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Risk and Protective Factors in Mothers with a History of Incarceration: Do Relationships Buffer The Effects of Trauma Symptoms and Substance Abuse History

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RISK AND PROTECTIVE FACTORS IN MOTHERS WITH A HISTORY OF INCARCERATION: DO RELATIONSHIPS BUFFER THE EFFECTS OF TRAUMA SYMPTOMS AND SUBSTANCE ABUSE HISTORY?

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Abstract

RISK AND PROTECTIVE FACTORS IN MOTHERS WITH A HISTORY OF INCARCERATION: DO RELATIONSHIPS BUFFER THE EFFECTS OF TRAUMA SYMPTOMS AND SUBSTANCE ABUSE HISTORY?

This study provides empirical support for the claim that the mental health and the relational health of a mother who has been incarcerated are intertwined. Healthy peer, partner, and child relationships were hypothesized to be essential ingredients in buffering and possibly healing the effects of trauma and substance abuse. The conclusions regarding this assertion received varying levels of empirical support, depending on the relationships between these kinds of variables and the mental health variables of depression and self-esteem. Peer relational health and perceived mutuality in partnerships can buffer the effects of trauma symptoms on self-esteem. The perceived quality of the mother-child relationship can buffer the impact of trauma symptoms and history of alcoholism on depression. Additionally, this study revealed strong statistical and clinical significance in the hypothesized directions for the three-pronged relational model (peer, partner, and child) on the mental health variables of depression and self-esteem. In particular, the positive impact of a healthy mother-child relationship on symptoms of depression, and the capacity of peer and partner relationships to raise self-esteem are significant.

Conclusions and implications for theory and clinical practice are that cultural and feminist relational theorists of trauma and psychological development are correct in linking the role of relationships in emotional well-being and recovery from trauma. This

link between theory and the present data underscores the need for the development of treatment programs aimed at improving the family system and thus the relational health of these women.

The results of this study highlight both how the mental health issues of depression and self-esteem for previously incarcerated mothers are affected by interpersonal trauma and substance abuse, and how this relationship is mediated by the quality of relational health for these women. The findings support the critical need for gender-specific and family-oriented treatment both in the prison setting and upon discharge. This treatment should be grounded in feminist relational theories of psychological development and should focus on the family system as well as substance abuse and trauma.

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Dedication

To the Hope Unit

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Chapter 1: The Problem and Procedures

Introduction

More often than not, incarcerated women in low-security institutions are not violent perpetrators. Recent statistics reveal that nearly 70% of women in prison are incarcerated for such non-violent offenses as drug-related and property-related crimes (Bureau of Justice Statistics, 2006). These figures are consistent with previous research showing that over the past two decades addiction-related offenses such as burglary or prostitution, rather than drug dealing or violent offenses (which are more common for males), have accounted for the majority of women's imprisonment (Covington, 1998b; Garcia-Coll, Miller, Fields, & Mathews, 1997).

Researchers have illustrated that social-contextual factors such as interpersonal trauma from childhood sexual abuse, domestic violence, and abusive relationships resulting in PTSD contribute to women's substance abuse and are associated with later incarceration of drug-related crimes (Browne, Miller, & Manguin, 1999; Grella, Stein, & Greenwell, 2005; Kane & DiBartolo, 2002; Mullings, Hartley, & Marquart, 2004). Furthermore, an abundance of studies indicate that survivors of trauma often abuse substances as a means of coping with the aftermath of emotional pain, resulting in the co-morbidity of both PTSD and substance abuse (Covington, 1998a; Grayson & Nolen-Hoeksema, 2005; Ouimette, Wolfe, & Chrestman, 1996; Sharkansky, Brief, Pierce, Meehan, & Mannix, 1999; Stewart, Conrod, Samoluk, Pilh, & Dongier, 2000). In a review of the literature, Najavits, Weiss, and Shaw (1997) found that this co-occurrence is more common for women than for men and is often related to childhood interpersonal trauma. A study by Browne et al. found that 70% of incarcerated women had experienced

severe physical violence by childhood or adolescent caregivers, and 75% had experienced severe physical violence by intimate partners as adults.

Women also frequently enter into drug use through intimate relationships, often with a male partner who uses illegal drugs, with the drug use continuing after the demise of the relationship (Amaro & Hardy-Fonta, 1995; Moe, 2004). This fact suggests that many women enter into addiction and crime through relational pathways and situations different than those experienced by men. Women also differ in their profiles and interactions with correctional staff. They are more verbal and show a wider range of emotions than men, and child and family concerns are more prominent (Browne et al., 1999; Garcia-Coll et al., 1997). Women in prison are more often trauma survivors, have little income, have lower levels of education, and are single mothers of color who have committed non-violent crimes (Covington, 1998b; Garcia-Coll et al.1997; Grella et al., 2005; Jenkins, 2004).

Incarcerated women are often struggling to maintain a relational context in their lives, and they express a desire for connection and healthy relationships that provide emotional support and mutuality (Garcia-Coll et al., 1997; Jenkins, 2004). Additionally, many studies have shown that relationships involving feelings of intimacy and mutuality are likely to facilitate self-disclosure, emotional resiliency, new coping strategies, and additional social support (Genero, Miller, Surrey, & Baldwin, 1992; Jordan, 2000; Manhal-Baugus, 1998; Spencer, Jordan, & Sazama, 2004; Tantillo, 2006). These findings are of particular relevance because they highlight relationships as a point of intervention for these women, not only while incarcerated but also upon re-entry, indicating the necessity of a continuum of care upon discharge.

Because of these issues, several researchers have suggested that therapists working with formerly incarcerated women should not only address issues of partner violence, PTSD, and addiction, but also create a safe place in which to build a healing relational context (Boudin, 1998; Covington, 1998a; Garcia-Coll et al., 1997; Marcus-Mendoza, 2004). In an attempt to provide empirical data to support the utility of such programs, this study explores the link between the mental health and the relational experiences of mothers who have been incarcerated.

Theoretical Models

Three theoretical models are particularly relevant to the treatment of female offenders: Relational-Cultural Theory (RCT), Judith Herman's (1992) trauma theory and the role of relationships, and a holistic theory of addiction (Covington, 1998a). Practitioners who utilize these theories view people as being formed developmentally by their relational experiences, genetic make-ups, and social contexts in which they grew up and live. These contexts include their gender, race, experience of power, and other socio-cultural forces. In the perspective presented here, recovering from both PTSD and substance abuse requires a relational framework. From this vantage point, a clinician must view both the person and the symptoms within a larger social context. These theories encompass this broad systemic perspective so as to increase our understanding of women's experiences in general (Miller & Stiver, 1997) and those of incarcerated women in particular (Covington, 1998a; Jenkins, 2004; Swift, 1998). Each of these three theoretical models is described below.

Relational-Cultural Theory (RCT)

Researchers have indicated that therapeutic intervention for women, both during and after incarceration, should be based on women's relational experiences as well as female psychological development theories (Covington, 1998a, Garcia-Coll et al., 1997; Jenkins, 2004). RCT, created by scholars from the Stone Center at Wellesley College, is one such perspective. RCT proponents assert that relationships and connection with others are necessities and serve as the central organizing principles of women's lives, and that disconnections are a source of psychological problems (Gilligan, 1982; Miller & Stiver, 1997; Miller, 1976; Stiver, 1990).

