' according to Gorsuch. This perspective of, specifically, female offenders is held by many correctional officers and clinical staff.

Research has attempted to more finely delineate the personality characteristics of various samples of female offenders but different pictures emerge with these different samples. Amongst a sample of female substance abusers incarcerated at a jail, Grabarek,

Bourke, and Van Hasselt (2002) used the Millon Clinical Multiaxial Inventory-III to describe prominent personality characteristics. Most notably, they observed an antisocial (48%) cluster of women. Other studies also typically find a high prevalence of antisocial personality disorder among female offenders (Salekin, Rogers, & Sewell, 1997; Daniel, Robins, Reid, and Wilfley, 1988), which is not surprising because the criteria for this disorder are irresponsible or socially unaccepted behaviors that in themselves are likely to be factors in these women intersecting with the criminal justice system. Oftentimes, researchers find elevations on the Psychopathic Deviate scale of the MMPI-2 for adolescents and women, indicating family conflict, problems with authority, delinquency, risk taking, impulsivity, and poor school achievement (Capwell, 1945 as cited in Toyer & Weed, 1998; Hathaway & Monachesi, 1963; Valliant, Maksymchuk, & Antonowicz, 1995).

Borderline personality disorder is of the same cluster B as antisocial personality disorder and is commonly diagnosed in populations of female offenders. Dolan and Mitchell (1994) found 79% of psychiatrically disturbed incarcerated women had borderline personality pathology. As discussed above, it is commonly agreed upon by researchers that the alarming majority of girls and women in the criminal justice system report experiences of sexual and physical victimization. The body of literature addressing the etiology of borderline pathology has long recognized the centrality of early experiences of trauma, particularly sexual trauma (Bradley, Jenei, & Westen, 2005). Thus, because so many of the women who come into contact with the criminal justice system have histories of sexual trauma, the likelihood of an accompanying borderline

personality pathology is high, and is even more commonly seen than in male offenders (Coid, 2003). Perhaps it is the features of this particular personality disorder that gives women in correctional facilities the 'untreatable' label that Gorsuch (1998) suggests.

Due to the complex and pervasive nature of the disorder among female offenders, borderline personality very often co-occurs with other clinical syndromes and personality disorders. Coid (2003) found borderline personality disorder to be comorbid with several Axis I and other Axis II disorders in his study of serious offenders. He found it to substantially co-occur with clinical diagnoses of depression and dysthymia, and also with unspecified psychosis, somatization, and phobias.

Other personality characteristics that have been empirically linked to female offenders are not necessarily diagnostic but may be descriptive characteristics that further help define this population. For example, in a study of incarcerated adolescent girls, ter Laak, de Goede, Aleva, Brugman, van Leuven, and Hussmann (2003) used a more normative measure based on Eysenck's theory of personality to predict delinquency. They found that conscientiousness was negatively correlated with delinquency, neuroticism was correlated with causing damage, and openness was correlated with general delinquent behavior. In addition, the more these girls were involvement in criminal activity, the more neurotic and open and less conscientious the became. On the MMPI-2, Megargee, Mercer, and Carbonell (1999) found for women in state and federal prison, high scores on scales of Psychopathic Deviance, Schizophrenia, Masculinity-Femininity, and Psychasthenia. Common 2-point code types among women were 46/64, 49/94, 45/54, and 59/95.

ATTACHMENT TRAITS OF FEMALE OFFENDERS

Relationships play a vital role in the developmental life of an individual. Gilligan (1982) particularly emphasized the inseparable role of relationships and a sense of self in female psychology. In fact, a female's relationships are so critical to her development that the form of these relationships can either serve a 'protective or deleterious' role in her life (Calhoun, 2001). Research indicates that male and female offenders travel different pathways to delinquency and have different offending trajectories (Fergusson & Horwood, 2002). It is believed that a significant part of understanding the gender difference in pathways to delinquency is considering the instrumental role of relationships in females' development and lives. Because first offenses by females tend to be offenses such as truancy and runaway, Yates (1993) states that these delinquent acts stem from a variety of relational difficulties. These problematic relationships often lead to depression and other internalizing problems. Offending then can be viewed as a possible option of coping with relational turmoil and feelings of distress.

Since relationship plays such an instrumental role in the development and treatment of female offenders, it is vitally important to assess this aspect of functioning. Therefore, this section will review literature pertaining to attachment. A brief overview of the attachment literature will be presented, followed by a discussion of methods of assessing attachment in adulthood. Next, research findings on what is currently known about the quality of attachment in the female offender population and other similar female populations will be reviewed.

Brief Review of Attachment Theory

Bowlby (1982) described attachment as a biologically based system which has as its goal the regulation of behavior in order to promote proximity to the attachment figure or caregiver to ensure protection for the infant. Maintenance of attachments is believed to lead to positive emotion states (joy and security) and threatened or lost attachments are believed to lead to negative emotion states (anxiety, anger, grief). Bowlby's (1969, 1973, 1980) study of attachment focused on the relationship between maternal loss in infants and personality development in later life. The first stage of the attachment process is thought to occur during the early years of a child's life when bonds are developed between the child and the caregiver. The quality of early attachment experiences are believed to provide children with a template for their future relationships in that children develop expectations about the roles of themselves and others in relationships (Bowlby, 1973). Bowlby referred to this template as an internal working model of relationships and it consists of expectations, beliefs, and attitudes that result from early attachment relationships. Although these models transform and evolve with subsequent life experiences, there is evidence for consistency in internal working models throughout life (Waters, Posada, Crowell, & Lay, 1993). Moreover, Bowlby identified two components of these internal working models: the child's image of others based on whether the caregiver is responsive to the need for protection and support; and the child's image of self based on whether the self is deemed to be someone to whom the caregiver is likely to respond.

Ainsworth (1982) further refined Bowlby's theory of attachment in her work with infants. She suggested three types of infant attachment: secure, anxious/ambivalent, and avoidant. Secure attachment develops with a sensitive, responsive, warm, and affectionate parental response to the infant. Anxious/ambivalent attachment develops when a caregiver is inconsistent and unpredictable in response to the infant. This attachment styles tends to result in children being tense, attention-seeking, helpless and impulsive. Avoidant attachment develops when the caregiver is detached, unemotional, and unresponsive to an infant's needs. The result of such parenting in children tends to be emotional detachment, lack of empathy, and hostility. A fourth attachment category was later added that exhibited no consistently organized behavior when the infant was reunited with the caregiver in studies of separation from the caregiver. Therefore this group is called disorganized-disoriented. This attachment type is believed to be the result of a fearful response to the caregiver (Main & Hesse, 1990).

More recently, attachment theory has been applied to adult relationships. Researchers have observed moderately stable correspondence between infant attachment styles and subsequent adult attachment styles, but changes in one's personal circumstances such as loss of a relationship may also influence the attachment style of the individual in adulthood (Hazan & Shaver, 1994). Hazan and Shaver (1987) translated infant attachment into adult attachment so that the styles corresponded to the three primary attachment styles in infancy. Adults with different attachment styles were then found to also have different kinds of relationship experiences in adulthood. These researchers used a self-report measure of attachment in their investigation of continuity of

attachment experience in relation to adult romantic experiences. They found that the two insecurely attached groups reported more negative experiences and beliefs about romantic love than the securely attached group, had a more impaired history of romantic relationships, reported more self-doubt, and reported poorer descriptions of parental relationships.

A prominent contributor to adult attachment theory and assessment has been Bartholomew. Based on Bowlby's two components of internal working models, Bartholomew and Horowitz (1991) proposed a four category model of attachment in adulthood by combining negative or positive image of self and negative or positive image of others. The model is based on Bowlby's idea that individuals develop persistent internal representations of self in relationships and representations of others in relationships that influence whether they perceive themselves as worthy of care and whether others can be trusted to give care. Secure attachment is believed to be a positive image of self and others, a preoccupied attachment is a negative image of self and a positive image of others, a dismissing attachment is a positive image of self and a negative image of others, and a fearful attachment is a negative image of self and others. In this model, the fearful and dismissing groups are different facets of Ainsworth's original avoidant attachment style. Bartholomew and Horowitz's study found empirical validation for this model. Each group was associated with a distinct pattern of interpersonal and personal problems. The problems of the fearful group were marked with interpersonal passivity and personal insecurity, the preoccupied group attempted to gain positive self-regard and dependence on others through a dominating interpersonal

style and they were personally insecure, and the dismissing group had a lack of warmth in social interaction and had difficulty relying on others. In the above model, the fearful and dismissing groups, although different in their concept of self, are both characterized by an avoidance of intimacy; similarly, the preoccupied and fearful groups, although ready for intimacy with others, both are riddled with insecurity and lack of assertiveness. Current methods of assessing adult attachment have thus been based largely upon this model by Bartholomew and Horowitz.

Attachment Issues in Female Offenders

There is a substantial body of literature that addresses the current attachment characteristics and the attachment related risk factors of offenders. However, the majority of research on attachment in this population has been conducted with males, and specifically males who have engaged in sexual offenses. Hence, there is a paucity of literature that describes the quality of attachment experience in female offenders. Generally, it is hypothesized that insecure attachment is a vulnerability factor for criminality without regard to gender and perhaps even without regard to offense type (Ward, Hudson, & Marshall, 1996). However, due to the particular difficulties sex offenders appear to experience in forming relationships, attachment research has primarily focused on this segment of the offending population; but even this research has not addressed the female offender. Therefore, the present review of literature will summarize studies comparing attachment in male and female offenders in addition to broadening the scope of attachment literature to include descriptions of attachment

characteristics of similar female populations such as inpatients or those with a history of delinquency.

As discussed in the section on the etiology of female criminality, there was a shift in thinking from criminality as a genetically determined phenomenon to one that is embedded in the childhood experience. In fact, during Bowlby's time more emphasis was being placed upon studying the child. Bowlby himself believed that delinquent behavior was rooted in early childhood experience. Within this context was Bowlby's (1944) classic study of 'forty-four juvenile thieves,' in which he observed the attachment styles of 88 children of which half were referred for stealing. Thirteen of these children were girls. Extensive assessment was conducted with these children and their mothers. From these case studies, Bowlby proposed that delinquency is more likely to occur when there is an early prolonged separation (within the first five years of life) between the mother and child or there are negative emotional attitudes from the parent towards to child. In his sample, 40% of the thieves as compared to 2% of the controls had experienced a prolonged separation from the mother during these years. Furthermore, it was the disruption of an existing bond and not the failure to form a bond with the mother that was considered to be particularly harmful because children who were placed in foster care within the first few weeks of life were able to form significant attachments with the foster mother, as long as the bond was then not broken again. These broken bonds were thought to be a precursor to the 'affectionless character' which was a common character type seen in persistent offenders. These were the children characterized by a lack of emotion, affection, shame and responsibility. Thus, these children were observed to have

dismissive patterns of attachment that were then theorized to protect them from forming close relationships in the future, thereby decreasing the possibility of further emotional pain. The traits of the affectionless character described by Bowlby are somewhat analogous to what is now considered characteristics of psychopathy.

Saltaris (2002) reviewed research on the precursors of psychopathy in juvenile offenders, specifically temperament and attachment in early childhood. However, psychopathy has a more prevalent occurrence in males than in females. In fact, research suggests it is five to seven times more common in men than in women (Offord, Adler, & Boyle, 1986; Offord, Boyle, & Racine, 1991). It has been suggested that differing symptom pictures exist for males and females but the underlying personality components remain the same. The emotional detachment seen in psychopathic individuals is so fundamental that Saltaris, like Bowlby, states it is most likely to originate from deficits in attachment in the initial few months of life.

In a sample of non-offending high school students, Wekerle and Wolfe (1998) examined child maltreatment and adolescent self-perceived insecure attachment style as predictors of 'offender' and 'victim' experiences in relationships. Attachment was measured by Hazan and Shaver's (1987) Attachment Security Ratings, a self-report measure of current quality of attachment. Findings for male and female youth varied. Child maltreatment was found to be significant predictor of victimization experiences for males and females but also a predictor of abusive experiences for only males. Results specifically pertaining to females in the sample indicate that avoidant attachment style was a significant predictor of female abusiveness and victimization. Therefore, Wekerle

and Wolfe concluded that the risk factors of child maltreatment and self-perceived insecure attachment style predominantly apply to a population of male and not female youth.

INTERSECTION OF PERSONALITY AND ATTACHMENT THEORY

In examining the personality and the attachment organization of female offenders, this work builds largely upon the previous work of Espelage et al. (2003). Accordingly, in this section, Espelage et al.'s study will be presented, followed by a review of MMPI and attachment literature to support the premises of the current study.

A Summary of Espelage et al. (2003)

Espelage et al. (2003) conducted a study that used the MMPI-2 clinical and validity scales to identify distinct psychological profiles within a sample of 141 male and female serious juvenile offenders, their ages ranging from 14 to 22 years. Results from this study revealed a marked distinction between the psychopathology of males and females within the sample. For both males and females, two distinct psychological profiles emerged, but the nature of the profiles greatly differed between the genders. For males, a *Normative* cluster with no clinical elevations on the MMPI-2 was found; and a *Disorganized* cluster was found with elevations on scales 8 (Schizophrenia), 6 (Paranoia), 7 (Psychasthenia), 4 (Psychopathic Deviate), and validity scale F. The Disorganized cluster is described in temperament as moody and hostile with a violent temper. Moreover, thought processes of individuals in this cluster tend towards relying on fantasy

in times of stress, unusual thoughts, attitudes, and experiences such as hallucinations and delusions, which may also extend to psychotic symptoms with bizarre content and delusions of persecution. There may be a tendency to be socially withdrawn and lack social skills. Common psychiatric diagnoses for this profile include schizophrenia or antisocial, schizoid, and paranoid personality disorders.