Families are often viewed as the most influential contexts in which relational and emotional development occur. Therefore, RCT theorists suggest that both healthy and unhealthy family processes form a relational model of growth and development (Miller, 1988). Proponents of RCT contend that growth-fostering relationships are an essential human necessity throughout life, and that disconnection from others constitutes the core of psychological problems (Jordan, Surrey, & Kaplan, 1991). Supporters of this perspective assume that growth-fostering relationships and all disconnections are constructed within interpersonal and cultural contexts, and that families are the most significant milieu in which relational and emotional growth occurs. Healthy development is fostered in families who have a high degree of mutuality and empathy among all members (Stiver, 1990). Mutuality in families is manifested in the children, who are encouraged to be

> expressive of their feelings and needs, so that they feel heard and can become more and more authentic in their interactions with others. In the process, the child

can then develop more clarity of thought and desire, and can feel free and unafraid of expressing curiosity and interest in people around her. (p. 1)

Central experiences within this growth-fostering family context are as follows: (a) Parents exhibit, and children develop, the ability to be empathic; (b) the members feel empowered by the recognition that their behaviors have an impact on the important people in their lives, who then are willing to adjust their experiences and behaviors accordingly; and (c) the members feel encouraged to go out into the world, participate and actively engage with others while still remaining connected to the family. The underlying processes in these healthy growth-producing family contexts have been termed mutual empathy and mutual empowerment.

In contrast, unhealthy families impede psychological development and cause members to become emotionally isolated. People in dysfunctional families are deprived of growth-enhancing experiences, become disconnected, feel isolated, and begin to exhibit psychological distress. Miller (1988) and Stiver (1990) addressed key family processes that foster emotional disconnection and impede psychological development. Stiver proposed that when children or adults express thoughts and feelings and receive no response, they realize that they have no impact on those around them; as a result, a sense of powerlessness is engendered in their interactions with more powerful family members.

Consequently, RCT theorists assert that an erosion of trust, a sense of learned helplessness, and a deficient capacity for empathy result from such dynamics. The imbalance of power at the core of these dysfunctional family processes makes mutual empathy and mutual empowerment non-existent. Stiver (1990) suggested that under these conditions, the less powerful members of the family (usually women and children) learn

to alter their inner sense of self and self-image in an attempt to understand and make sense of the neglect and abuse inflicted by others.

When this crisis of sense of self and self-image occurs, family members may split-off their true thoughts and feelings, leaving only constricted and rigid negative self-images that fit the perspective of the powerful others. This disempowering effect leads to strategies of being in relationships that do not encompass the family members' authentic selves; ultimately, they stay out of connected relationships with each other and are left vulnerable to isolation and pathology.

RCT theorists also call into focus the awareness and consequences of social marginalization and traumatic disconnection. Together, these experiences can lead to an acute sense of vulnerability, with extreme sensitivity to power dynamics and settings of inequality (Walker, 2004). In addition to familial and personal sources of disconnection, these theorists also acknowledge issues of power within societal forces, such as racism and sexism, that contribute to a sense of isolation and feelings of helplessness. Walker concluded that connections and disconnections are constructed within specific cultural contexts and that in order to experience psychological health, people need to create and maintain growth-fostering relationships that advance toward mutuality. Moreover, these relationships foster growth, mutual empathy, and mutual empowerment, and lie at the core of psychological healing (Jordan, 2000).

Fundamentally, scholars of female psychological development posit that women often value relationships differently than men do, and that a woman's self-esteem development and psychological growth occur within a relational context (Gilligan, 1982; Gilligan, Lyons, & Hanmer, 1990; Miller, 1976). Women thrive when they are well-

connected to others, and they are at risk when they are in unhealthy relationships that are void of mutuality. If psychological issues such as depression, substance abuse, and PTSD are linked to relational problems in women (Browne et al., 1999; Najavits, Sonn, Walsh, & Weiss, 2004), treatment providers should focus on building safe and healthy relational contexts in which to heal.

Trauma Theory and the Role of Relationships

A theory suggested for understanding the traumatic experiences of women is the relational stage model developed by Judith Herman (1992). Herman suggested that at the moment of trauma, the victim is rendered helpless by overwhelming force and experiences terror, helplessness, loss of control, and threat of annihilation. The intensity of these feelings does not leave the victim when the traumatic event is over. The feelings often linger, or they are transient but do not disappear. Because dealing with the power of these feelings during and after the trauma is out of the realm of human possibility, it is not uncommon that the survivor's psychological growth is hindered.

> The core experiences of psychological trauma are disempowerment and disconnection from others. Recovery, therefore, is based upon the empowerment of the survivor and the creation of new connections. Recovery can take place only within the context of relationships; it cannot occur in isolation. (p.133)

Therefore, Herman asserted that the primary effects are not just the destruction of the psychological structures of the self; the systems of attachment and meaning that link the survivor to others are also shattered.

Herman (1992) claimed that a sense of safety and trust in the world are acquired in one's relationships with early caregivers, and a secure sense of connection with caring

people is the basis of personality development. "Originating with life itself, this sense of trust sustains a person throughout the lifecycle. It forms the basis of all systems of relationship and faith" (p. 51). At the moment of trauma, this trust and feeling of connection to the world and others are destroyed. Consequently, a profound sense of alienation, disconnection, and mistrust infiltrate all aspects of relational life, especially when the traumatic event involves betrayal by significant others, such as family members and loved ones.

Because traumatic events damage one's relational world, a person's social network has the ability to influence the outcome of trauma and to facilitate healing from it (Herman, 1992). The establishment of human connection along with some semblance of trust and feelings of safety is the first and primary task toward regaining psychological well-being. Herman therefore suggested that in the aftermath of trauma, the formation of healthy relationships--on both individual and community levels--that encompass mutuality, felt empathy, and safety are vital to the restoration of psychological health.

Holistic Theory of Addiction

The theory suggested for understanding addiction and women is based on biopsychosocial holistic principles that go beyond the commonly used medical model that regards addiction as a disease that lies solely in the individual (Covington, 1998b). Covington asserted that chemical dependency is best seen as a public health issue. To support this broader view, Covington presented cancer as an appropriate analogy. It encompasses lifestyle choices (e.g., diet and exercise), environment (e.g., pesticides, emissions, and nuclear waste), and sociopolitical aspects (e.g., large powerful corporations that profit from carcinogenic products) (B. Siegel, personal communication,

1996, as cited in Covington). Concurring with this holistic perspective, Leshner (2004) perceived addiction as a brain disease that should be understood as a chronic re-occurring illness, and--like other brain diseases such as Alzheimer's, schizophrenia, and clinical depression--it includes some behavioral, psychological, and social aspects.

For women in particular, addiction encompasses a relational component and can be viewed as a dynamic connection between the woman and her choices of substances (Covington, 1998a). Covington observed that women often use relational imagery when explaining their feelings about a particular drug or alcohol, such as "My most passionate affair was with cocaine" (p.123) and "I turned to Valium, but then valium turned on me" (p. 123). This relationship is often characterized as one that began with good feelings but ended up taking a downward spiral. Covington and Surrey (2000) described addiction as a relationship riddled with "obsession, compulsion, non-mutuality, and an imbalance of power. It is a kind of love relationship in which the object of addiction becomes the focus of the woman's life" (p. 3).

At a colloquium, Surrey (1991, as cited in Covington, 1998a) suggested that women often enter into substance abuse through relational pathways in an effort to connect with others, and to feel loved or energized. Paradoxically, Covington and Surrey (2000) theorized that while women often begin substance abuse to connect and feel good, they often end up using substances to numb the pain of unsatisfying or abusive relationships in which they do not experience mutuality or empathy, but instead feel depressed, isolated, and disconnected from others. Covington (1998b) perceives RCT as an important framework for conceptualizing trauma and addiction: "When a woman is disconnected from others or involved in abusive relationships, she experiences

disempowerment, confusion, and diminished zest, vitality, and self worth--fertile ground for addiction" (p. 148).

Relational experiences in one's family of origin can also contribute to a holistic understanding of substance abuse. Unhealthy family processes can manifest themselves in an alcoholic family in the form of secrecy, parental inaccessibility, and parentification. The maintenance of secrecy is essential to family cohesiveness and functioning in an alcoholic family. Secrecy often takes the form of family denial. For example, members of the family are not supposed to notice or talk about the drinking of an alcoholic parent. The parent denies drinking in order to keep drinking, and the spouse and children deny the drinking in order to stay connected with the parent/spouse.