Unlike the males in Espelage et al.'s study, all of the females in the sample fell into one of two clinically elevated profiles, with no females falling into a normative profile. The first was the *Impulsive-Antisocial* cluster which had a clinical elevation on scale 4 (Psychopathic Deviate) and a low score on scale 0 (Social Introversion). This cluster is characterized by antisocial tendencies such as a marked disregard for social standards, poor judgment, lack of responsibility taken for behavior, and poor frustration tolerance. In addition, these antisocial tendencies may include highly developed social skills which may be used to manipulate others. Reports of depression and anxiety or psychological distress, if at all present, are short-term, thereby making individuals in this cluster unlikely candidates for therapy. Instead emotion is expressed by intense occasional outbursts of anger and hostility. Due to these characteristics, these individuals tend to have difficulties with family, work, and the legal system.

The second female cluster, named *Irritable-Isolated*, had clinical elevations primarily on scales 4 (Psychopathic Deviate), 8 (Schizophrenia), and 6 (Paranoia), and validity scale F, followed by some additional elevations on scales 7 (Psychasthenia) and 9 (Hypomania). This profile is described as impulsive, angry, distrustful, and socially isolated. It is common for adolescents with this code type to experience either severe

adjustment disorders or prepsychotic episodes, which like the male Disorganized cluster may include thought disturbance such as delusions or hallucinations. Individuals with this profile often have extensive criminal histories, similar to those with a 4-9 code type, but engage in crimes that are poorly planned and tend to be brutal. Psychiatric diagnoses common to this profile are schizophrenia or antisocial, schizoid, or paranoid personality disorders.

In order to relate these personality clusters to participants' reports of psychological symptoms, Espelage et al. then compared the MMPI-2 clusters to scales of the Massachusetts Youth Screening Instrument-Version 2 (MAYSI-2), which is an inventory of mental health symptoms designed for use in juvenile correctional settings. They found significant relationships between the clusters and MAYSI-2 scales which further validated the natural grouping of the clusters. Males in the Disorganized cluster reported significantly more symptoms related to depressed mood, alcohol ad drug abuse, and thought disturbance. Specific findings pertaining to females were that those in the Irritable-Isolated group reported significantly more symptoms of depressed mood, angry-irritable mood, and suicidal ideation than those in the Impulsive-Antisocial cluster. It is noted however that the MAYSI-2 thought disturbance scale is valid only for males so this comparison was not made for females.

Background Literature on Espelage et al's (2003) Two Clusters

Literature from the MMPI, attachment theory and clinical psychology will now be used to further explore the two female clusters that emerged in Espelage et al. (2003)'s

work. A more in depth description of the two clusters will be given from MMPI literature; then research will be presented concerning the link between these clusters and attachment styles and report of psychological symptoms.

Impulsive-Antisocial Cluster

The description of this MMPI cluster, labeled Impulsive-Antisocial by Espelage et al. (2003), is further described in the MMPI literature. The following description is a synthesis of interpretations from Friedman (2000), Friedman, Webb, and Lewak (1989), Graham (1993), and Archer (1997), Graham, Ben-Porath, and McNulty (1999). This profile consists of an elevation in scale 4 (Psychopathic Deviate) followed by a slight elevation in scale 9 (Mania), and a depression in scale 0 (Social Introversion). Individuals with this profile are impulsive, resentful, hostile, rebellious, and have difficulty following rules and adhering to authority. Antisocial or conduct disordered features are common among adults and adolescents who exhibit this MMPI profile, as are narcissistic features. It is noted that longstanding legal problems in such a profile is highly likely, lending evidence for a more characterological rather than a situational profile. There is generally a low tolerance for frustration and an inability to delay gratification. In fact, these individuals tend to sacrifice long-term goals for immediate gratification of desires and they have difficulty anticipating consequences for their actions. It is also common to avoid responsibility and to externalize problems with this code type. Regarding emotional expression, these persons do a poor job of controlling

angry emotions and the anger is often acted out behaviorally. In addition, a consistent pattern of conflict with family members, peers, and authority figures is common.

In terms of clinical symptoms, although they may verbalize feelings of guilt and depression at times, these feelings tend to be transitory and situational and do not actually affect ensuing behavior. More often, manifestations of depression and anxiety are not associated with this code type. This profile is predictive of alcohol and substance abuse, particularly if the MAC-R scale is elevated. However, because they selectively report information, the degree of alcohol and substance abuse problems may not be clear.

Relationally, this cluster also exhibits distinct qualities. Although they may be socially outgoing, their relationships are superficial and ephemeral. There is a veneer of social glibness and well-developed skill in manipulating others. However, a lack of empathy for others, poor interpersonal judgment, and an inability to follow through on the responsibilities of long-term relationships preclude more intimate relationships. On a deeper level, issues of fundamental distrust and fear of vulnerability make it very difficult to allow other people to become close. Most often, there are childhood experiences of disappointment and neglect from caregivers who were arbitrary and controlling. The response of these individuals was to numb their feelings in order to survive by using manipulation and devious means to get their basic emotional needs met.

Research has consistently reported a connection between antisocial or highly disruptive behaviors, which are central to the Impulsive-Antisocial cluster, and a dismissing style of attachment (Rosenstein & Horowitz, 1996; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Greenberg, Speltz, & DeKlyen, 1993). Main

(1990) theorized that children classified as dismissing develop a strategy for minimizing the output of attachment behaviors in the face of an inaccessible or rejecting caregiver in order to maintain a level of self-organization. Hence, although these children show little need for the caregiver or distress when the caregiver departs or returns, the rejection causes anger and anxiety. The internalization of the lack of trustworthiness of others and one's strategy for managing it forms the initial stages for distortions in personality and psychopathology. Rosenstein and Horowitz (1996) studied attachment within a sample of adolescent inpatients. One of the attachment styles of interest was the dismissing style. When a personality assessment was conducted with this dismissing group of participants, it was found that they had antisocial, narcissistic, and paranoid features, with a trend toward drug abuse. These are similar features to Espelage et al's Impulsive-Antisocial cluster. It was also found that those diagnosed with conduct disorder and substance abuse predominantly exhibited enduring attachment organizations consistent with a dismissing style.

Frodi, Dernevik, Sepa, Philipson, and Bragesjo (2001) qualitatively examined the attachment representations of a group of incarcerated offenders who exhibited some degree of psychopathy. Their description of psychopathy resonates with the description of the Antisocial-Impulsive cluster: 'a glib, superficial interpersonal style, grandiosity, callousness, a conning and manipulative use of others, lack of empathy, and emotional coldness.' They additionally site characteristics as 'a chronically unstable, antisocial lifestyle, impulsivity, and criminal versatility' (p.270). These researchers found an overrepresentation of dismissing attachment representations in their sample. Upon closer

examination of attachment interviews, Frodi et al. found a high degree of abuse within this dismissing group (consistent with findings of Fonagy, Target, Steele, Leigh, Levinson, & Kennedy, 1997) and long periods of separation from parents in early childhood. Interestingly, this dismissing group had a very poor recall of childhood experiences, overidealization of childhood experiences at the expense of specific recollections, and they had great difficulty verbally describing early experiences. Researchers associate dismissing attachment styles with a dismissal of the significance of attachment-related experiences, idealization of childhood, and denial of distress or psychological symptoms (Rosenstein & Horowitz, 1996; Frodi et al., 2001).

Irritable-Isolated Cluster

The description of the Irritable-Isolated cluster is similarly described in the MMPI literature. The following is a synthesis from Friedman (2000), Friedman, Webb, and Lewak (1989), Graham (2000), Archer (1997), and Graham, Ben-Porath, and McNulty (1999). The Irritable-Isolated cluster, a label given by Espelage et al. (2003), describes the code type with primary elevations on scales 4 (Psychopathic Deviate), 8 (Schizophrenia), 6 (Paranoia) and validity scale F. Individuals from this cluster almost always have severe psychiatric problems often in the form of a personality disorder or psychosis. Clinicians often describe these persons as those having acute psychological turmoil and inner chaos. Although not all of these persons have a psychosis, some are overtly psychotic with hallucinations, delusions, paranoid tendencies, and have a history of psychiatric hospitalizations. Others may not exhibit a distinct psychotic disorder but

will experience periodic breakdowns in their reality testing and will exhibit loose associations in thought, fragmented thoughts, and bizarre thoughts and actions. Paranoia can lead to psychotic distortion as they tend to ruminate with anger about real or imagined injustices that have happened to them, leading to delusions or ideas of reference. Similarly, elements of grandiosity can be present as part of their paranoid sensitivity. In adolescents, this code type may reflect more of a moderate or perhaps severe transient adjustment disorder, whereas, in other adolescents it may reflect a prepsychotic process.

It is common for persons from this cluster to become social isolates or to become involved in criminal activity. A high portion of individuals from this cluster do act out in some manner. Crimes committed by such individuals are often senselessly brutal, savage, and poorly planned out and executed. Due to the impulsive nature of the crimes, these individuals appear self-destructive because they are most often caught. Research with women from this cluster shows that they often have unwed pregnancies and are often the result of unwanted pregnancies themselves. Most notably, they have low self-esteem and are thus most comfortable with those less competent than themselves or those vulnerable to abuse. Women also tend to be in relationships with men who are less competent than themselves, and they generally prefer to relate to others sexually, and fear emotional involvement. Chemical addiction is strongly correlated with this code type and is often used as a way to self-medicate. Assault and suicide attempts are also moderately frequent and should be taken seriously due to poor judgment, lack of insight,

and impulsivity. Educational and occupational histories are marked by underachievement and poor adjustment.

Socially, these individuals are seen as peculiar due to their poor reality testing and subsequent behavior, in addition to subtle communication problems. Others find it difficult to relate to them because they are unpredictable and moody, often displaying volatile moods that are not triggered by external events but arise from internal chaos. Moreover, lack of empathy for others and poor social judgment further complicates social relationships. Relationally, mistrust is a central characteristic for this group; in fact, this group is largely characterized by a sense of profound alienation and disconnection from others. The centrality of mistrust in their view of others makes the formation of intimate attachments very difficult. A childhood history of disruption, chaos, abuse, and threats to the development of identity are common. Histories of chronic conflict and upheaval within the family, sexual and physical abuse, alcoholism and cruel neglect may be seen. A severely damaged sense of identity lies at the core of images of self and perception of others. Self-esteem is intensely low, and from an early age, these individuals learn to view others as untrustworthy, rejecting, hostile, and dangerous. In order to cope, they establish a pervasive attitude of distrust and protective withdrawal toward the world. Many also learned to protect themselves and to lessen the anticipation of rejection by lashing out first in anger or rebellion. Adolescents in this cluster may in fact go out of their way to appear frightening or disgusting to others in order to keep them at a distance.

The Impulsive-Antisocial cluster, if characterized by a dismissing attachment organization, consists of a negative view of others and a positive view of self according

to Bartholomew and Horowitz's (1991) four dimensional model of attachment which consists of the self and the other axes. It would appear then that both the Impulsive-Antisocial and Irritable-Isolated cluster share the common axis of negative view of others because both have a profound mistrust of others that stems from various levels of disruption in early attachment and thus both avoid intimacy with others. But it is argued here that although both clusters view others negatively, where they differ is on the axis of view of self. That is, whereas the Impulsive-Antisocial group views self as positive, albeit in a defensive and exaggerated manner, the Irritable-Isolated group views self as negative, which is underscored by a markedly low self-esteem. Cyranowski et al. (2002) state that the adherence to a negative view of self and other organization, also called a fearful attachment organization, is associated with chronically low self-esteem. They also find that the tendency toward fearful attachment is associated with the experience of depression and with numerous interpersonal problems, especially those involving intimacy and sociability. Similarly, the link between depression and fearful attachment has been evidenced in other samples, particularly samples of women (Whiffen, Kallos-Lilly, & MacDonald, 2001 as cited in Reis & Grenyer, 2004). Espelage et al. (2003) and MMPI data find that individuals in the Irritable-Isolated cluster struggle with feelings of depression, suicidal feelings, low self worth, and social isolation. Such feelings of distress set this cluster apart because they are not present in the Impulsive-Antisocial cluster.

The fearful attachment style is thought to result from harsh and rejecting early caregiving that damages the self and also leads to a belief that others cannot be trusted.

Individuals with this attachment style do still desire relationship with others but fear rejection and thus develop a fear of intimacy (Wearden, Lamberton, Crook, & Walsh, 2005). Research with this specific attachment style is limited but some results suggest it is an antecedent for abusive and controlling behavior in samples of assaultive men (Mahalik, Aldarondo, & Gilbert-Gokhale, 2005; Dutton, Starzomski, & Ryan, 1996). Simeon, Nelson, Elias, Greenberg, and Hollender (2003) have found that fearful attachment is associated with dissociation and immature defenses in a sample of individuals with borderline personality disorder. This is a particularly interesting finding that warrants further investigation and relates to the present study because it is very possible that dissociative processes are present in the Irritable-Isolated cluster of female offenders. Because dissociative processes develop from a history of severe abuse or trauma (Simeon et al., 2003), and a significant number of incarcerated adolescent and adult females have backgrounds of sexual abuse and other trauma (Kane & DiBartolo, 2002; Dixon et al., 2004), it is likely that dissociation exists in this population. It is also possible that dissociative processes that result from trauma resemble prepsychotic or thought disorder symptoms that are characteristic of the Irritable-Isolated cluster.