This silence also serves to keep peace in the family and/or to protect the alcoholic and family from the judgments of people outside the family (Stiver, 1990). This secrecy increases family members' dependency on each other, making the formation of relationships outside the family unit very difficult. Real relationships outside the family would make the alcoholism vulnerable to discovery, and the family member who tried to create other relationships would be at risk of being abandoned and/or appearing disloyal. In addition, children in alcoholic families may be conditioned not to notice the whole picture or see reality, significantly diminishing their ability to solve problems and succeed later in life.

The spouse or partner of an alcoholic is also negatively affected. The partner may become depressed and begin to feel isolated and lonely. Consequently, due to alcoholism and depression, both partners are emotionally inaccessible to each other and to their children. The result may be dissociative states, alcoholic numbing and or/blackouts, and

outbursts of rage or crying--both in and out of context. In these situations, family members are emotionally unavailable to and often fearful of each other, with the greatest deprivation and terror experienced by the children. This restricted and/or unexplainable affective level of parents can create restricted affect in children, causing them to lose touch with the experiences and meanings of their feelings.

Because both the mother and the father are unable to perform the normal household and relational duties expected of parents, the children often take on parental responsibilities before they are developmentally ready to do so. According to Stiver (1990), parentified children learn very early to split-off the need to be cared for; they have little expectation that others, especially their parents, will want to know what their needs are. Consequently, these children grow up feeling that relationships are burdensome and non-gratifying because they have never experienced true mutuality in caretaking among family members. Parentified children also struggle to achieve an authentic sense of mastery in age-appropriate skills and problem-solving behaviors. The result is low self-esteem, due to the significant dissonance between how the children are perceived and how they experience themselves.

These three dysfunctional processes--secrecy, inaccessibility of parents, and parentification--exemplify what happens in disconnected families in which mutual empathy and mutual empowerment are nonexistent. Of course, these processes exist on a continuum, with families experiencing varying levels of connection and disconnection. However, they provide a lens of a relational model of growth and development through which one can see that constructive family processes must foster an interpersonal world

of mutuality, so that family members can engage in authentic relational experiences that nurture empathic development and mutual empowerment.

Therefore, a holistic model of addiction encompasses several dimensions: physical, familial, emotional, spiritual, social, environmental, and political. Thus, addiction involves not only the individual but also a family and/or society that fosters it (Covington, 1998b). Whether or not a genetic predisposition exists, addiction is understood here as a biopsychosocial disease that is manifested in conditioned negative coping aimed at managing stress and/or the negative effects of trauma.

Statement of the Problem

Tragically, it has been well-documented that women in prison have extremely high rates of mental health incidents that are often related to childhood and adulthood interpersonal abuse (Browne et al., 1999; Bradley & Davino, 2002; Jenkins, 2004). Several researchers have taken the theoretical position that the high incidence of drug-related crimes and substance abuse, combined with inadequate treatment for the extensive trauma histories of women in prison, is largely responsible for high recidivism rates (Bill, 1998; Garcia-Coll et al., 1997; Kubiak, 2004; Zlotnick, Najavitis, Rohsenow, & Johnson, 2003). Previous research focusing on the prevalence of traumatic events in the lives of incarcerated women found that 78% to 85% of these women experienced at least one trauma in their lifetimes (Browne et al., 1999; Pomeroy, 1998; Kane & DiBartolo, 2002). These data indicate that incarcerated women have trauma rates two to three times higher than those of the general population of women.

Furthermore, 70% of women in prison are mothers (Bureau of Justice Statistics, 2000b). Zaplin and Dougherty (1998) reported that prior to incarceration many women

were the primary caretakers of their children. These findings underscore not only the vital role these women play in the development of their children, but also the consequential disrupted bonds and the inevitable emotional repercussions both parties experience. Specifically, somatization, depressive symptoms, and levels of anxiety related to parenting stress have been shown to be elevated in incarcerated mothers (Houck & Loper, 2002; Poehlmann, 2005). Furthermore, Johnston (1995) revealed that children of incarcerated parents exhibit high levels of anxiety, aggression, acute traumatic stress reactions, survivor guilt, poor school performance, and truancy.

Despite the rapidly increasing rates of women in prison, most of whom are mothers, and the devastating effect incarceration has on the lives of their children, therapeutic models are often still based on the needs of men and stem from an individual medical model that does not adequately attend to women. Proponents of male-oriented models stress rules and offer ways to advance within a structured environment, while advocates of female-oriented programs believe treatment is more successful when it focuses on relationships with other people and offers ways to manage life successfully, both during and after incarceration, while keeping these relationships intact (Belknap et al., 1997, as cited in Covington, 1998a).

These issues indicate the presence of a growing problem in correctional institutions. And little empirical data substantiates the recommended relational paradigms and systemic models thought to be useful in the treatment of women both during and after imprisonment. Furthermore, there is a dearth of empirical research that explores the mental health incidences and specific relational experiences of mothers post-incarceration.

Significance of the Study

The present study is designed to address this gap in the literature by exploring the link between the mental health and the relational health of mothers who have been incarcerated. Currently, little empirical data addresses how different types of relationships and specific qualities of relational interaction influence the mental health of previously incarcerated mothers. Therefore, this study explores whether and how relationships may buffer the psychological distress of mothers who have been in prison. Specifically, this study examines whether peer-relational health, the perceived quality of one's relationship with children, and perceived mutuality in partnerships can buffer low self-esteem and symptoms of depression in post-incarcerated mothers who experience trauma symptoms or have a history of substance abuse, or the co-occurrence of these mental health issues.

This investigation is based on research findings that women in prison have extremely high rates of both childhood and adulthood interpersonal abuse, and that approximately 78% of these women are mothers (Bloom, 1995; Browne et al., 1999; Bradley & Davino, 2002; Bureau of Justice Statistics, 2000b;Garcia-Coll et al., 1997b; Jenkins, 2004; Najavits et al., 1999; Zlotnick et al., 2003). Boudin (1998) stated that when a mother becomes incarcerated, often her primary emotional focus is her children. Her relationship with her child(ren) can be the source of both hope and distress. She may experience tremendous guilt, anxiety, and a sense of failure. Additionally, depressive symptoms have been shown to be elevated in incarcerated mothers (Poehlmann, 2005).

Female incarceration rates are rapidly rising; thus, a rise in the number of women and children needing post-incarceration services is inevitable. Because of this growing

problem, O'Brien and Bates (2005) qualitatively explored factors that may help women succeed upon re-entry into society, and found that emotional and social supports that reinforce interpersonal and mutually rewarding relationships are essential. Data relevant to the present study buttress the opinion of RCT proponents who assert that while past relationship disconnections are thought to have a cumulative impact, current relationship processes are vitally important to women's mental health as well (Jordan, 2004). Specifically illustrating this point, Harm and Phillips (2001) found that formerly incarcerated women identified their families as both the best and the most difficult parts of re-entry adjustment.

These data underscore the twofold utility of this research. First, this study investigates the heretofore relatively unknown incidence of the identified mental health variables (depression, self-esteem, trauma symptoms, and substance abuse) in mothers post-incarceration. Second, the data addresses assertions by female psychological development theorists who espouse that relational health and experiences of mutuality are crucial to the psychological well-being of women in general and in the treatment of previously imprisoned women in particular (Covington, 1998a; Jenkins, 2004; Jordan, 2004; Miller, 1976; Poehlmann, 2005; Swift, 1998) .

The results of this study not only assist in clarifying the connection between the relational health and the mental health of post-incarcerated mothers, but also reveal the nuances of how different types of relationships and specific qualities of relational interactions may influence the mental health of previously incarcerated mothers. The following research questions and hypotheses are based upon a review of the literature and are intended to aid in exploring these possibilities.

Research Questions

This study was designed to answer two research questions: (a) Are levels of peer relational health, mutuality in partnerships, and relationship quality with children associated with levels of depression and self-esteem in a population of previously incarcerated mothers? (b) Are the associations between relational variables and mental health variables affected by histories of substance abuse and current experiences of trauma symptoms in a population of previously incarcerated mothers?

Hypotheses

Hypothesis 1

Higher levels of peer relational health, mutuality in partnerships, and relationship quality with children are associated with lower levels of depression and higher levels of self-esteem in a population of previously incarcerated mothers.

Hypothesis 2

The risks (negative effects) of substance abuse history and trauma symptoms on depression and self-esteem for previously incarcerated mothers are buffered by higher levels of peer relational health, partnership mutuality, and relationship quality with their children.

These hypotheses arose from expectations about the sample characteristics, based on previous research on the variables of interest (depression, self-esteem, trauma symptoms, substance abuse history, and relationship quality) (Browne et al., 1999; Houck & Loper, 2002; Moe, 2004; Poehlmann, 2005; Swift, 1998; Zlotnick et al., 2003), as well as the theoretical expectations of the role of relationships in trauma theory suggested by Herman (1992) and female psychological development theorists who propose that healthy

connections with others are essential to psychological well-being (Gilligan, 1982; Jordan, 2004; Jenkins, 2004; Miller, 1976).

While the significant others and family members of male inmates frequently participate in prison programs designed to address family and re-entry issues, female inmates often are not offered the same degree of support and involvement. In order to provide support services for female prisoners, as well as to tailor services to address the unique relational needs of women upon discharge, essential questions must be asked and explored. Who are the women in prison? Why are they there? How did they get there? What are their mental health needs? What are their relational experiences upon discharge? How can we help them? The next chapter reviews the literature to explore these questions, and provides empirical and theoretical support for the two hypotheses of this study.

Chapter 2: Review of the Literature

The following review of the literature explores mental health and relational experiences of incarcerated women. The purpose of this exploration is to clarify the complex connection between these issues. First, because of the high prevalence of co-occurring PTSD and substance abuse in this population, a general overview of this dual diagnosis is provided. Following this overview, the details of this dual diagnosis with regard to incarcerated women in particular is presented. Second, relational issues specific to incarcerated women are explored. The following elements are addressed: (a) adult interpersonal relationships and partner violence, (b) incarcerated mothering, and (c) women's relational experiences post-incarceration. The mental health and relational experiences of women in prison are investigated because they are thought to be both etiologically linked and embedded in the systemic nature of family and social interactions that most profoundly affect female development and psychological healing.

PTSD and Substance Abuse

Prevalence

Early research on PTSD and its prevalence in substance-abusing populations focused on male combat veterans. But more recently, scholars have focused on women, as the rates of this co-occurring disorder in female populations have surpassed those of men (Brown, Recupero, & Stout, 1995). Researchers have shown that women with PTSD comprise 33% to 59% of substance-abusing females and that symptoms are more severe for these women than for women who experience only one disorder. This percentage is twice as high for women as for men, whose range is from 12% to 34% (Brown et al.,

1995; Dansky, Saladin, Brady, Kilpatric, & Resnick, 1995; Fullilove et al., 1993; Ouimette, Brown, & Najavits, 1998).

The Link

The link between PTSD and substance abuse has been extensively studied from both physiological and psychosocial points of view, across different types of trauma and varying categories of substance abuse. Studies have confirmed that one does not always necessarily precede the other, but that each is a risk factor for the development of the other disorder (Cottler, Compton, Mager, Spitznugel, & Janca 1992; Najavits et al., 1999). The role of physiological response to trauma has linked the occurrence of trauma to alcohol abuse. For example, alcohol has been shown to compensate for a deficiency in endorphin levels in the brain caused by the traumatic event; thus, a victim may drink in an attempt to control subsequent emotional pain (Volpicelli, Balaraman, Hahn, Wallace, & Bux, 1999). Researchers have suggested that social-contextual factors (e.g., the interpersonal trauma of childhood sexual abuse, domestic violence, and abusive relationships resulting in PTSD) contribute to women's substance abuse at a rate of 32% to 66% (Browne et al., 1999; Dansky, Burne, & Brady, 1999; Fullilove et al., 1993; Volpicelli et al., 1999).

Clinical Profile

The clinical profile of dually diagnosed women is much more severe than that of women with PTSD or substance abuse alone (Grice, Brady, Dustan, Malcom, & Kilpatrick, 1995; Najavits et al., 1999). For example, dually diagnosed women more often present with a co-occurring affective disorder, commonly dissociate, and have medical problems (Back, Sonne, Killeen, Dansky, & Brady, 2003; Brady, Killeen,

Saladin, Dansky, & Becker, 1994; Ouimette et al., 1996). Furthermore, Najavits et al. found that 60% of the dually diagnosed group experienced PTSD before the onset of substance abuse and indicated a more severe clinical profile and more negative life conditions (e.g., less opportunity, more criminal behavior, more suicide attempts, more siblings with drug problems, and less outpatient psychiatric treatment). Additionally, the only domain in which the two groups were consistently differentiated was risk and protective factors. These results not only point to the necessity of incorporating a contextual and developmental perspective when attempting to understand the etiology of these disorders, but also assist in revealing the strengths of this population, so that effective treatment can be developed.

Dual Treatment

Childhood sexual abuse is increasingly recognized as a significant risk factor for the development of adult psychological problems, such as PTSD, and survivors are more likely to face later substance abuse challenges (Fullilove et al., 1993; Grayson & Nolen-Hoeksema, 2005; Najvaits et al., 1999; Stewart et al., 2000; Volpicelli et al., 1999). Given these data, clinicians recognize the necessity of developing treatments sensitive to the unique needs of this population, and they realize that simultaneous attention to both trauma and addiction is crucial to successful treatment. However, while clinicians may agree that a dual-treatment plan would be effective, the separate fields of trauma and addiction are often at odds over which disorder to treat first, as opposed to attempting to treat both concurrently.

Because of this conflict, Hein, Cohen, Miele, Litt, and Capstick (2004) compared the efficacy of treating only substance abuse with that of treating substance abuse and

PTSD in tandem. Three therapies were compared: (a) manualized cognitive behavioral therapy, called Relapse Prevention; (b) manualized PTSD and substance abuse treatment, called Seeking Safety; and (c) standard community care for PTSD and substance abuse. Both Relapse Prevention and Seeking Safety significantly reduced symptoms of PTSD and substance abuse. However, Seeking Safety also significantly reduced psychiatric symptoms at a 9-month follow-up. These data suggested that the Seeking Safety treatment addressed a deeper level of emotional pain and thus enabled the alleviation of psychological distress, rather than just coping, behavior change, and/or abstinence.

Heibert-Murphy and Woytkiw (2000) developed an integrated treatment for PTSD and substance abuse. Their model was developed with the understanding that while simultaneous treatment of addiction and trauma makes clinical sense, it also creates a conceptual challenge. They asserted that treatment of sexual abuse grew out of the feminist movement, which points to patriarchy, abuses of power, and the sociopolitical context as core elements to understanding sexual abuse. Thus, empowerment of the survivor, awareness of context, and assertion of voice serve as keys to trauma resolution. Addiction treatment, in contrast, has been embedded in a medical model based on the premise that the individual is affected by an illness to which he or she is powerless, thus creating a treatment dilemma for client and therapist alike.

Because the experiences of trauma symptoms, substance abuse, and relapse are, in part, the result of contextual and family/relational issues, the narrow medical model paradigm for assessment and treatment is limiting. It is necessary to assess and address all of the related complexities in the treatment of both trauma and substance abuse. Proponents of these dual therapies honor the necessity of dealing with relational worlds

as a buffer to the destructive effects of trauma, especially for those experiencing both PTSD and substance abuse (Covington, 1998b; Hein et al., 2004; Heibert-Murphy & Woytkiw, 2000; Herman, 1992). Empirical support for this perspective can be gleaned from the findings of Stewart et al. (2000), who reported significant correlations between increased PTSD symptoms and frequency of heavy drinking and negative situations in general ($p < .0005$), and greater frequency of heavy drinking in situations involving physical discomfort ($p < .0005$), negative emotions ($p < .0005$), and conflict with others ($p < .0005$) in particular.