In fact, one of the prominent diagnostic categories for individuals with many of the characteristics of those found in the Irritable-Isolated cluster, or elevations on MMPI-2 scales 8-4, is borderline personality disorder (Graham, 2000). The hallmarks of the Irritable-Isolated cluster that fit the characteristics of borderline personality disorder are the following: emotional instability and distress, hostility towards self and others, a profoundly damaged self identity (including serious sexual identity concerns) that

subsequently leads to primitive defenses such as projection and acting out to protect the fragile core self, intimacy with others is desired but feared and therefore avoided, behavior is unpredictable oftentimes destructive, alcohol and drug abuse is likely in addition to suicide attempts, and insight in limited and judgment is poor. Thus, this group can be diagnostically conceptualized as similar to borderline personality.

Research pertaining to the relationship between borderline personality and its antecedents of attachment have been mixed. Unlike findings that appear to consistently link antisocial personality to dismissing attachment, there is a lack of consistency with borderline personality, perhaps in part due to the complexity and diversity of the disorder itself. Many studies have indicated a relationship between borderline personality and preoccupied attachment (i.e. Levy, 1993 as cited in Levy, 2005; Patrick, Hobson, Castle, Howard, & Maughan, 1994; Fonagy et al., 1997; Stalker & Davies, 1995), with most of these studies having utilized interview measures of attachment. More recent research which has used self-report methods of assessing attachment, however, has found some additional evidence for the relationship between borderline personality and fearful attachment (Brennan & Shaver, 1998; Hoermann, Clarkin, Hull, & Fer tuck, 2004; Eurelings-Bontokoe, Verschuur, & Schreuder, 2003; Fossati, Feeney, & Donati, 2003). For example, researchers have found borderline personality disorder symptoms to be related to both anxiety and avoidance dimensions (see section review of Bartholomew). Brennan and Shaver (1995) found borderline features to load significantly on secure-fearful dimensions. Therefore, individuals with borderline personality traits rated higher on fearful and preoccupied dimensions than others. Hoermann et al. (2004) found

borderline patients scored highest on the fearful attachment dimension, but the preoccupied dimension predicted hospitalizations. In a sample of abusive men, borderline personality organization was significantly related to fearful attachment; it was also related to preoccupied attachment in this study, but to a significantly lesser degree (Dutton et al., 1994). Studies do therefore not converge concerning the relationship between borderline personality traits and attachment organization. It is possible there may be some overlap in dimensions, but further research is needed to clarify this relationship, particularly among women.

There is some evidence to suggest a distinguishing factor between attachment organizations that are manifested in borderline personality may lie in the extent and severity of trauma experienced, particularly complex trauma (Pearlman & Courtois, 2001). The presence of complex trauma appears to be a precursor for fearful attachment. Research suggests this population is likely to have backgrounds filled with victimization and complex trauma, and thus perhaps be more likely to exhibit fearful attachment organizations that correspond to borderline pathology. Therefore, based on Bartholomew and Horowitz's (1991) self and other axes, a negative view of both self and other (fearful attachment) is theorized to underlie the borderline personality.

The Impulsive-Antisocial cluster and the Irritable-Isolated cluster should also be distinguishable by report of psychological symptoms. Studies have linked attachment style with symptom reporting. It has commonly been found that individuals with preoccupied and fearful attachment styles express more psychological distress (Wearden et al., 2004; Rosenstein & Horowitz, 1996); whereas, individuals with dismissing

attachment styles deny or fail to express psychological symptoms (Rosenstein & Horowitz, 1996; Frodi et al., 2001). Wearden et al. believes this relationship is mediated by negative affectivity that exists in individuals with preoccupied and fearful attachments, stemming from poor self-esteem or negative view of self. Furthermore, as noted previously, there is a presence of acute psychological turmoil that has been observed in the Irritable-Isolated cluster that is not characteristic of the Impulsive-Antisocial cluster.

STATEMENT OF PURPOSE

One aim of this dissertation is to reexamine the findings of Espelage et al.'s (2003) study in a sample of young female offenders. In particular, this study will examine whether groups who possess the characteristics of the Impulsive-Antisocial and the Irritable-Isolated clusters exist within this sample. Utilizing a developmental pathways perspective, which posits that attachment organizations produce differential vulnerabilities to psychiatric symptoms and personality traits, an additional aim of this dissertation is to examine how attachment styles and report of depressive symptoms relate to the two personality styles.

This study is valuable for several reasons. Although there is substantial evidence for the connection between the personality characteristics of the Impulsive-Antisocial cluster and the dismissing attachment organization, the studies that found this link used male samples (ex. Frodi et al., 2001) or primarily found this link with the males in their sample (ex. Rosenstein & Horowitz, 1996). Rosenstein and Horowitz, for example, did

not study this link with a sample of females who had conduct disordered behavior and thus found some difference in results for males and females. Therefore, it is valuable to examine whether this attachment organization manifests similarly across genders. Also, there is little research linking fearful attachment organizations with various personality traits and psychological symptoms. Research has mainly focused on the link between fearful attachment and depression in normative samples, not examining more diverse symptoms such as those present in the Irritable-Isolated cluster.

On a broader scale, as the review of the literature suggests, attachment is a particularly important factor in the profile of female offenders, yet it is often overlooked by researchers and clinicians working with this population. Therefore, this study is deemed a unique contribution to the literature because it is one of the few studies that addresses attachment style as a factor in the assessment of female offenders. By linking personality to meaningful structures of attachment organization and propensity to express psychological distress, this study hopes to contribute a picture of the female offender that has breadth, and thus will be useful for clinicians.

Based on the review of literature, several hypotheses are proposed. First, it is expected, that using the MCMI-III, this sample of female offenders will primarily be characterized by two specific personality types that approximate the two female profiles found in Espelage et al.'s study. Diagnostically, most females in the sample may either fall into the MCMI-III personality type that approximates the Impulsive-Antisocial cluster (i.e. antisocial personality traits with an absence of psychological distress as measured by depressive symptoms) or they may fall into the MCMI-III personality type

that approximates the Irritable-Isolated cluster (i.e. borderline personality traits with the presence of psychological distress as measures by depressive symptoms). Second, it is hypothesized that all participants in this study will possess insecure styles of attachments. Studies with similar populations consistently find an absence of secure attachment (Van IJzendoorn, Feldbrugge, Derks, de Ruiter, Verhagen, Philipse, van der Staak, & Riksen-Walraven, 1997; Frodi et al. 2001; Dozier, 1990; Rosenstein & Horowitz, 1996). Specifically, based on Bartholomew's attachment model and MMPI research, it is hypothesized that particular attachment styles will naturally coexist with the two personality styles. The dismissing attachment style, consisting of a positive view of self and a negative view of others, will predominantly be related to the MCMI-III Antisocial grouping; and the fearful attachment style, consisting of a negative view of self and a negative view of others, will predominantly be related to the MCMI-III Borderline grouping. Third, consistent with literature that states that there is a difference in report of psychological distress between individuals from the two attachment styles (Wearden et al., 2004; Frodi et al., 2001; Rosenstein & Horowitz, 1996) and this pattern similarly emerged in Espelage et al.'s (2003) study, it is expected that there will be this same difference between the two groups. It is expected that those in the MCMI-III Borderline group will report higher degrees of depression while those in the MCMI-III Antisocial group will deny feelings of depression.

To measure the MMPI-A personality clusters found by Espelage et al. (2003), MCMI-III scales that are deemed to capture the traits most central to these clusters were used in the present study. To capture the nature of the Impulsive-Antisocial cluster, the

Antisocial scale of the MCMI-III was used. The description of Millon's Antisocial scale (scale 6A) is as follows: Persons with elevations on this scale exhibit impulsive acting out. Their behavior is often short-sighted and imprudent, and they tend to ignore the consequences of their actions even if this jeopardizes the safety of self or others. They tend to violate the rights of others and act irresponsibly in interpersonal relationships. They fail to conform to social norms and many such persons have legal difficulties and engage in criminal activity. There is also a central theme of lack of empathy for others and lack of remorse. In fact, they often project that same callousness onto others. Due to these beliefs, people with elevations on Antisocial may be mistrustful, suspicious of others, guarded, and reserved. They might also use aggression, intimidation, and cruelty to provoke fear, and thereby maintain self-protection (Groth-Marnat, 1997; Jankowski, 2002).

To capture the nature of the women in the Irritable-Isolated cluster, the MCMI-III Borderline was used. A description of the Borderline scale (scale C) follows: The predominant features of individuals with elevations on this scale are instability and unpredictability of mood and behavior. However, their unstable behavior appears to be a result of internal factors rather than a reaction to environmental factors. The instability may be marked by shifts in mood, periods of depression and anxiety, intense emotional outbursts, often directed towards others, and periods of apathy. Mood may also be characterized by intense anger and irritability, may lead to self-destructive behaviors. Beneath such mood and behavior lies an extremely poorly developed sense of identity, which may lead to feelings of profound emptiness and disorganization. During periods of

stress, it is not uncommon for individuals with elevations of this scale to become so disorganized so as to experience transient psychosis. The relationships of these individuals are also marked by the instability and intensity. They often elicit rejection in order to protect a damaged sense of self, but also may long for emotional attachment and may invest themselves in maintaining attachments.

In this study, a sample of incarcerated female offenders were administered a self-report measure of adult attachment and a self-report measure of personality and clinical symptoms in order to explore the psychological characteristics of this population. The specific hypotheses of interest in this study are as follows:

Hypothesis 1: The majority of the sample in this study will be characterized by either: (1) an elevation on the MCMI-III Antisocial scale (scale 6A) or (2) an elevation on the MCMI-III Borderline scale (scale C).

Hypothesis 2: Participants with an elevation on the MCMI-III Antisocial scale will differ in their style of attachment from those who exhibit an elevation on the MCMI-III Borderline scale. Specifically, the Antisocial group will endorse higher degrees of the dismissing attachment style while the Borderline group will endorse higher degrees of the fearful attachment style, as measured by the RSQ.

Hypothesis 3: Participants with an elevation of the MCMI-III Antisocial scale will differ in their report of psychological symptoms from those who have an elevation on the MCMI-III Borderline scale. Specifically, the Borderline group will report a greater

degree of depression, as measured by the Major Depression scale of the MCMI-III, than the Antisocial group.

The specific methodology employed in this study is discussed in the next chapter.

CHAPTER THREE

METHODOLOGY

PARTICIPANTS

Participants were women ages 18 to 21 who are incarcerated at Texas Youth Commission at the Giddings, and Corsicana, and Ron Jackson (Brownwood) facilities. There were approximately 70 women in this age range at the three facilities. Age and sex were the exclusionary criteria for participation in the study, and there was no compensation for participation. TYC houses serious juvenile delinquents and chronic offenders who have committed felony-level offenses. Offenders at TYC are committed between the ages of 11 and 17, but may be held until age 21 according to sentence mandates. Therefore, although the participants in this study are a select age group of the total TYC population, the following are descriptors of the current commitments. The TYC commitment profile for 2006 stated that 11% of commitments were female. Ethnic breakdown for 2006 was as follows: 44% Hispanic, 34% Black, 22% Anglo, and 1% Other. Ninety-four percent of the TYC population were U.S. citizens, 5% were Mexican citizens, and 1% were classified as other citizenship. Thirty-four percent of the population were known to belong to a gang. Offense types for females in 2006 were the following: 21% burglary, 11% simple assault, 11% drug offenses, 8% unlawful use of a motor vehicle, 7% aggravated assault, 6% other crime, 6% theft, 5% aggravated robbery, 5% evade/escape/resisting arrest, 5% sexual assault/aggravated sexual assault, 3%

indecency with a child, 3% robbery, 3% unlawful weapons, 2% criminal mischief, 1% arson, 1% criminal trespass, 1% deadly conduct, 1% injury to child/elderly, 1% murder/capital murder, 1% organized criminal activity, 0% kidnap or aggravated kidnap.

In regards to family background, 60% of TYC commitments came from low-income families, 74% came from chaotic environments, 76% had parents who never married or who had divorced or separated, 52% had families with histories of criminal behavior, and 36% had a documented history of abuse or neglect. In regards to psychological profile, 48% had an emotional disturbance of some kind, 83% had IQ scores below a mean score of 100, 40% were eligible for special education, 46% had a chemical dependency, and 12% had family members with psychological impairments. In addition, 48% had been in juvenile court on two or more felony offenses prior to commitment to TYC.

In the demographics section of the study, participants were asked about the nature and length of their current sentence, number of prior convictions, history of mental health treatment, gang membership, alcohol and substance abuse, education level, and primary language spoken at home.

MEASURES

Assessment of Adult Attachment

Initially, there were two methods for assessing adult attachment. The first method involves the use of a structured interview. This interview, the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1984) categorizes individuals using four

attachment classifications: avoidant, anxious, secure and disorganized. The second method is a self-report measure developed by Hazen and Shaver (1987), the Three Attachment Style Measure that categorizes individuals into three attachment classifications corresponding to the infant styles. The AAI is based on retrospective descriptions of the parental relationship while the self-report measure focuses on present awareness of attachment relationships in adulthood.

Bartholomew (1990) noted that these instruments did not converge in theory or measurement so she expanded the model into her comprehensive four category adult attachment model and entitled this the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). While many recent studies have utilized Hazen and Shaver's (1987) three category measure of attachment, several of these same studies have cited the fact that Bartholomew's (1990) four dimensional method of assessing attachment may have been a superior and more comprehensive method (Brennan & Shaver, 1995; Collins, 1996; Collins & Read, 1990; Mikulincer, 1998). Since the development of the RQ, Bartholomew and her colleagues have developed a more comprehensive assessment instrument for assessing adult attachment. The Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994a) is also based on the four category model of attachment that underlies the RQ. Since its development, the RSQ has gained popularity in use as a measure of adult attachment. Siegart, Ward, and Hudson (1995) further examined the factor structure of the RSQ and found support for two underlying factors instead of four; however, these researchers claim that the dimensional use of these two factors is still

consistent with Bartholomew's (1990) notion of four dimensions of attachment styles. In fact, they argue the RSQ is a useful measure of attachment.