Developmental and Contextual Variables

Because dual treatment is recommended, exploration of the etiology of both trauma and addiction is essential. Childhood maltreatment in women has been identified as a primary risk factor in the development of both adulthood PTSD and substance abuse (Browne et al., 1999; Dansky et al., 1999; Fullilove et al., 1993; Volpicelli et al., 1999). More specifically, Marcenko, Kemp, and Larson (2000) asserted that developmental and contextual variables of childhood abuse are crucial pieces of a broader framework for understanding addiction and its effects on parenting. Thus, they presented a developmental model based on the complex effects of trauma and addiction on adult functioning, parenting, and later child placement in the social services system.

This model was developed from the perspective of distinguishing women's parenting capacities from their actual day-to-day parenting practices; it perceives substance abuse as interfering with their practices, rather than regarding women as incapable mothers. Based on results of logistical regression, childhood abuse emerged as significantly related to psychological distress ($p < .05$, $\beta = .29$), with sexual abuse

positively related to good parenting attitudes ($p < .01$, $\beta = .19$) and heavy substance use ($p < .05$, $\beta = 2.19$). With reference to child-placement status, the data manifested a significant positive relationship with severity of addiction ($p < .001$). Results also indicated that childhood sexual trauma and age were correlated with severity of adult drug use, and severity of parental addiction was highly correlated with child placement. These relationships suggest that childhood sexual abuse can cause severe substance abuse, which can lead to child placement. Overall, the results demonstrated that the contextual factor most significantly related to later child placement was severity of addiction by the parent.

Assessment

Studies of PTSD and addiction consistently imply that women with dual diagnosis are often survivors of severe interpersonal childhood trauma (Back et al., 2003; Grayson & Nolen-Hoeksema, 2005; Grella et al., 2005; Marcenko et al., 2000; Najavits et al., 1999). These women are also likely to present with a more severe clinical profile on all socio-demographic variables and with more distorted thinking than women with a single diagnosis of either disorder (Back et al., 2003; Najavits, Gotthardt, Weiss, & Epstein, 2004). However, researchers have also provided evidence that having one disorder is a risk factor for acquiring the other, suggesting a need for prevention in the treatment of both disorders (Cottler et al., 1992; Marcenko et al., 2000; Najavits et al., 1999). Moreover, women who were abused as children tended to start using substances during adolescence to cope with the emotional and physiological after-effects of the abuse (Grella et al., 2005; Marcenko et al., 2000).

While the research indicates that these women are similar on a number of key variables, it is essential not to make an assumption of homogeneity when designing treatment programs for this population. In order to protect against this clinical error, proper assessment of treatment needs is essential. First and foremost, researchers have suggested the need for substance abuse treatment centers to assess for both trauma symptoms and PTSD (Back et al., 2003; Brown, Stout, & Mueller, 1996; Najavits et al., 1999; Najavits, Weiss, Shaw, & Munez, 1998; Najavits, 2004). Trauma assessments should involve exploring not only history and type of trauma, but also both frequency and intensity of PTSD symptoms (Back et al., 2003). Earliest age of trauma(s) experienced, duration, frequency of incident(s), and relationship to perpetrators should also be assessed (Browne et al., 1999; Marcenko et al., 2000). The use of descriptive behaviorally oriented questioning with regard to trauma experiences is recommended, since it has proven to be more revealing of trauma history than event-oriented questioning (Dansky et al., 1995; Browne et al., 1999).

Because survivors of childhood abuse are often re-victimized, experiences of re-traumatization and violence in current relationships should be addressed in assessment and treatment (Najavits, 2004; Najavits, Sonn, Walsh & Weiss, 2004). Comprehensive batteries may also include an assessment likely to evoke the strengths of this population, such as familial and/or social support and parenting capacity (in contrast with current practice) (Grella et al., 2005; Marcenko et al., 2000). Investigation of socio-demographic variables, along with type of substance used and single or polysubstance abuse, is also relevant to proper assessment and the design of effective treatment plans (Back et al., 2003; Najavits et al., 1999).

Trauma and Substance Abuse among Incarcerated Women

Prevalence

It is well-documented that women in prison have extremely high rates of both childhood and adulthood interpersonal abuse, and that 78% of these women are mothers (Bloom, 1995; Browne et al., 1999; Bradley & Davino, 2002; Garcia-Coll et al., 1997; Jenkins, 2004; Zlotnick et al., 2003). Research also suggests that the high incidence of drug-related crimes and substance abuse, combined with the extensive trauma histories of women, is largely responsible for high recidivism rates (Bill, 1998; Garcia-Coll et al., 1997; Kubiak, 2004).

Scholars who focused on the prevalence of traumatic events in the lives of incarcerated women found that 78% to 85% of these women experienced at least one traumatic event in their lifetimes (Browne et al., 1999; Pomeroy, 1998; Kane & DiBartolo, 2002). In an attempt to find reported rates of PTSD in prison populations, Goff, Rose, Rose, and Purves (2007) reviewed the literature and found only four studies that revealed these data; percentage ranges from 4% to 21%, with women disproportionately affected. These statistics, combined with the data suggesting extremely high levels of experienced trauma, indicate that incarcerated women may have trauma and PTSD rates two to three times higher than that of the general population of women. Because female victims of severe childhood sexual and physical abuse by parental figures are at significantly higher risk for addiction and substance abuse than women who have not been abused, it is essential that proper research methodologies be utilized, so that proper treatment can be developed.

Browne et al. (1999) asserted that in most cases the questioning methodology for gathering information on interpersonal trauma by intimates is flawed. For example, studies often include questions that do not focus on interpersonal trauma, or the measurements used are abbreviated, or the questions themselves lack reliability and validity. Therefore, if questions are limited in both quantity and quality, prevalence results are inaccurate and under-reported.

Browne et al. (1999) comprehensively addressed this flaw in methodology by asking numerous descriptive detailed questions about different kinds of abuse. Specific abuse information about this population is essential not only because of the increasing rates of women in prison but also because of the economic and human burden imprisonment imposes on both women and society. The results of this study generated alarming percentages: 70% of the women experienced severe physical violence from childhood or adolescent caregivers; 82% experienced severe parental violence and/or sexual abuse before reaching adulthood; 75% experienced violence by adult partners; 77% experienced sexual violence by non-intimates at some point in their lives; and the relationship between childhood victimization and adult victimization was 80%.

Concurring data collected by Bradley and Davino (2002) showed that 86.2% of incarcerated women experienced a history of childhood sexual abuse, with 67.9% experiencing unwanted intercourse; 56.9% reported a history of physical abuse; 67.7% reported a history of sexual assault in adulthood; and 84.6% experienced physical abuse in adult relationships. Fifty-two percent reported sexual abuse onset before age nine; 81% reported onset of physical abuse before age nine; and only 5% of the women (N=3)

reported no experiences of abuse in either childhood or adulthood. These findings indicate severe and pervasive rates of lifetime violence.

Particularly disturbing is the realization that prevalence rates of violence by intimates against incarcerated women was more than double that of all (intimate or stranger) acts of physical violence against women in the general population (Browne et al., 1999). These authors also revealed that traumatic events for incarcerated women often begin in early childhood, before the age of nine. The findings by Browne et al. (1999), although not directly addressing the dual diagnosis of substance abuse and PTSD, pointed to the association and prevalence of both disorders in female inmates. This high occurrence necessitates trauma-informed rehabilitation for incarcerated women.

Relational Histories

To understand the seriousness of this problem, the prevalence and severity of lifetime trauma among imprisoned women must be properly investigated. Browne et al. (1999) pointed out that it is essential to investigate the relational histories of imprisoned women and to acknowledge the long-term effects of violence on the lives of these women. Girls from physically or sexually abusive homes are significantly more at risk of separation from their families of origin before adulthood, due to out-of-home placement or running away (Marcenko et al., 2000; Tuesday, 1998). This abuse and displacement have been shown to increase the risk of drug-related or prostitution-related activities, and often lead to a greater risk of incarceration for both juveniles and adults (Grella et al., 2005). Sexual abuse is also consistently linked to later involvement in violent interpersonal relationships, which often involve drug abuse and drug-related criminal activities (Moe, 2004; Najavits, 2004; Wilson-Cohn, Strauss, & Falkin, 2002).

Furthermore, increased exposure to violent partners increases the risk of defensive acts of self-protection, as well as the likelihood that girls and women will be present during criminal activity and/or have knowledge of when a crime is committed (Moe, 2004; Najavits, Sonn, Walsh & Weiss, 2004). This research illuminates the long-term developmental effects and trajectory paths of girls and women who are victimized by family violence, and points to the etiology of increased prevalence of women in prison today.

Developmental Trajectory Paths

Clearly, childhood trauma is prevalent among women in prison (Browne et al., 1999). A wealth of previous research makes it evident that childhood experiences of abuse and adversity are correlated with poor adult mental health (Browne & Finkelhor, 1986; Horowitz, Widom, McLaughlin, & White, 2001; Jumper, 1995; Kessler, Davis, & Kendler, & 1997). Adolescent precursors, such as substance abuse and criminal activity, lead to negative adult outcomes (Brook, Whiteman, Cohen, Shapiro, & Balka, 1995; Marcenko et al., 2000). While such research is valuable, it is important to note that most research on antisocial and criminal behaviors has been conducted with men, under the supposition that antisocial behavior in girls is less harmful to their later development (Pajer, 1998). Furthermore, minimal research addresses the complexity of developmental pathways leading to adverse adult outcomes in women with reference to specific types of childhood traumatic events. Grella et al. (2005) focused on incarcerated women and investigated whether adolescent antisocial behaviors mediate adverse adult outcomes. Results supported the assertion that certain traumatic events suggest pathways to

particular adult outcomes, and specific events also point to adolescent conduct disorder as a mediating factor.

Grella et al. (2005) also revealed that foster care or adoption placement was directly related to sex work, and early traumatic events that did not involve abuse were directly related to violence without adolescent conduct disorder as a mediator. Both direct and indirect relationships were found between sexual abuse and adult criminal behavior. The indirect relationships were mediated through adolescent substance abuse. Other traumatic events (e.g., physical abuse, family violence, and early trauma events) had no direct relationship to adult criminal behavior, but did show an indirect relationship to criminal behavior mediated by adolescent conduct problems. Additionally, current levels of psychological distress were positively correlated with several types of childhood trauma, suggesting that the effects of trauma in adulthood are often mediated by substance abuse or conduct problems in adolescence.

With regard to ethnic differences, Grella et al. (2005) found that African American ethnicity was directly related to criminal behavior (i.e., without the mediator of adolescent conduct problems), but found an indirect relationship to criminal behavior through the mediating factor of adolescent substance abuse. Additionally, African-American women reported lower levels of physical abuse, sexual abuse, and adolescent substance abuse, yet had higher rates of adult criminal behavior, especially sex work. No direct relationship was found between being Hispanic and experiencing trauma, but Hispanic ethnicity was related to adolescent conduct problems. White women showed significantly higher rates of both physical and sexual abuse than non-White women, and,

in general, being Caucasian was associated with less criminal behavior. No other statistically significant associations with being White were found.

Overall, Grella et al. (2005) suggested that African-American women have different pathways into adult criminal activity than other women, and adolescent conduct problems do not have a direct relationship to later criminal activity for African-American women, as they do for women in other ethnic groups. However, adolescent substance abuse was associated with later criminal behavior in African-American women. For all the women sampled, a strong relationship existed between substance abuse and later criminal behavior; but the relationship was stronger for African-American women.

The results on racial differences highlight the necessity of interpreting data through a contextual lens. Specifically, the data suggesting that African-American ethnicity was positively related to criminal behavior and more strongly related to substance abuse and later incarceration than other ethnicities warrants explanation. Richie (1996) noted that women's crimes are often rooted in traumatic experiences, and are drug-related and/or are non-violent economically motivated offenses. Based on this premise, she articulated a theoretical paradigm of gender entrapment to untangle the complexity of the data:

> Gender, race/ethnicity, and violence can intersect to create a subtle, yet profoundly effective system of organizing women's behavior into patterns that leave them vulnerable to private and public subordination, to violence in their intimate relationships and, in turn, to participation in illegal activities. (p. 4)

Essentially, it can be assumed that because of the oppressive nature of racism, sexism, and classism, African-American women are at triple risk for incarceration.

From this perspective, female criminality must be viewed in the context of women's developmental histories. Many researchers have examined the effect of early abusive conditions on later female criminality and found that factors shown to lead adult women into a life of crime include economic marginalization, substance abuse, sexual and physical violation, and parenting without adequate financial resources. However, the most powerful of these variables appears to be physical and/or sexual abuse (Chesney-Lind & Pasko, 2004; Marcus-Mendoza &Wright, 2004; Velasquez, 1998; Moe, 2004).

In an overview of the issues surrounding young women's pathways into crime, Belknap and Holsinger (2006) illustrated a pattern of childhood victimization resulting in delinquent behavior (e.g., running away, drug and alcohol misuse, prostitution, robbery, and selling drugs to survive and/or to support drug addictions). Additionally, the detrimental psychological effects of these issues for abused delinquent girls were shown to be feelings of severe negative self-worth and consequential self-harm behaviors such as burning and cutting their bodies and thinking about suicide. Moreover, these researchers found that girls were twice as likely as boys to report that they had acted on these thoughts and had tried to kill themselves.

Consequently, such psychological distress can put these girls at high risk for inadequate development of empathy and caring attitudes towards themselves and others. Because of its developmental focus on childhood factors leading to incarceration, developmental/pathways research facilitates the identification of possible trajectory paths to adult female incarceration and illuminates points of prevention in the lives of girls. The data suggests that early childhood abuse is the core from which delinquent behaviors

stem and then blossom into what society calls antisocial personality traits, such as lack of empathy toward self and others.

Adult Interpersonal Relationships and Partner Violence

A vast amount of feminist scholarship focuses on the link between women's developmental victimization and later criminal behavior. However, due to the extensive violence committed against adult women, the exploration of adult-partner violence and female offending is also necessary.

Prevalence

Abuse of women is considered one of the most pervasive social problems in our society today. Prevalence numbers indicate that in the United States 1.5 million women each year are physically injured or sexually assaulted by their partners (Tjaden & Thoennes, 2000). In the year 2000 alone, the Bureau of Justice Statistics (2003) indicated that 1,247 women died at the hands of intimate partners. In light of these statistics, Moe (2004) suggested that such pervasive abuse is the result of patriarchal violence and domination existing within the institution of family, marriage, and/or intimate relationships in which society is reluctant to intervene.

Adult Criminality and the Systemic Context of Adult Abuse

Moe (2004) investigated the ways in which different criminal behaviors may be understood as an extension of a woman's attempt to survive in the context of partner battering. A particular focus of Moe's research was determining the extent to which the context and experience of battering influences women's choices to engage in crime. She provided a conceptual framework from which to view the issue of partner battering in heterosexual relationships, and explored the complex issues of racism, gender

socialization, and the ineffectiveness of the criminal justice system and governmental policy in dealing with violence against women. Along the same lines, Burman and Chantler (2005) investigated the connection between domestic violence and being a minority of lower socioeconomic status; they asserted that complex and intersecting connections exist among domestic violence, law, mental health provisions, and entitlement to welfare services that function alongside constructions of culture, racism, class, and gender oppression--all of which contribute to keeping women, particularly minority women of lower socioeconomic status, in violent relationships.

Moe (2004) found that institutional and social failures to protect these women lead to feelings of helplessness and contribute to entrapment. Additionally, Moe revealed that some women left an abusive relationship hoping to rely on family, friends, and/or non-profit victim assistance programs. However, these avenues were often not readily available and/or were unable or unwilling to provide a respite of safety. Consequently, these women were turned away because of lack of space or some exclusionary criteria such as being a felony offender, mentally ill, or an addict.