Although studies have primarily utilized the RSQ as a measure of adult attachment in populations such as college students in regards to issues of romantic attachment, the scale itself is not specific to such issues (Griffin & Bartholomew, 1994a). Thus, due to the suitable theoretical basis for this scale and the sound psychometric properties, it will be used to measure adult attachment in this female offender population.

RELATIONSHIP SCALES QUESTIONNAIRE (RSQ): The RSQ (Griffin & Bartholomew, 1994a) was designed as a measure of adult attachment. Although several scales exist to measure adult attachment, the RSQ was chosen for this study because it appears to most closely represent Bowlby's original theory of attachment. Moreover, Kurdek (2002) reviewed adult attachment scales and found the RSQ to yield psychometrically sound scores of attachment styles. Although conceptually based on Bartholomew's (1990) four dimensional theory of attachment, the RSQ is an assimilation of Hazan and Shaver's (1987) self-report measure utilizing a three-category attachment model, Bartholomew and Horowitz's (1991) four-category Relationship Scale, and Collin's and Read (1990) Adult Attachment Scale. It is a more comprehensive instrument than the Relationship Questionnaire (Bartholomew & Horowitz, 1991) from which it was developed. Although many studies have utilized Hazan and Shaver's (1987) measure of attachment, those authors note that Bartholomew's (1990) four dimensional method of assessing attachment

may have been a more comprehensive method (Collins, 1996; Collins & Read, 1990; Mikulincer, 1998).

The RSQ is a 30 item measure that asks participants to rate the extent to which each statement best describes their experience in close interpersonal relationships on a five point scale ranging from *not at all like me* to *very much like me*. The RSQ yields a continuous measure of adult attachment, providing a profile of scores that are consistent with Griffin and Bartholomew's (1994a) four-dimension model of adult attachment. As such, the measure recognizes that individuals may exhibit varying degrees of characteristics of more than one attachment style. Five items each contribute to the secure and dismissing attachment patterns and four items each contribute to the fearful and preoccupied attachment patterns. The scale produces a mean score for each of the four dimensions of adult attachment and the four scores are used to create a profile of attachment for the participant.

Construct validity has been found for the four major theoretical categories of attachment style that underlie this measure, although Siegart, Ward, and Hudson (1995) propose that a two factor model that still captures these four categories on a continuum is a better approach to using the RSQ. The RSQ exhibits moderate reliability estimates of approximately .65 for each of the subscales that assess the four attachment categories (Crowell, Fraley & Shaver, 1999). Estimates are moderate due to the multi-item nature of the scales. Internal consistency estimates have been found to range from .40 to .70 (Griffin & Barthomolew, 1994b), which are again modest per the researchers because the two orthogonal dimensions of self and other described earlier in the literature review

have been integrated within this measure. There is moderate convergent validity between the Relationship Questionnaire, the RSQ, and attachment interview ratings (Griffin & Bartholomew, 1994b).

MILLON CLINICAL MULTIAXIAL INVENTORY-III (MCMI-III): The MCMI-III (Millon, Davis, & Millon, 1994) is a 175-item true-false self-report measure of clinical syndromes and personality patterns for adults who are 18 years or older with a minimum of an eight grade reading level. The test is specifically developed for the evaluation of populations in mental health settings, and as such, use with non clinical populations will yield distorted test results. The MCMI-III was developed to align with DSM-IV (American Psychological Association, 1994) diagnostic criteria and Millon's theory of personality. The test consists of 28 scales which are divided into the following categories: Modifying Indices, Clinical Personality Patterns, Severe Personality Pathology, Clinical Syndromes, and Severe Syndromes. Many scales have theoretical and item overlapping that denotes the theory that various personality patterns and clinical symptoms are related to one another in a consistent manner. The scales of interest in the current study were Antisocial (M = 83.02; SD = 18.32), Borderline (M = 74.26; SD = 21.28), Major Depression (M = 50.43; SD = 30.38) (Millon, Davis, & Millon, 1997). Respondents are instructed to describe their feelings and attitudes as honestly as possible by marking 'True' for statements that describe them and 'False' for statements that do not do not describe them.

The MCMI-III was normed on a sample consisting of 998 psychiatric patients from the United States and Canada, whom were divided into two separate groups. A group of 600 patients were used for scale construction and a second group of 398 patients were used in the process of verification of accuracy of the standardized scores. As noted, the MCMI-III was created for a clinical population, and as such the normative sample consisted of individuals from an inpatient setting, and outpatient setting, as well as a correctional setting. Because of this, this measure is especially suited for the sample in this study, which is thought to be clinical in nature.

Instead of the T scores like those used in the MMPI-2, the MCMI-III uses base rate (BR) scores. T scores assume a normal underlying population distribution, and this cannot be used for the MCMI-III because its normative sample is a psychiatric population. BR scores, however, are based on the symptoms of the normative sample itself. Millon created BR scores by having clinicians provide DSM-III-R diagnoses for the patients in the sample. He then created anchor points or base rate scores that reflect the prevalence of the clinical syndromes and personality patterns. A BR score of 6o represents the median for all patients. For the personality scales, BR scores of 75 to 84 suggest that clinically significant personality traits are present, and BR scores of 85 and above signify that a disorder is present. For the clinical syndrome scales, BR scores of 75 to 84 suggest the presence of a syndrome, and BR scores of 85 and above indicate that a syndrome is prominent (Millon, Davis, & Millon, 1997). Due to the dimensional nature of the variables in this study, the MCMI-III scales of interest will be examined as personality traits on a continuum rather than as having clinical significance as Millon

strictly discusses here. Therefore, higher scores on a scale indicate the greater presence of those traits.

All protocols in this study were computer scored and the 9 protocols identified as invalid were not included in analysis.

Reliability and validity of the MCMI-III indicate that it is a generally well-constructed instrument. Internal consistency has shown to be strong, with alpha coefficients ranging from .66 (Compulsive) to .90 (Depression) in which 20 of the 26 scales exceeded .80 (Millon, 1994). Median test-retest reliability has also been reported to be .91 with a high of .96 (Somatoform) and a low of .82 (Debasement) during an interval of five to 14 days (Millon, 1994).

In considering validity of the MCMI-III, validity studies on previous versions of the instrument have often been used. Since there is a high degree of correlation between the MCMI-II and the MCMI-III (12 of the 25 scale comparisons are above .70; Groth-Marnat, 1997), this is acceptable. The MCMI-III has been correlated to various other measures such as the Beck Depression Inventory, Symptom Checklist-90, the MMPI, State-Trait Anxiety Inventory, and the Michigan Alcohol Screening Test (Millon, 1994). Most of these correlations between the MCMI and external criterion instruments have supported the validity of the constructs being measured. For example, correlations were found the Beck Depression Inventory and the MCMI-III Major Depression scale (.74) and Dysthymia scale (.71); and negative correlations were found between the Beck depression Inventory and MCMI-III scales related to denying pathology (Histrionic. -.49; Narcissistic, -.40; and Compulsive, -.30) (Millon, 1994 as cited in Groth-Marnat, 1997).

In addition, there is evidence of the MCMI-III's diagnostic validity. Participants who scored of 75 or 85 on any particular scales were compared to clinician ratings to see whether characteristics predicted by scale scores matched clinician ratings. Using a score of 75, a match rate of between 61.3% and 90.4% was found (Groth-Marnat, 1997).

Internal consistency coefficient alphas for the scales used are as follows: Antisocial .77; Borderline .85; Major Depression .90; Post-Traumatic Stress Disorder .89 (Millon, Davis, & Millon, 1997). Internal consistency coefficient alphas for the current study are the following: Antisocial .75; Borderline .80; Major Depression .84; Post-Traumatic Stress Disorder .86.

DEMOGRAPHIC INFORMATION: Demographic information will be obtained through a self-administered form. Participants will be asked to provide the following information: name, age, ethnicity, primary language spoken, current offense, length of current sentence, number of prior offenses, presence of a history of violent crime or involvement in fights, presence of history of psychiatric illness or family history of psychiatric illness, presence of alcohol or substance abuse disorder, and constitution of family. (See Appendix B)

PROCEDURE

Participation in this study was voluntary and was no compensation for participation. Fifty-five young women between the ages of 18 to 21 were recruited for the study through treatment providers at TYC, and were then referred to the researcher

upon their willingness to participate. During the group administration session, participants were asked to complete a packet with a consent form containing a description of the study, a statement of confidentiality, and possible risks and benefits associated with participation (Appendix A). The packet additionally contained a demographics form (Appendix B) and the Relationship Scales Questionnaire (Appendix C). The researcher verbally reviewed the contents of the written consent form with the participants to ensure comprehension, and a copy of the consent form was given to each participant. Participants were informed that their responses to measures would remain confidential, and written consent was then obtained from participants. Participants were assured that information provided by them would not be shared with TYC staff and their decision to participate or decline participation would not affect the receipt or quality of treatment at TYC, nor would it affect any legal proceedings, including minimum length of stay at TYC. Time was then given for participants to individually complete the packet. The MCMI-III was read aloud to any participants who had difficulty reading (those with less than a sixth grade education) or those who requested assistance. Protocols of participants who refused to complete the MCMI-III (n=6) were omitted from the study. After completion of the study, inmates were thanked for their participation and escorted back to their regular activities. MCMI-III protocols were computer scored and were considered valid if they met the following criteria from the MCMI-III manual (Millon, 1994): (1) a Validity raw score of 1 or less, (2) less than 11 "I don't know" responses, (3) a Scale X (Disclosure) raw score ranging from 35 to 178, and (4) all Base Rate (BR) scores on

personality pattern scales greater than 59. Following these criteria, 9 MCMI-III protocols were discarded from the analysis because they were invalid.

SUMMARY OF HYPOTHESES AND DATA ANALYSES

Upon examination of the research questions to be addressed, various statistical approaches were considered. In order to reduce probability of committing Type I error and to most efficiently examine the variables in one analysis, a multivariate method was deemed to be most appropriate. After considering the various multivariate approaches, it was believed that canonical correlation analysis (CCA) is a statistical approach that would aptly answer these research questions. CCA is a multivariate method that subsumes other parametric methods, both univariate and multivariate, in the general linear model (Sherry & Henson, 2005). There are two major advantages to using this method of analysis. First, it captures the complex nature of psychological research. Human behavior most often lies on a continuum rather than in categories, and there may be multiple causes for that behavior with multiple outcomes. Second, CCA allows for simultaneous comparisons between several criterion and predictor variables, while limiting the probability of committing Type I error.

Due to the limited sample size that is available for this study (approximately N=70), the variable sets were carefully chosen so as to only include the most important variables to answer the research questions. In particular, MCMI-III variables were limited to the pertinent personality scales rather than the entire set of clinical and severe personality scales. As such, CCA will be conducted by using the four attachment

dimensions (Secure, Preoccupied, Dismissing, Fearful) as predictors and the three MCMI-III scales (Antisocial, Borderline, Major Depression) as dependent variables. Not only is CCA able to examine the relationship between all the four attachment variables as predictors and the personality variables as dependent variables, this analysis provides the ability to examine all shared correlations within each variable set. Simply, CCA is a Pearson's r correlation between two synthetic variable sets. Thus, due to the complexity of these constructs and the efficiency of this statistical approach, CCA was deemed an appropriate method of analyses.

Hypothesis 1: The majority of the sample in this study will be characterized by either: (1) an elevation (BR≥75) on the MCMI-III Antisocial scale (scale 6A) or (2) an elevation (BR≥75) on the MCMI-III Borderline scale (scale C).

Analysis: Descriptive statistics were used to observe these frequencies within the present sample.

Hypothesis 2: Participants with an elevation on the MCMI-III Antisocial scale will differ in their style of attachment from those with an elevation on the MCMI-III Borderline scale. Specifically, those with an Antisocial elevation will endorse higher degrees of the dismissing attachment style while those with a Borderline elevation will endorse higher degrees of the fearful attachment style, as measured by the RSQ.

Analysis: A Canonical Correlation Analysis (CCA) was conducted to examine whether the scores on the RSQ (consisting of the four profile scores of attachment styles: secure, dismissing, fearful, preoccupied) related to the identified personality groups.

Hypothesis 3: Participants who have an elevation on the MCMI-III Antisocial scale will differ in their report of depression from those who have an elevation on the MCMI-III Borderline scale. Specifically, those with an Antisocial elevation will report a greater degree of depression, as measured by the Major Depression scale of the MCMI-III, than those with a Borderline elevation.

Analysis: A CCA was conducted to examine whether the scores on the MCMI-III Depression scale related to the identified personality groups.

CHAPTER FOUR

RESULTS

The purpose of this study was to investigate the relationship between dimensions of adult attachment (secure, fearful, dismissing and preoccupied) as conceptualized by Bartholomew (1990) and particular personality traits (Antisocial and Borderline) as measured by the MCMI-III. In addition, depression, as measured by the MCMI-III Major Depression scale was examined to investigate its relationship to personality traits and attachment styles.

DESCRIPTIVE STATISTICS

Fifty-four women, ages 18 to 20 (M=18.56, SD=.73), who were incarcerated at Texas Youth Commission (Giddings, Corsicana, and Ron Jackson Units) participated in this study. There was a total sample of approximately 70 women in this age range of which 54 were available and willing to participate. Of the participants, 26.9% identified themselves as African American, 28.9% identified themselves as Mexican American, 25.0% identified themselves as White, and 19.2% described themselves as other or a combination of ethnic backgrounds. Educational level of participants ranged from 8th grade to 12th grade or completion of high school diploma (M=10.42, SD=1.07). The women were sentenced for a range of offenses: 44.23% for violent crimes against persons (e.g. assault, robbery, rape, murder), 23.08% for property crimes (e.g. auto theft, burglary), 11.54% for drug-related crimes, and 21.15% for other crimes (violation of

probation/parole, evading arrest). Number of prior offenses reported by participants ranged from 0 to 12 (*M*=3.41, *SD*=3.37). Mean length of participant incarceration at TYC was 19.14 months (*SD*=13.50) with a minimum of 1 month and a maximum of 48 months. Within this sample, 37.25% identified as belonging to a gang, 78.85% reported they had incurred trouble in school or work due to drugs or alcohol, and 70.56% had received mental health services of some kind during incarceration.

RSQ Characteristics: Due to the dimensional nature of the RSQ, continuous data were collected for this measure. As a reminder, the RSQ yields a profile of scores for the four dimensions of attachment rather than a categorical assignment. Table 1 presents means and standard deviations in the sample.

Table 1. Descriptive Statistics for RSQ Scales

Scale	Mean	SD	Range
Secure	3.01	.62	1.80-4.20
Dismissing	3.50	.83	1.00-5.00
Preoccupied	2.96	.77	1.00-5.00
Fearful	3.71	.70	2.00-5.00

Note: Higher numbers indicate higher levels of specified attachment dimension.

INVALID MCMI-III PROTOCOLS

Of the fifty-four women who participated in the study, only forty-two MCMI-III protocols were valid. Two participants failed to complete their measures due to lack of

motivation. Ten protocols were deemed invalid and thus could not be used. Of the 10 invalid protocols, eight were considered invalid because the Disclosure index (Scale X) was elevated beyond interpretability. The Disclosure index is one of the modifying indices that measures the response style of the participant. This particular index signifies the degree to which a person is willing to be either self-revealing or secretive. High scores on this index indicate and tendency to be extremely vulnerable and defenseless. Such respondents tend to complain excessively which may represent both an inability to cope with life stressors and a distressed plea for help (Millon, Davis & Millon, 1997). According to the MCMI-III manual, raw scores below 34 or above 178 should not be interpreted.

In addition, two of the 10 invalid protocols were considered so because the participants responded to two or more of the validity items in an unreliable manner, indicating either misunderstanding of the questions, unwillingness to cooperate, confusion or severe disturbance at the time of testing (Millon et al., 1997). It is also noted that these two protocols additionally had high scores on the Disclosure index.

RELIABILITY ANALYSIS

Reliability analysis using coefficient alphas was conducted on the research sample for the MCMI-III. Internal consistency reliability on the MCMI-III scales was .75 for Antisocial, .80 for Borderline, and .84 for Major Depression. These scores are comparable to those in the normative sample (Antisocial .77, Borderline .85, Major Depression .90; Millon, Davis, & Millon, 1997).

In the RSQ, Griffin and Bartholomew (1994b) used factor analysis to differentiate two orthogonal dimensions referred to as dimensions of anxiety and avoidance (or positivity of the self model and positivity of the other model, respectively), and internal consistency estimates are theoretically based upon these dimensions. The anxiety dimension assesses fear and worry about possible loss and rejection in relationships. This factor is similar to the anxious/ambivalent attachment style. The avoidance factor assesses degree of discomfort with intimacy in relationships. In essence, this factor contrasts between avoidance and secure attachment styles. Griffin and Bartholomew argue for combining these two orthogonal dimensions to yield the continuous "prototype scores" for each of the four attachment styles. It should be noted, however, that the four attachment variables result from a combination of the two dimensions based on theoretical underpinnings, and they do not exist as four unique factors. Therefore, while the RSQ has two factors, two scores are theoretically derived for the purpose of measuring the four dimensions of attachment. As an example, the secure subscale consists of items related to comfort with self and others, which draws from both of the anxiety and avoidance dimensions. Thus, internal consistency reliability estimates are not appropriate for each of the four subscales. The reader is referred to Griffin and Bartholomew (1994a, 1994b) for a thorough discussion of the empirical and theoretical evidence for this style of assessing adult attachment.

MAIN ANALYSES

Hypothesis 1: The majority of the sample in this study will be characterized by either: (1) an elevation (BR≥75) on the MCMI-III Antisocial scale (scale 6A) or (2) an elevation (BR≥75) on the MCMI-III Borderline scale (scale C).

Analysis: Descriptive statistics were used to observe these frequencies within the present sample.

To address the first hypothesis, descriptive statistics were conducted to examine the frequency of antisocial personality traits and borderline personality traits compared to other MCMI-III personality scales within this sample. Table 2 provides details of the clinical personality scales (1 to 8b) and the severe personality scales (S, C, P), and shows percentages of participants who scored above BR 75 and BR 85 on these scales. A score of BR 85 is a strong indication of a clinically disordered level of personality functioning, while a score between BR 75 and 85 is indicative of a tendency towards pathological functioning. While a score of 75 is considered clinically significant and a score of 85 is considered diagnostic of a personality disorder, it is important to remember the dimensional nature of this scale. In reviewing Table 2, the most commonly occurring scale elevations among the women in this sample were Antisocial (69.57% scored ≥BR 75), Borderline (59.52% scored ≥BR75), Narcissistic (58.47% scored ≥BR75), Paranoid (53.66% scored ≥BR75), and Masochistic (53.65% scored ≥BR75), and Sadistic (51.22% scored ≥BR75). A majority of the women in this sample (69.6%) had a clinically significant degree of antisocial personality traits, indicated by MCMI-III BR scores of 75 or greater. There was also a notable degree of borderline personality traits in the sample

(59.5%), as indicated by MCMI-III BR scores of 75 or greater. Means and standard deviations are also listed for the personality pattern and severe personality scales in Table 2.

Table 2. Summary of MCMI-III Personality and Severe Personality Pathology Scales (N=42)

MCMI-III Scale		% Scores BR≥85	% Scores BR 75-84	Mean (SD)	Range
1	Schizoid	7.32	14.63	62.90 (15.18)	27-91
2a	Avoidant	4.88	4.88	50.56 (22.78)	0-55
2b	Depressive	17.07	4.88	54-95 (28.13)	0-57
3	Dependent	7.32	7.32	44.41 (25.33)	4-40
4	Histrionic	2.44	9.76	56.20 (20.09)	0-60
5	Narcissistic	41.46	17.01	81.22 (23.53)	30-82
6a	Antisocial	41.00	28.57	83.02 (18.32)	12-113
6b	Sadistic	41.46	9.76	79.51 (22.42)	0-75
7	Compulsive	2.44	4.88	34.39 (22.83)	0-32
8a	Negativistic	12.20	36.59	69.51 (18.69)	0-72
8b	Masochistic	14.63	39.02	62.51 (18.70)	0-72
S	Schizotypal	12.20	7.32	63.56 (17.55)	0-64
C	Borderline	35.71	23.81	74.26 (21.28)	22-103
P	Paranoid	21.95	31.71	74.07 (21.31)	0-75

Note: Higher numbers indicate higher levels of specified personality trait.
*Forty-two valid MCMI-III protocols were included.
*BR scores ≥85 denote the strong presence of a clinically disordered level of functioning; BR scores between 75 and 84 denote a tendency toward pathological functioning.

Hypothesis 2 and 3: Participants with an elevation on the MCMI-III Antisocial scale will differ in their style of attachment from those with an elevation on the MCMI-III Borderline scale. Specifically, those with an Antisocial elevation will endorse higher degrees of the dismissing attachment style while those with a Borderline elevation will endorse higher degrees of the fearful attachment style, as measured by the RSQ. Participants who have an elevation on the MCMI-III Antisocial scale will also differ in their report of depression from those who have an elevation on the MCMI-III Borderline scale. Specifically, those with an Antisocial elevation will report a greater degree of depression, as measured by the Major Depression scale of the MCMI-III, than those with a Borderline elevation.

Analysis: A Canonical Correlation Analysis (CCA) was conducted to examine whether the scores on the RSQ (consisting of the four profile scores of attachment styles: secure, dismissing, fearful, preoccupied) related to the identified personality groups and report of depression.

Due to the dimensional nature of both the MCMI-III and RSQ, a canonical correlation analysis was conducted using the four attachment variables as predictors of the three MCMI-III variables to evaluate the multivariate shared relationship between the two variable sets (adult attachment and personality). This analysis yielded two functions with squared canonical correlations (R_c^2) of .207 and .037 for each successive function. Collectively, the full model across all functions was not statistically significant using the Wilks's $\lambda = .763$ criterion, F (8,70.00) = 1.268, $p = .274$. Because Wilks' λ represents the variance unexplained by the model, (1-λ) yields the full model effect size in an r^2

metric. Thus, for the set of four canonical functions, the r^2 type effect size was .237, which signifies that the full model explained about 24% of the variance shared between the variable sets, which was not a substantial portion of the variance.

The dimension reduction analysis tests the hierarchical arrangement of functions for statistical significance. However, because the full model did not explain a significant portion of the shared variance between attachment styles, personality and depression, the analysis did not proceed further to this next step.

RETROSPECTIVE POWER ANALYSIS

Sample Size: Retrospective to the study, a power analysis was conducted to estimate sample size with α =.05 and a large effect of .80 (Cohen, 1992). This was done because it was suspected that there was insufficient power to detect any effects from the main CCA. In the present study, although 52 participants completed protocols, only 42 of those were valid; thus the sample size for the main analysis was 42. When all MCMI-III variables were taken into account (Antisocial, Borderline, Major Depression), power for the current analysis was calculated at a low .42, Wilks' test indicating this is nonsignificant (p = .56). For a large effect of .80 with α =.05, 74 participants were required. Hence, there was insufficient power to detect any effects that may have been present in this sample.

EXPLORATORY ANALYSES

Exploratory analyses were conducted in addition to the main analyses. The following results should be interpreted with some caution and in light that they are

exploratory in nature because there may be an increase in the Type I error rate. **Hypothesis 4:** There will be a difference in the quality of attachment between participants who endorse gang membership and those who do not endorse gang membership. In particular, those who report to be in a gang will exhibit higher levels of insecure attachment (preoccupied, dismissing, and fearful) than those who are not in a gang.

Analysis: A descriptive discriminant analysis (DDA) was used to examine whether self-reported gang membership related to level of attachment, as measured by the RSQ (secure, dismissing, preoccupied, fearful).

Descriptive discriminant analyses were conducted to examine the relationship between, first, level of adult attachment and gang membership, and then adult attachment and violent crime. The data were analyzed to ensure the assumption of multivariate normality was met within the sample means. The Mahalanobis distances and paired chi-square values were plotted in a scattergram and then evaluated. The assumption of multivariate normality was deemed to be satisfied because the plots formed a straight, diagonal line (Henson, 1999 as cited in Sherry, 2006). In addition, the assumption of homogeneity of variance was determined to be met for this analysis by review of Box's M-F (10, 6759.69) = .915, p = .518, indicating that covariance matrices can be pooled for this analysis.

Table 3. Means and Standard Deviations on Adult Attachment (RSQ) for the Two Groups

	Gang		No Gang	
Attachment	*M*	*SD*	*M*	*SD*
Secure	3.25	0.56	2.86	0.65
Dismissing	3.66	0.94	3.48	0.67
Preoccupied	3.13	0.84	2.83	0.72
Fearful	3.74	0.75	3.77	0.64

Note: Higher numbers indicate higher levels of specified attachment dimension.

An examination of the canonical discriminant functions shows a moderate canonical correlation (.447) on Function 1 (only one Function emerged from the analysis) with an effect size of $R_c^2 = 20.0\%$. The full model test of Function 1 was statistically significant at $p = .036$.

In order to then determine which variables contributed to the group differences, standardized discriminant function coefficients and structure coefficients were examined. Table 4 lists both sets of coefficients for the analysis. In Function 1, group differences were primarily contributable to secure attachment, and to a lesser extent to preoccupied attachment. Upon examination of the group centroids, it appears that on Function 1, women who endorsed membership in a gang were substantially higher than those who did not report gang membership. This suggests that the group differences observed on Function 1 related to secure attachment and, to a lesser extent, preoccupied attachment,

can be attributed to gang membership. Approximately 39% of variance seen between those in gangs and those not in gangs can be accounted for by secure attachment; similarly approximately 15% of variance can be accounted for preoccupied attachment. In other words, women who report being part of a gang have more secure and slightly more preoccupied attachments than those who do not report being part of a gang. In addition, Table 5 provides a summary of correlations for the attachment variables.

Table 4. Standardized Discriminant Function and Structure Coefficients for the Two Groups

Scale	Coefficient	r_s	r_s^2
Function 1			
Secure	.630	.625	39.06%
Dismissing	.911	.235	05.52%
Preoccupied	.975	.389	15.13%
Fearful	-.304	-.043	00.18%

Table 5. Correlation Coefficients for Adult Attachment Variables (RSQ) (N=52)

	Secure	Dismissing	Preoccupied	Fearful
Secure				
Dismissing	.032 (.819)			
Preoccupied	.030 (.837)	-.574** (.000)		
Fearful	-.075 (.599)	.349* (.011)	.010 (.943)	

Note: ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Hypothesis 5: There will be a difference in the quality of attachment, as measured by the RSQ, between participants who have been adjudicated for violent offenses and those who have no history of violent offenses.

Analysis: A descriptive discriminant analysis (DDA) was conducted to examine whether self-reported gang membership related to level of attachment, as measured by the RSQ.