Criminal Behavior as Coping and Survival

In light of the above challenges, Moe (2004) hypothesized that committing crimes becomes a coping mechanism for surviving violent victimization and often provides an avenue out of an abusive relationship. By examining the social-psychological context (i.e., lived experiences and circumstances) in which women engaged in illegal activity, studies revealed that female juvenile offenders--who were often survivors of intolerable physical, sexual, and/or emotional abuse and neglect--engaged in criminal behavior as a means of practical survival (Chesney-Lind & Pasko, 2004). Furthermore, many adult

women who committed murder had done so after being abused by the men they had killed (Henning & Renauer, 2005; Serran & Firestone, 2004; Shackelford, 2000). The study of the processes through which victimized girls and women come to engage in illegal offenses is known in the literature as pathways research. Pathways researchers assert that abuse facilitates criminalization, so that the boundaries between victimization and offending are blurred, making it necessary to examine the circumstances throughout the lifespan that put women and girls at risk for criminal behavior, ironically transforming them from victims to offenders (Belkap & Holsinger, 2006).

For example, Moe (2004) found that 10 of the 13 women in a domestic violence shelter had committed illegal activity associated with partner abuse. The offenses were generally petty, non-violent, substance abuse-related crimes, such as theft and low-level fraud. The women who committed violent offenses did so in retaliation and/or self-defense in relation to their partners. These data identified three primary reasons the women engaged in illegal activity: (a) to cope with abuse by an intimate partner, (b) to keep an abusive relationship intact and/or appease the batterer, and/or (c) to survive economically upon leaving the relationship. The women's actions did not appear to have much premeditation, and their behaviors often spontaneously stemmed from the need to survive, especially if they were mothers with children in need.

Drug Use and Violent Relationships

Substance abuse may also play a major role in violence. Often, the women's partners introduced them to substances, and the women used the drugs or alcohol in hopes of establishing a better connection with their partners and/or to keep their partners close. Their stories showed that the drug use ended up more as a means to self-medicate,

to numb physical injuries, and to cope with painful emotions and thought patterns during and after violent incidents (Moe, 2004). Furthermore, reliance on substances was reported to fluctuate, based upon renewed status of the relationships and frequency of abuse. Overall, the research indicates that criminality is often part of women's help-seeking and survival strategies (Moe). Not only are issues of childhood abuse and addiction related to women's incarceration, but adult relationships also may be connected to incarceration and re-traumatization experiences.

Incarcerated Mothering

Prevalence

The emotional and parenting issues surrounding being an incarcerated mother are many. Up to 80% of women in prison are mothers who have children under the age of 18, for whom they were the primary caretakers and sole sources of economic and emotional support before incarceration (Bloom, 1995). In 2000, according to a report from the Bureau of Justice Statistics (2000a), there were 1,498,800 children of incarcerated parents in the United States. And with the rapidly rising incarceration rates, especially for women, this number at present is most likely even higher. Additionally, incarcerated mothers are often unmarried and are more likely than incarcerated fathers to have trouble finding placement for their children, since incarcerated men usually leave their children in the care of the children's mothers (Bloom). Consequently, the children and families of incarcerated mothers are much more likely to be disrupted by the institutionalization than are children and families of fathers. Adding to this traumatic separation is the limited interaction these mothers and children have, due to prisons being extremely far away (an average of 100 miles) from where the child resides, telephone calls being restricted

and/or expensive, and the reluctance and/or inability of the new primary caregiver to endure the expense and stress of travel and phone bills necessary for contact (Poehlmann, 2005).

Clinical Profile

While the practical issues of caretaking, time, travel, and money damage the mother-child bond and family cohesiveness, incarceration also has mental health ramifications for all parties involved. Boudin (1998) stated that when a mother becomes incarcerated, often her primary emotional focus is her children. Her relationship with her child can be the source of both hope and distress. She may experience tremendous guilt, anxiety, and a sense of failure, as well as a motivation to change and grow in order to maintain a connection to her children and the part of herself that is a mother. Additionally, depressive symptoms are often elevated in incarcerated mothers (Poehlmann, 2005). Bloom (1995) contended that some incarcerated women withdraw from their children, due to feelings of shame and embarrassment about the child's awareness of the criminal behavior, with some not even telling their children that they are in prison. Often the women's sense of powerlessness is so severe that they need to sever emotional ties with their children, out of an act of self-preservation. Garcia-Coll et al. (1997) and Houck and Loper (2002) found that incarcerated mothers experience intense stress when separated from their children and that parenting stress for the imprisoned mother is related to high levels of anxiety, depression, and somatization. According to Snyder, Carlo, and Mullins (2001), regular visitation by children is associated with positive maternal perceptions of the mother-child relationship.

Poehlmann (2005) investigated the relationships among maternal depressive symptoms, early relationship disconnections, frequency of visits, telephone calls with children, and perceived family relationships in a sample of incarcerated mothers. Sixty-eight percent of the women reported an intense focus on feelings of distress, depression, or guilt. Moreover, experiences of early interpersonal trauma and disconnection were associated with elevated maternal depressive symptoms, as were fewer face-to-face visits with children. With regard to telephone contact, frequency of calls (but not visits) with older children, as opposed to those with younger children, significantly predicted the quality of the relationship to be positive, but was not associated with depressive symptoms. Early trauma and disconnections were not found to be related to perceived quality of mother-child relationships. Additionally, the more conflicted the relationship was between the mother and the current caregiver, the less the child visited or was able to talk on the phone. Clearly, maintaining a connection with her child during incarceration simply helps the mother feel better and can enable her recovery.

Women's Relational Experiences Post-Incarceration

Harm and Phillips (2001) noted that between 1989 and 1998 the rate of increase in the number of women on parole (132%) was three times that for men (48%). With female incarceration rates still rapidly increasing, a rise in the number of women and children needing post-incarceration services is inevitable. Because of this growing problem, O'Brien and Bates (2005) explored factors that may help women succeed upon re-entry into society. These researchers found that a new environment that offers concrete goods such as clothing, bus fare, and money, as well as emotional and social supports that reinforce interpersonal and mutually rewarding relationships, is essential. These

qualitative data buttress the assertion of previous scholars who espoused that a reconceptualization of recidivism from prediction to process is necessary if society is going to meet the needs of women upon discharge (Zamble & Quinsey, 1997). For example, previous thinking centered on the strength of various historical-predictor variables such as level of education, prior adult convictions, and time served for robbery, rather than emphasizing current dynamic factors such as employment opportunities, relationship quality, and effective programming (Zamble & Quinsey).

From this perspective, Harm and Phillips (2001) interviewed 38 women who had served multiple prison sentences. The women were asked open-ended questions that prompted them to discuss their experiences after release, with a focus on their relationships with their children and family, their work experiences, and their living arrangements. Additionally, the women were asked to identify what was and was not helpful about programs in which they had participated both during and after incarceration. Data relevant to the present study supported the assertion of RCT theorists that while past relationship disconnections may have a cumulative impact, current relationship processes are vitally important to women's mental health as well (Jordan, 2004). Specifically illustrating this point, Harm and Phillips found that formerly incarcerated women identified their families as both the best and most difficult part of re-entry adjustment.

The qualitative data encompassed the women's comments on both positive and negative aspects of discharge with regard to their children (Harm & Phillips, 2001). On the positive side, the mothers expressed that their children were sources of inspiration and companionship, saying "they kept me going" (p.11) and "the best part of [being released]

was being able to spend time with family and getting to know my daughter" (p.10). Conversely, other women reported negative experiences, saying, for example, "I never felt good about myself....I felt a lot of guilt about the kids. The kids blamed me for everything that went wrong in their life. I just didn't have a base" (p. 12).