Similar to the preceding analysis, descriptive discriminant analysis was conducted to examine whether adult attachment differed according to whether women had been adjudicated for a violent offense. In this analysis, Mahalanobis distances and paired chi square values were again plotted in a scattergram, and evaluated to have met the assumption of multivariate normality. The homogeneity of variance assumption was

determined to be met for this analysis, as indicated by Box's *M*-*F* (10, 9638.235) = .702, $p = .724$.

Examination of the one canonical discriminant function revealed a canonical correlation of .281 on Function 1 with an effect size of $R_c^2 = 7.8\%$. The full model test of Function 1 was not statistically significant ($p = .423$) and thus the analysis did not proceed further.

CHAPTER FIVE

DISCUSSION

This chapter provides a careful consideration of the study's results and discusses the implications of these findings within the context of the research and theory that pertain to personality and attachment in the population of female offenders. The chapter then describes limitations of the study and directions for future research.

MAJOR FINDINGS

This dissertation examined the relationship between the personality variables of interest and adult attachment dimensions among serious female offenders. It was hypothesized, based on empirical findings in a study of a similar sample conducted by Espelage et al. (2003), the present sample would be primarily characterized by women who had antisocial personality traits and borderline personality traits. Furthermore, it was expected that the two types of personality styles would be distinguishable in nature by other variables. Based on the theoretical groundwork of Bartholomew (1990) which was laid out in the review of literature, it was expected that the antisocial group would be characterized by a greater level of dismissing attachment style, while the borderline group would be characterized by a greater level of fearful attachment style. In addition, it was proposed that those with a dismissing style of attachment would endorse a lesser

degree psychological distress in the form of depressive symptoms, whereas those with a fearful style of attachment would be more likely to endorse depressive symptoms.

The MCMI-III descriptive results revealed that this sample of offending women is characterized by the prominence of antisocial, borderline, and narcissistic personality traits. Approximately 70% of women in this study exhibited clinically significant levels of antisocial personality traits, approximately 60% of women exhibited clinically significant levels of borderline personality traits, and approximately 58% of women exhibited narcissistic personality traits. These rates of personality disorder are consistent with several studies that also found a high level of antisocial and borderline personality traits, in particular, within samples of female offenders. For example, Grabarek, Bourke, and Van Hasselt (2002) found 48% of their sample of incarcerated female substance abusers had antisocial traits, also using the MCMI-III (elevations on the antisocial scale). These researchers also found a high degree of narcissistic personality traits (24% of sample), as measured by the MCMI-III narcissistic scale, and they found a category of female offenders who had no significant elevations on personality scales, labeled 'normal.' Grabarek et al. attributed the high rate of narcissistic personality to substance use rather than to the offender status of their sample, as these findings did not coincide with similar studies. This is similar to the present study in that narcissistic personality traits were prevalent and substance abuse was a commonly occurring characteristic of the sample (approximately 79% endorsed problems resulting from substance use). Salekin, Rogers, and Sewell (1997) also found a high prevalence rate of antisocial personality of 56% among incarcerated women. Similarly, Dixon, Howie, and Starling (2004) found

that among female juvenile offenders, 91% had a diagnosis of conduct disorder, which is a prerequisite for an adult diagnosis of Antisocial Personality Disorder (Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition, 1994).

Likewise, Wilkins and Coid (1991) found antisocial personality and borderline personality disorders to be the most common within this population. Studies of women incarcerated in HMP Holloway in London indicate high levels of acting out behaviors such as fire-setting, self-harm, violent and destructive behavior, and impulsive behaviors such as binging and purging which may very well be concomitant with diagnoses of antisocial and borderline personality disorders (Stewart, 1983). In Wilkins and Coid's (1991) study, 74% of the sample met DSM-IIIR criteria for personality disorder, 69% for borderline personality and 42% for antisocial personality. It is noted that selection criteria for this study included a history of self-mutilation, a behavior associated with borderline personality, which increases the probability of finding this particular personality disorder within their sample.

Dolan and Mitchell (1994) also predicted a high prevalence of borderline personality traits among a sample of female offenders, and found that not only did 76% of their sample meet criteria for a personality disorder, but the women met criteria for a mean of 4.46 categories of personality disorder, indicating the breadth of personality pathology. Likewise, although high rates of both antisocial and borderline personality exist within this study, it should be noted that there is likely a substantially high percentage of women who also met criteria for other personality disorders, and therefore the complexity of this construct should be noted.

Despite the prevalence of antisocial and borderline personality traits within the sample, this study did not find the predicted relationship between personality, attachment, and depression. These findings are contrary to Rosenstein and Horowitz's (1996) results that provide evidence for a relationship between antisocial personality (or conduct disorder), substance abuse, and dismissing attachment style in adolescent offenders. Frodi, Dernevik, Sepa, Philipson, and Bragesjo (2001), and Fonagy, Target, Steele, Leigh, Levinson, & Kennedy (1997) also found an overrepresentation of dismissing attachment organizations among an offender population; but these studies were all conducted with samples of male offenders. Rosenstein and Horowitz's (1996) main finding related to the relationship between antisocial personality and dismissing attachment was with the males in their sample, not the females. Hence, there is further question regarding the existence of this relationship among women, particularly female offenders. This study does not support the relationship, but further research in this area is warranted.

Evidence for the relationship between Espelage et al.'s (2003) Irritable-Impulsive group, using the MCMI-III borderline personality scale, and fearful attachment was also not found in this study. As there has not been consistent support for the association of borderline personality features with a specific attachment organization in a review of past literature, this study fails to bring further clarity to this relationship within the population of female offenders. Although early studies utilizing attachment interviews indicated a strong relationship between borderline personality features and preoccupied attachment,

particularly fearfully preoccupied attachment, later studies that have utilized self-report measures have yielded results suggestive of associations with both fearful and preoccupied attachment (Alexander, 1993; Brennan & Shaver, 1998; Hoermann et al., 2004; Eurelings-Bontekoe et al., 2003; Allen et al., 1998; Sack et al., 1996; Dutton et al., 1994; Levy et al., 2005). Levy (2005) proposes that one reason for the lack of unifying data for this relationship may exist because there may be a range of functioning within each attachment organization, a concept similarly endorsed by Bartholomew in her construction of the RQ and RSQ. More specifically, within each attachment style, there may be degrees of adaptive attachment that allow one to be more or less adaptive in relation to others. Levy explains that these developmental degrees are based upon the level of differentiation and integration of working models that underlie attachment organizations. As such, fearful and preoccupied attachment can exist at various developmental levels, based on differences in the structure of internal working models, which distinguish more or less adaptive forms of attachment. This model leads to a more complex perspective of the study of attachment, particularly when underlying such an already complex personality structure as borderline. Certainly, further research is required to flesh out this complex relationship between borderline personality and its attachment antecedents, preferably by utilizing more sophisticated and nuances theories and measures of attachment.

Furthermore, a relationship between personality, attachment style, and the report of psychological distress, as indicated by depression, was not detected in this study.

Contrary to this, there have been several findings that have linked preoccupied and fearful attachment styles with the tendency to express psychological distress (i.e. Wearden et al., 2004; Rosenstein & Horowitz, 1996), and dismissing attachment styles with the tendency to deny psychological distress (i.e. Rosenstein & Horowitz, 1996; Frodi et al., 2001). And theoretically, this relationship makes a great deal of sense when considering the emotional development of individuals who primarily utilize the two attachment styles (see literature review). One reason for not finding this relationship between attachment style and depression could be because that, statistically, there may not have been enough variability in RSQ scores to distinguish between personality types and depression. If this might be true, then a larger sample size would help to provide more variability in scores. It is also possible that, although this relationship tends to hold true in other populations, perhaps there is some variation in emotional experience and expression within the offender population. That is, this relationship may not hold true or may be mediated by some intervening factor. This concept should be explored further within this population.

Although this study did not find a primary relationship between personality variables of interest and attachment, other interesting exploratory results of note were found. Exploratory analyses found that women who reported being a part of a gang had higher levels of secure attachment and, to a lesser extent, higher levels of preoccupied attachment compared to those who did not endorse gang membership. Although these results are only suggestive of this trend and are not conclusive, they are worthy of

comment and further investigation. They speak to the hypothesis that the gang, like the family or other social groups, can provide a sense of belonging and identity to women who yearn for attachments. This makes sense in the context of relational theory, which posits that relationships play a primary role in the development of adolescent girls. From this perspective, formation of connections with others is the guiding principle of growth for the development of a sense of self and self-worth (Bloom, Owen, and Covington, 2005). Thus, this preliminary research suggests that even membership in a gang can provide these connections that are so critically important for girls and young women.

McMillan and Chavis' (1986) model of community, one example of which is a gang, is described as a 'feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through commitment to be together' (p. 6). Likewise, other literature related to gangs has discussed the importance of belonging in joining and maintaining gang membership (Rizzo, 2003; Blakemore & Blakemore, 1998; Toy, 1992), which highlights the hunger that exists for belonging, or attachment. Perhaps those with higher levels of secure attachment have both a greater awareness of the need for connection and the motivation to fulfill the need, even if it is met within the context of a gang. The exploratory results of this study suggest that being a part of a gang can fulfill this hunger for attachment and provide some amount of security. However, there are no other known existing studies that have examined this relationship between gang membership and

attachment; thus it would be worthwhile to continue to study this relationship in more detail.

McMillan and Chavis conclude from their investigation that 'community' may have profound implications for treatment programs for the mentally ill, and thus, the therapeutic benefits of community can be incorporated into group homes and other treatment settings. This concept can be easily transplanted into the correctional setting where women would likely respond very well to treatment programs that incorporate models of 'community' based on attachment needs, if in fact these women respond to membership in gangs to meet these same relational needs. For example, community can first be conceptualized in the context of family. In line with gender-specific treatment recommendations made by Patino, Ravoira, and Wolf (2006) in their report for the National Council on Crime and Delinquency, therapeutic intervention should not only target the incarcerated individual, but should include the family in order for change to be systemic and relationally restorative. With family issues such as family histories of abuse, criminal behavior within the family, and substance abuse problems, families must be engaged in treatment so that it is effective. Due to the fact that many of these women experience unhealthy relationships, gender-specific therapeutic programs must address issues of abuse, violence, and family relationships. Relationship skills training is also recommended to provide education about healthy ways of relating. In addition, it is recommended that residential programs that serve to transition women back into their communities should be located within the women's actual communities. This would

increase the likelihood and accessibility of family visitation and family therapy appointments. Moreover, it would facilitate transition back into the community.

While this type of gender-specific programming would require significant and systemic policy changes, it would address the unique needs of women. If correctional settings do not meet the unique emotional and relational needs of women, it can be assumed that those same unmet needs may drive their continued re-offending behavior.

LIMITATIONS AND FUTURE DIRECTIONS

The main theoretical limitation of this study lies in the selection of instrumentation. Although the Borderline scale of the MCMI-III appears to capture a large part of what Espelage and her colleagues describe in the Irritable-Isolated female cluster in their study, it is not identical. It is difficult to capture what was found in this cluster in a single diagnostic category because there are elements of borderline, paranoid, antisocial, schizotypal personality disorder, and schizophrenia that fit within the Irritable-Isolate cluster, with borderline personality perhaps most closely capturing the nature of the group. However, Evans, Ruff, Braff, and Ainsworth (1984) note the difficulty of measuring a diagnostic entity such as borderline personality disorder alone because of the complexity of the descriptive criteria. Therefore, the MCMI-III as a measure of personality that maps closely to DSM-IV diagnostic categories has its limitations in this study. Nevertheless, there is evidence to suggest the strong presence of both antisocial and borderline personality disorder within the female offender population (Wilkins &

Coid, 1991; Salekin, Rogers, & Sewell, 1997; Dixon, Howie, and Starling, 2004). More research is needed to investigate whether there is a true group of women who possess the traits of Espelage et al's Irritable-Isolated cluster in the offender population or whether borderline personality or other groupings of personality and related symptoms instead emerge. Future studies may continue to investigate personality disorders among female offenders by using the MMPI-2 or MCMI-III rather than overlapping theoretical constructs between the two measures.

In addition to instrumentation, insufficient statistical power was a limitation of this study. A retrospective power analysis indicated the sample size in this study was not sufficient to detect meaningful effects if any were present. Thus, it is possible there was in fact a relationship between personality variables and attachment, but insufficient power to detect it. Future studies might attempt a similar investigation in this population with a larger sample size.

A related limitation is that a high percentage of MCMI-III protocols in this study were invalid, primarily due to participants exhibiting an overly high level of distress and self-disclosure, which rendered protocols unable to be interpreted. A few protocols were also invalid or had questionable validity because participants responded affirmatively to one of more items indicating possible carelessness, confusion or randomness in responding (most of these protocols overlapped with the aforementioned high disclosure protocols). Millon, Davis and Millon (1997) note that approximately 10% of respondents in their clinical sample obtained scores of BR 85 or above on the Disclosure index,

whereas approximately 11% of participants in the current study obtained scores of BR 100 on this same index. Thus, a disproportionately high percentage of this sample of female offenders responded to the MCMI-III in either one or both of these ways. The question about the significance of this response style in this sample must be raised.

The most common reason for the invalidity of a protocol was extreme distress or excessive self-disclosure, which makes the MCMI-III scales difficult to interpret because it skews scales due to overreport of symptoms (Millon et al. 1997). On the MMPI-2, overreporting of symptoms and distress are assessed by Scales F and Fb, with high scores indicating severe psychopathology or symptom exaggeration. The MCMI-III gauges overreport by use of the Disclosure Index, with high scores indicating the inclination toward high levels of self-disclosure concerning problems and symptoms. Morgan, Schoenberg, Dorr, and Burke (2002) found a correlation between the MMPI-2 Scale F and MCMI-III Disclosure Index of .72; but they also found that the MCMI-III Disclosure scale has a much higher tolerance for overreport than Scale F of the MMPI-2. Arbisi and Ben-Porath (1995) state the high degree of pathology and distress that is so often characteristic of psychiatric populations often results in a marked elevation on the validity indexes of various personality tests. Several studies of female offenders have found extreme levels of psychopathology and distress within this population, which may lead to overreport of symptoms (i.e. Teplin, Abram, and McClelland, 1996; Denno, 1994; Silverthorn & Frick, 1999, Espelage et al., 2003). In fact, a characteristic of Espelage et al.'s Irritable-Isolated cluster is the high level of psychopathology and distress, as

indicated by an elevated MMPI-2 Scale F. Therefore, the fact that the MCMI-III Disclosure scale was elevated in such a high proportion of women in this study may further provide evidence for the severity of illness in this population. Patients with a diagnosis of borderline personality disorder have also been found to have higher levels of disclosure of problem areas, as measured by the MCMI-II Disclosure Scale (McCann, Flynn & Gersh, 1992), which suggests a further possibility of the presence of borderline-type pathology in this sample. But this conclusion cannot be made without further evidence.

The strength of this dissertation study was its pioneering attempt to explore the attachment characteristics of female offenders, an area of little research. Although no conclusions can be made from this study, it is an important line of research to pursue because it has the potential to impact the approach towards the treatment of women in correctional settings. Future research should examine the personality characteristics of female offenders perhaps by taking the approach of assessing multiple elevations of scales, using either the MMPI-2 or the MCMI-III, instead of confining hypotheses to specific scales (such as McCann et al., 1992). In doing so, future studies could come to a more accurate description of this population. Another suggestion for future research is to utilize another research design, such as cluster analysis, in a larger sample size, that would allow the researcher to see what personality traits and attachment variables cluster together within this population.

In conclusion, this line of research is promising because it offers a new approach to understanding and treating women in correctional settings. If researchers can further

elucidate the unique characteristics and needs of these women, treatment models that incorporate their specific needs have the potential to impact the effectiveness of psychological services in correctional settings. This line of research also ultimately has the goal to decrease rates of recidivism and the cost to society. Although this study did not find the proposed relationship between personality, attachment, and psychological distress, future research should continue to examine these variables with more depth in order to gain greater understanding of this highly misunderstood and underserved population.

Appendices

APPENDIX A

Personality and Attachment Traits of Female Offenders

IRB PROTOCOL # 2004-09-0133
Conducted By: Lavanya Balasingham, M.Ed.; Dr. Ricardo Ainslie, Ph.D.
University of Texas at Austin Educational Psychology; 471-4409

You are being asked to take part in a research study. This form provides you with information about the study. The person in charge of this research will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part.

Your participation is entirely voluntary and you may stop participation in the study at any time simply by telling the researcher you would like to stop. You will be asked to fill out some surveys in this study but you do not have to answer all the questions on the surveys if you choose not to do so. Choosing to be in this study will have absolutely **NO** impact on your minimum length of stay at TYC, your projected release date, or your requirements for parole. You may refuse to participate without penalty or loss of benefits to which you are otherwise entitled. This means that you can refuse to be in this study without fear that you will be negatively treated by the TYC treatment staff, the caseworkers, or the security personnel.

The purpose of this study is to look at personality and relationship traits of women who are in prison.

If you agree to be in this study, we will ask you to do the following things:

- complete a demographics survey
- complete a survey on relationships
- complete a survey on psychological symptoms

Total estimated time to participate in study is 45 minutes.

Risks and Benefits of being in the study

- a primary risk involves the loss of confidentiality
- there is a slight risk of emotional discomfort or stress
- there are no benefits

Compensation:

- there is no compensation for participation in this study

Confidentiality and Privacy Protections:

- The data from this study will not contain any identifying information on it in order to protect your confidentiality. Also, all data will be secured so that persons other than the researcher cannot access them.
- The data resulting from your participation may be made available to other researchers in

the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.

The **records** of this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin, members of the Institutional Review Board, and (study sponsors, if any) have the legal right to review your research records and will protect the **confidentiality** of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

Contacts and Questions:

If you have any questions about the study please ask now. If you have questions later or want additional information, call the researchers conducting the study. Their names, phone numbers, and e-mail addresses are at the top of this page. If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact Clarke Burnham Ph.D., Chair of The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 232-4383.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information and have sufficient information to make a decision about participating in this study. I consent to participate in the study.

Signature:_____ Date: _____

_____ Date: _____
Signature of Person Obtaining Consent

Signature of Investigator:_____ Date: _____

APPENDIX B

Demographics

Name:_____

Age:_____

What is your ethnicity?_____

Primary language spoken?_____

Highest level of education completed?_____

What offense have you currently been adjudicated for?_____

What is the length of your current sentence?_____

How many times have you been adjudicated for an offense prior to this time?_____

Have you ever been adjudicated for a violent crime? Yes No

Have you been in trouble for fighting? Yes No

Have you ever been diagnosed of or treated for a psychiatric illness (ex. Depression, Bipolar Disorder, Schizophrenia, Attention Deficit Disorder)?

Yes No

Has anyone in your family ever been diagnosed of or treated for a psychiatric illness?

Yes No

Have you ever had an alcohol or substance abuse problem?

Yes No

List the people in your immediate household with whom you were raised (ex. mother, grandmother, brother, uncle):

_____

_____

APPENDIX C

RSQ

Please read each of the following statements and rate the extent to which you believe each statement best describes your feelings about close relationships.

		Not at all like me		Some-what like me		Very much like me
1.	I find it difficult to depend on other people.	1	2	3	4	5
2.	It is very important to me to feel independent.	1	2	3	4	5
3.	I find it easy to get emotionally close to others.	1	2	3	4	5
4.	I want to merge completely with another person.	1	2	3	4	5
5.	I worry that I will be hurt if I allows myself to become too close to others.	1	2	3	4	5
6.	I am comfortable without close emotional relationships.	1	2	3	4	5
7.	I am not sure that I can always depend on others to be there when I need them.	1	2	3	4	5
8.	I want to be completely emotionally intimate with others.	1	2	3	4	5
9.	I worry about being alone.	1	2	3	4	5
10.	I am comfortable	1	2	3	4	5

	depending on other people.					
11.	I often worry that romantic partners don't really love me.	1	2	3	4	5
12.	I find it difficult to trust others completely.	1	2	3	4	5
13.	I worry about others getting too close to me.	1	2	3	4	5
14.	I want emotionally close relationships.	1	2	3	4	5
15.	I am comfortable having other people depend on me.	1	2	3	4	5
16.	I worry that others don't value me as much as I value them.	1	2	3	4	5
17.	People are never there when you need them.	1	2	3	4	5
18.	My desire to merge completely sometimes scares people away.	1	2	3	4	5
19.	It is very important to me to feel self-sufficient.	1	2	3	4	5
–						
20.	I am nervous when anyone gets too close to me.	1	2	3	4	5
21.	I often worry that romantic partners won't want to stay with me.	1	2	3	4	5
22.	I prefer not to have other people	1	2	3	4	5

	depend on me.					
23.	I worry about being abandoned.	1	2	3	4	5
24.	I am somewhat uncomfortable being close to others.	1	2	3	4	5
25.	I find that others are reluctant to get as close as I would like.	1	2	3	4	5
26.	I prefer not to depend on others.	1	2	3	4	5
27.	I know that others will be there when I need them.	1	2	3	4	5
28.	I worry about having others not accept me.	1	2	3	4	5
29.	Romantic partners often want me to be closer than I feel comfortable being.	1	2	3	4	5
30.	I find it relatively easy to get close to others.	1	2	3	4	5

References

Aalsma, M.C., & Lapsley, D.K. (2001). A typology of adolescent delinquency: Sex differences and implications for treatment. *Criminal Behaviour and Mental Health, 11,* 173-191.

Abraham, H. D. & Fava, M. (1999). Order of onset of substance abuse and depression in a sample of depressed outpatients. *Comprehensive Psychiatry*, 40, 44-50.

Ainsworth, M.D. (1982). Attachment: Retrospect and prospect. In C.M. Parkers & J. Stevenson-Hinder (Eds.), *The place of attachment in human behavior* (pp.3-30). London: Tavistock.

Allen, J. P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development, 69*, 1406 –1419.

Arbisi, P.A., & Ben-Porath, Y.S. (1995). An MMPI-2 infrequent response scale for use with psychopathological populations: The Infrequency-Psychopathology Scale, F(p). *Psychological Assessment, 7,* 424-431.

Archer, R.P. (1997). *MMPI-A: Assessing adolescent psychopathology (2nd edition).* Mahweh, NJ: Lawrence Erlbaum Associates.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7,* 147-178.

Blakemore, J.L., & Blakemore, G.M. (1998). African American street gangs: A quest for identity. *Journal of Human Behavior in the Social Environment, 1*, 203-223.

Bloom, B., Owen, B., & Covington, S. (2005). *Gender-Responsive Strategies for Women Offenders: A Summary of Research, Practice, and Guiding Principles for Women Offenders*. Washington, DC: National Institute of Corrections.

Bowlby, J. (1944). Forty-four juvenile thieves: Their characters and home-life. *International Journal of Psycho-Analysis, 25*, 19-53.

Bowlby (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books, Inc.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books, Inc.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss: Sadness and depression*. New York: Basic Books, Inc.

Bradley, R., Jenei, J., & Westen, D. (2005). Etiology of borderline personality disorder: Disentangling the contributions of intercorrelated antecedents. *Journal of Nervous & Mental Disease, 193,* 24-31.

Brennan, K.A., & Shaver, P.R. (1995). Dimensions of adult attachment, affect regulations, and romantic functioning. *Personality & Social Psychology Bulletin, 21,* 267-283.

Brennan, K.A., & Shaver, P.R. (1998). Attachment styles and personality disorders: Their connections to each other and to parental divorce, parental death, and perceptions of parental caregiving. *Journal of Personality, 66*, 835-878

Burke, J. D., Burke, K. C. & Rae, D. S. (1994). Increased rates of drug abuse and dependence after onset of mood or anxiety disorders in adolescence. *Hospital & Community Psychiatry*, 45, 451-5.

Calhoun, G.B. (2001). Difference between male and female juvenile offenders as measured by the BASC. *Journal of Offender Rehabilitation, 33,* 87-96.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112,* 155-159.

Coid, J.W. (1992). DSM-III diagnosis of criminal psychopaths: A way forward. *Criminal Behaviour & Mental Health, 2,* 78-79.

Coid, J.W. (2003). The co-morbidity of personality disorder and lifetime clinical syndromes in dangerous offenders. *Journal of Forensic Psychiatry & Psychology, 14*, 341-366.

Collins, N.L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology, 71,* 810-832.

Collins, N.L., & Read, S.J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58,* 644-663.

Cosden, M. & Cortez-Ison, E. (1998). Sexual abuse, parental bonding, social support, and program retention for women in substance abuse treatment. *Journal of Substance Abuse Treatment, 16*, 149-155.

Christie, K.A., Burke, J.D., Regier, D.A., Rae, D.S., Boyd, J.H. & Locke, B.Z. (1988). Epidemiologic evidence for early onset of mental disorders and higher risk of drug abuse in young adults. *American Journal of Psychiatry*, 145, 971-975.

Crowell, J.A., Fraley, R.C. & Shaver, P.R. (1999). Measurement of individual differences in adolescent and adult attachment. In J. Cassidy & P.R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications* (pp. 434-465). New York: Guilford Press.

Cyranowski, J.M., Bookwala, J, Feske, U. (2002). Adult attachment profiles, interpersonal difficulties, and response to interpersonal psychotherapy in women with recurrent major depression. *Journal of Social & Clinical Psychology, 21*, 191-217.

Daniel, A.E., Robins, A.J., Reid, J.C., & Wilfley, D.E. (1988). Lifetime and sex-month prevalence of psychiatric disorders among sentenced female offenders. *Bulletin of the American Academy of Psychiatry and Law, 16,* 33-342.

Deas-Nesmith, D., Brady, K. T. & Campbell, S. (1998). Comorbid substance use and anxiety disorders in adolescents. *Journal of Psychopathology & Behavioral Assessment*, 20, 139-148.

Denno, D.W. (1994). Gender, crime, and the criminal law defenses. *Journal of Criminal Law & Criminology, 85,* 80-180.

Deykin, E. Y., Buka, S. L. & Zeena, T. H. (1992). Depressive illness among chemically dependent adolescents. *American Journal of Psychiatry*, 149, 1341-1347.

Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (1994). American Psychiatric Association: Washington, DC.

Dixon, A., Howie, P., & Starling, J. (2004). Psychopathology in female juvenile offenders. *Journal of Child Psychology and Psychiatry, 45,* 1150-1158.

Dolon, B., & Mitchell, E. (1994). Personality disorder and psychological disturbance of female prisoners: A comparison with women referred for NHS treatment of personality disorder. *Criminal Behaviour and Mental Health, 4*, 130-143.

Dozier, M. (1990). Attachment organization and treatment use for adults with serious psychopathological disorders. *Development and Psychopathology, 2*, 47-60.

Dutton, D.G., Starzomski, A., & Ryan, L. (1996). Antecedents of abusive personality and abusive behavior in wife assaulters. *Journal of Family Violence, 11*, 113-132.

Espelage, D.L., Cauffman, E., Broidy, L., Piquero, A.R., Mazerolle, P., & Steiner, H. (2003). A cluster-analytic investigation of MMPI profiles of serious male and female juvenile offenders. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 770-777.

Evans, R.W., Ruff, R.M., Braff, D.L., & Ainsworth, T.L. (1984). MMPI characteristics of borderline personality inpatients. *Journal of Nervous and Mental Disease, 172,* 742-748.

Federal Bureau of Investigation. (2002). *Crime in the United States 2002*. Washington, D.C.: Government Printing Office.

Fergusson, D.M., & Horwood, L.J. (2002). Male and female offending trajectories. *Development and Psychopathology, 14,* 159-177.

Fogel, C.I., & Martin, S.L. (1992). The mental health of incarcerated women. *Western Journal of Nursing Research, 14,* 30-47.

Fonagy, P., Target, M., Steele, M., Steele, H., Leigh, T., Levinson, A., & Kennedy, R. (1997). Morality, disruptive behavior, borderline personality disorder, crime, and their relationship to security of attachment. In L. Atkinson & K. Zucker (Eds.), *Attachment and psychopathology* (pp. 223-274). New York: Guilford Press.

Friedman, A.F. (2000). *Psychological assessment with the MMPI-2*. Mahweh, NJ: Lawrence Erlbaum Associates, Inc.

Friedman, A.F., Webb, J.T., & Lewak, R. (1989). *Psychological assessment with the MMPI*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Frodi, A., Dernevik, M., Sepa, A., Philipson, J., & Bragesjo, M. (2001). Current attachment representations of incarcerated offenders varying in degree of psychopathy. *Attachment & Human Development, 3*, 269-283.

George, C., Kaplan, N., & Main, M. (1985). *Attachment interview for adults*. Unpublished manuscript, University of California, Berkley.

Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.

Gomberg, E.S. & Nirenberg, T.D. (1993). Antecedents and consequences. In E.S Goldberg & T.D. Nirenberg (Eds.), *Women and substance abuse* (pp.118-141). Norwood, NJ: Ablex Publishing.

Gorsuch, N. (1998). Unmet needs among disturbed female offenders. *Journal of Forensic Psychiatry, 9*, 556-570.

Gorsuch, N. (1999). Disturbed female offenders: Helping the 'untreatable.' *The Journal of Forensic Psychiatry, 10*, 98-118.

Grabarek, J.K., Bourke, M.L., & Van Hasselt, V.B. (2002). Empirically-derived MCMI-III personality profiles of incarcerated female substance abusers. *Journal of Offender Rehabilitation, 35,* 19-29.

Graham, J.R. (1988). Establishing validity of the revised form of the MMPI. Symposium presentation at the 96th Annual Convention of the American Psychological Association, Atlanta, GA.

Graham, J.R. (1993). *MMPI-2: Assessing personality and psychopathology* (2nd ed.). New York: Oxford University Press.

Graham, J.R., Ben-Porath, Y.S., & McNulty, J.L. (1999). *MMPI-2 correlates for outpatient community mental health settings*. Minneapolis, MN: University of Minneapolis Press.

Greenberg, M.T., Speltz, M.L., & DeKlyen, M. (1993). The role of attachment in the early development of disruptive behavior problems. *Development & Psychopathology, 5,* 191-213.

Griffin, D., & Bartholomew, K. (1994a). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67,* 430-445.

Griffin, D., & Bartholomew, K. (1994b). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew and D. Perlman (Eds.), *Advances In Personal Relationships Vol. 5: Attachment Processes in Adulthood* (pp. 17-52), London: Jessica Kingsley Publishers.

Hathaway, S.R.; & Monachesi, E.D. (1963). Adolescent personality and behavior. Oxford, England: University of. Minnesota Press.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52,* 511-524.

Hazan, C., & Shaver, P. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry, 5*, 1-22.

Kane, M., & DiBartolo, M. (2002). Complex physical and mental health needs of rural incarcerated women. *Issues in Mental Health Nursing, 23,* 209-229.

Keenan, K., & Shaw, D. (1997). Development and social influences on young girls' early problem behavior. *Psychological Bulletin, 121,* 95-113.

Kurdek, L.A. (2002). On being insecure about the assessment of attachment styles. *Journal of Social and Personal Relationships, 19*, 811-834.

Levy, K.N. (2005). The implications of attachment theory and research for understanding borderline personality disorder. *Development and Psychopathology, 17*, 959-986.

Levy, K.N., et al. (2005). The implications of attachment theory and research for understanding borderline personality disorder. Development and Psychopathology 17, 959–986.

Maden, T., Swinton, M., & Gunn, J. (1994). Psychiatric disorder in women serving a prison sentence. *British Journal of Psychiatry, 164*, 44-54.

Mahalik, J.R., Aldarondo, E., & Gilbert-Gokhale, S. (2005). The role of insecure attachment and gender role stress in predicting controlling behaviors in men who batter. *Journal of Interpersonal Violence, 20*, 617-631.

Main, M. (1990). Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development, 33,* 48-61.

Main & Hesse (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightening and/or frightening parental behaviour the linking mechanism? In M. Greenberg, D. Cicchetti, and E.M. Cummings (Eds), *Attachment in the preschool years: Theory, research and intervention* (pp. 161-182). Chicago: University of Chicago Press.

McCann, J.T., Flynn, P.M., & Gersh, D.M. (1992). MCMI-II diagnosis of borderline personality disorder: Base rates versus prototypic items. *Journal of Personality Assessment, 58,* 105-114.

McMillian, D.W., & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14*, 6-23.

Megargee, E.I., Mercer, S.J., & Carbonell, J.L. (1999). MMPI-2 with male and female state and federal prison inmates. *Psychological Assessment, 11*, 177-185.

Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of the interaction goals and affect regulation. *Journal of Personality and Social Psychology, 74,* 1209-1224.

Miller, D. (1992). Profiles of adolescents with behavioral/emotional disorders, adolescent offenders, and adolescents at-risk: Who are they and how do we teach them? Paper presented at the 70th Annual Convention of the Council for Exceptional Children, Baltimore, MD.

Millon, (1994). *Manual for the MCMI-III.* Minnesota, MN: National Computer Systems.

Millon, T., Davis, R., & Millon, C. (1997). *MCMI-III Manual (Second Edition).* Minnesota, MN: National Computer Systems.

Morgan, C.D., Schoenberg, M.R., Dorr, D., & and Burke, M.J. (2002). Overreport on the MCMI-III: Concurrent validation with the MMPI-2 using a psychiatric inpatient sample. *Journal of Personality Assessment, 78,* 288-300.

Myers, W.C., Burket, R.C., Lyles, W.B., Stone, L., & Kemph, W.P. (1990). DSM-III diagnoses and offenses in committed female juvenile delinquents. *Bulletin of the American Academy of Psychiatry and Law, 18,* 47-54.

Offord, D.R., Adler, R.J., & Boyle, M.H. (1986). Prevalence and sociodemographic correlates of conduct disorder. *American Journal of Social Psychiatry, 6*, 272-278.

Offord, D.R., Boyle, M.H., & Racine, Y.A. (1991). The epidemiology of antisocial behavior in childhood and adolescence. In D.J. Pepler, & K.H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 31-54). Hillside, NJ: Erlbaum.

Pajer, K.A. (1998). What happens to 'bad' girls?: A review of the adult outcomes of antisocial adolescent girls. *American Journal of Psychiatry, 155,* 862-870.

Patino, V., Ravoira, L., & Wolf, A. (2006). A Rallying Cry for Change: Charting a New Direction in the State of Florida's Response to Girls in the Juvenile Justice System. National Council on Crime and Delinquency.

Patrick, M., Hobson, P, Castle, D., Howard, R., & Maughan, B. (1994). Personality disorder and the mental representation of early social experience. *Development and Psychopathology, 6,* 375–388.

Peugh, J., & Belenko, S. (1999). Substance-involved women inmates: Challenge to providing effective treatment. *The Prison Journal, 79*, 23-44.

Reis, S., & Grenyer, B.F. (2004). Attachment, working alliance and treatment response for individuals with major depression. *Clinical Psychology& Psychotherapy, 11*, 414-424.

Renken, B., Egeland, B., Marvinney, D., Mangeldorf, S., & Sroufe, L.A. (1989). Early childhood antecedents of aggression and passive withdrawal in early elementary school. *Journal of Personality, 57,* 257-281.

Rizzo, M. (2003). Why do children join gangs? *Journal of Gang Research, 11*, 65-75.

Rosenstein, D.S., & Horowitz, H.A. (1996). Adolescent attachment and psychopathology. *Journal of Consulting and Clinical Psychology, 64,* 244-253.

Sack, A., Sperling, M. B., Fagen, G., & Foelsch, P. (1996). Attachment style, history, and behavioral contrasts for a borderline and normal sample. *Journal of Personality Disorders, 10*, 88–102.

Salekin, R.T., Rogers, R. & Sewell, K.W. (1997). Construct validity of psychopathology in a female offender sample: A multi-trait multi-method evaluation. *Journal of Abnormal Psychology, 106*, 576-585.

Saltaris, C. (2002). Psychopathy in juvenile offenders: Can temperament and attachment be considered as robust developmental precursors? *Clinical Psychology Review, 22,* 729-752.

Shearer, R.A. (2004). Identifying the special needs of female offenders. *Federal Probation, 67*, 46-51.

Sherry, A. (2006). Discriminant analysis in counseling psychology research. *Counseling Psychologist, 34,* 661-683.

Sherry, A., & Henson, R.K. (2005). Conducting and interpreting canonical correlation analysis in personality research: A user-friendly primer. *Journal of Personality Assessment, 84,* 37-48.

Siegert, R.J., Ward, T., Hudson, S. (1995). The structure of romance: A factor-analytic examination of relationship scales questionnaire. *New Zealand Journal of Psychology, 24,* 13-20.

Silverthorn, P. & Frick, P.J. (1999). Developmental pathways to antisocial behavior: The delayed-onset pathway in girls. *Development and Psychopathology, 11*, 101-126.

Simeon, D., Nelson, D., Elias, R., Greenberg, J., & Hollender, E. (2003). Relationship of personality to dissociation and childhood trauma in borderline personality disorder. *CNS Spectrums, 8*, 755-757, 760-762.

Strick, S.E. (1989). A demographic study of 100 admissions to a female forensic center: Incidences of multiple charges and multiple diagnoses. *Journal of Psychiatry & Law,* 435-448.

Teplin, L.A., Abram, K.M., & McClelland, G.M. (1996). Prevalence of psychiatric disorders among incarcerated women. *Archives of General Psychology, 53*, 505-512.

Ter Laak, J., de Goede, M., Aleva, L., Brugman, G., van Leuven, M., & Hussmann, J. (2003). Incarcerated adolescent girls: Personality, social competence, and delinquency. *Adolescence, 38*, 251-265.

Timmons-Mitchell, J., Brown, C., Schultz, S., Webster, S., Underwood, L., & Semple, W. (1997). Comparing the mental needs of female and male incarcerated juvenile delinquents. *Behavioral Science & Law, 15,* 195-202.

Toy, C. (1992). Coming out to play: Reasons to join and participate in Asian gangs. *Journal of Gang Research, 1*, 13-29.

Toyer, E.A., & Weed, N.C. (1998). Concurrent validity of the MMPI-A in a counseling program for juvenile offenders. *Journal of Clinical Psychology, 54*, 395-399.

Valliant, P.M., Maksymchuk, L.L, & Antonowicz, D. (1995). Attitudes and personality traits of female adult victims of childhood abuse: A comparison of university students and incarcerated women. *Social Behavior and Personality, 23*, 205-216.

Van IJzendoorn, M.H., Feldbrugge, J.T., Derks, F.C., de Ruiter, C., Verhagen, M.F., Philipse, M.W., van der Staak, C.P., & Riksen-Walraven, J.M. (1997). Attachment representations of personality disordered criminal offenders. *American Journal of Orthopsychiatry, 67*, 449-459.

Ward, T., Hudson, S.M., & Marshall, W.L. (1996). Attachment style in sex offenders: A preliminary study. *Journal of Sex Research, 33,* 17-26.

Warren, M., & Rosenbaum, J.L. (1986). Criminal careers of female offenders. *Criminal Justice and Behaviour, 13,* 393-418.

Waters, E., Posada, G., Crowell, J., & Lay, K. (1993). Is attachment theory ready to contribute to our understanding of disruptive behavior problems? *Development and Psychopathology, 5,* 215-224.

Wearden, A.J., Lamberton, N., Crook, N., & Walsh, V. (2005). Adult attachment, alexithymia, and symptom reporting: An extension to the four category model of attachment. *Journal of Psychosomatic Research, 58*, 279-288.

Wilkins, J. & Coid, J. (1991). Self-mutilation in female remanded prisoners: An indicator of severe pathology. *Criminal Behaviour and Mental Health, 1*, 247-267.

Wekerle, C., & Wolfe, D.A. (1998). The role of child maltreatment and attachment style in adolescent relationship violence. *Development and Psychopathology, 10,* 571-586.

Yates (1993). Issues of autonomy in adolescence: The “superwoman.” In M. Sugar (Ed.), *Female Adolescent Development* (pp. 57-167). New York: Brunner/Mazel Publishers.

Vita

Lavanya Balasingham was born in Kollam, India on April 29, 1975. She is the daughter of Ravi Shankar and Indira Shankar. She grew up in Australia during her early childhood, and moved to the United States at age 12. Lavanya graduated from Willowbrook High School in Villa Park, Illinois in 1993 and proceeded to earn a Bachelor of Science degree at Loyola University Chicago, majoring in Psychology, in 1997. While in Chicago, she worked for a year as a case manager in a community mental health center that serves the chronically mentally ill. In August of 1998, Lavanya entered graduate school at the University of Texas at Austin in the Counseling Psychology Training Program. She earned her Masters in Educational Psychology in 2001 and worked for two years as a counselor in the Travis County Correctional System before returning to complete her doctorate.

Lavanya was married to Noel Balasingham on June 20, 2005, and they currently reside in Round Rock, Texas.

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