RCT theorists assert that depression and severe relationship disconnections that involve traumatic violation (e.g., abuse, domestic violence, death, desertion, absent or unavailable parental figures, and prolonged separations) can have a severely detrimental impact on the psychological health of women and their children (Miller & Stiver, 1997). This claim was also supported by Harm and Phillips (2001), who reported that 6% of the women went home to partners or spouses upon release, and of those women, only one went home to a man who was not abusive. Most of the women highlighted themes similar to the following statement:

> I did okay until I met a guy who started beating me. That's where it started. I lost my personal key, my emotional key. He told me I was no good as he'd kick me. I started smoking crack and when I start doing good it's like someone's beating me saying no, you don't deserve this, you're no good. (p. 13)

These women's testimonies demonstrate the central role that relationships play in the matrix of substance abuse, trauma, relapse, recidivism, and recovery, as well as the necessity of systemic gender-specific reunification programs that address the complex family dynamics these women encounter upon release.

Summary

Overall, researchers have revealed the pervasive co-occurrence of PTSD and substance abuse in incarcerated women (Browne et al., 1999; Covington, 1998b; Garcia-

Coll et al., 1997; Kane & Di Bartolo, 2002; Kerr, 1998; Marcus-Mendoza & Wright, 2004; Martin & Hesselbrock, 2001; Poelhmann, 2005; Zlotnick et al., 2003). And for mothers in particular, depression was found to be elevated (Poehlmann). These findings point to a vital need for mental health care that includes trauma-informed assessment and treatment in conjunction with co-morbid substance abuse treatment.

The relational experiences and developmental histories of incarcerated women have been riddled with early childhood violence that was later associated with adolescent substance abuse and consequential antisocial behavior (Grella et al., 2005). African-American women are particularly vulnerable to this outcome. However, Richie (1996) identified this phenomenon as a form of gender entrapment that results from the combined racism, sexism, and classism experienced by African-American women. Thus, they are at triple risk for exploitation and later incarceration. From this perspective, female criminality is viewed as a contextual occurrence stemming from various circumstances and experiences in women's lives. Concurring scholars also suggest that among the factors shown to lead adult women into a life of crime, the most prevailing variables appear to be physical and/or sexual abuse (Chesney-Lind & Pasko, 2004; Marcus-Mendoza & Wright, 2004; Velasquez, 1998; Moe, 2004).

Additionally, researchers have revealed that many women in prison were involved in abusive relationships that led to self-defense behaviors, which resulted in incarceration, suggesting that women's criminality is often part of their help-seeking and survival strategies (Henning & Renauer, 2005; Moe, 2004; Serran & Firestone, 2004; Shackelford, 2000). As Belknap and Holsinger (2006) observed, abuse facilitates

criminalization, so that the lines between victimization and offending are blurred, ironically often transforming women from victims to offenders.

Substance abuse is also thought to play a major role in women's relationships and later imprisonment. Often, the women's partners introduced them to substances, and the women used the drugs or alcohol in hopes of creating better connection with their partners. Paradoxically, these women continued to use substances in order to cope with the aftermath of violent incidents with their partners (Moe, 2004).

In addition to the experiences of both childhood and adulthood interpersonal abuse, the debilitating effects of trauma, substance abuse, and depression, many women in prison are mothers struggling with the challenges of incarcerated parenting and separation from their children. The literature addresses the value of maintaining and nurturing the mother-child connection during incarceration, and shows this connection to help incarcerated mothers feel better (Poehlmann, 2005; Snyder et al., 2001). However, women in penitentiaries do not often receive appropriate mental health care or participate in programs that make recovery possible. Therefore, researchers recommend services upon discharge to focus on current changeable variables such as employment opportunities, relationship quality, and effective programming (Zamble & Quinsey, 1997). Concurring scholars report that concrete support in the form of bus fare and clothing, combined with interpersonal factors such as the quality of women's relationships, is instrumental in re-entry success (Harm & Phillips, 2001; O'Brien & Bates, 2005).

This review of the literature has focused on the mental health and the relational experiences of women in prison. It appears that the two are connected and that this

connection is often laden with both childhood and adulthood abusive experiences, followed by consequential substance abuse and later incarceration. However, little empirical data focuses on how different types of relationships and specific qualities of relational interaction influence the mental health of previously incarcerated mothers. Therefore, the present research is intended to address this gap in the literature. The next chapter discusses the methodology of the current study, which is designed to explore whether and how relationships may buffer the psychological distress of previously incarcerated mothers.

Specifically, this study examines whether the perceived quality of relationships can buffer low self-esteem and symptoms of depression in post-incarcerated mothers who experience trauma symptoms or have a history of substance abuse or present with the co-occurrence of these mental health issues. It is hoped that these results will not only assist in clarifying the connection between the mental health and the relational health of mothers after imprisonment, but also suggest that addressing trauma-related issues by creating and nurturing safe and healthy relationships upon discharge is a vital aspect of future treatment interventions.

Chapter 3: Methodology

This chapter discusses the research design and hypotheses of the study, and defines the independent and dependent variables and target populations. It also describes the instruments used, the method of recruitment, and the procedures of data collection. The chapter concludes with an analysis of the data.

Hypotheses

A cross-sectional research design was implemented to test the two hypotheses in this study.

Hypothesis 1

Higher levels of peer relational health, mutuality in partnerships, and relationship quality with children are associated with lower levels of depression and higher levels of self-esteem in a population of previously incarcerated mothers.

Hypothesis 2

The risks (negative effects) of substance abuse history and trauma symptoms on depression and self-esteem for previously incarcerated mothers are buffered by higher levels of peer relational health, partnership mutuality, and relationship quality with their children.

These hypotheses arose from expectations about the sample characteristics, based on previous research on the variables of interest (depression, self-esteem, trauma symptoms, substance abuse history, and relationship quality) (Browne et al., 1999; Houck & Loper, 2002; Moe, 2004; Poehlmann, 2005; Swift, 1998; Zlotnick et al., 2003), as well as the theoretical expectations of the role of relationships in trauma theory suggested by

Herman (1992) and female psychological development theorists who propose that healthy connections with others are essential to psychological well-being (Gilligan, 1982; Jordan, 2004; Jenkins, 2004; Miller, 1976). The hypotheses predict that relatively high levels of peer relational health, quality of one's relationship with children, and perceived mutuality in partnerships may act as buffers against the negative effects of trauma symptoms and substance abuse history (e.g., depression and low self-esteem).

Variables

This study involves three sets of variables. The social relationship variables include peer relational health, perceived mutuality in partnerships, and perceived quality of the mother-child relationship. The mental health variables include symptoms of depression and self-esteem. The history and stimulus variables include history of substance abuse and current trauma symptoms. For Hypothesis 1, the independent variables are peer relational health, perceived mutuality in partnerships, and perceived quality of the mother–child relationship; the dependent variables are symptoms of depression and self-esteem. Hypothesis 2 introduces into the analysis the control variables of substance abuse history and current trauma symptoms. The definition of each variable appears below.

Peer Relational Health

Peer relational health is defined as a way of relating that is shared and in which all involved parties participate as fully as possible; experiences of engagement, authenticity, and empowerment are felt (Laing, Tracy, Taylor, Williams, Jordan & Miller, 2002; Miller & Stiver, 1997). Peer relational health was assessed with the use of the Relational Health Indices (RHI) (Liang et al., 2002). The RHI allows scores to range from 0 to 48.

Frey, Beesley, and Miller (2006) found a mean score of 38 for college women; Frey, Toblin, and Beesley (2004) reported a mean score of 34 for the same population. For the purposes of the present study, no cut-off score was necessary, since the full range of values for this variable was correlated for both hypotheses.

Perceived Mutuality in Partnerships

Mutuality in partnerships is characterized as partners being open to influence, emotional availability, and a changing pattern of responding to and affecting the other in a relationship that involves bidirectional movement of feelings, thoughts, and activities between two people (Genero, Miller, & Surrey, 1992). Mutuality was assessed with the use of the Mutual Psychological Development Questionnaire (MPDQ) (Genero, Miller, & Surrey, 1992). Mean mutuality scores on the MPDQ range from 1 to 6, with higher scores indicating higher levels of mutual relational support (Randolph & Reddy, 2006). Because the MPDQ had not yet been used with women who have a history of substance abuse, the literature did not indicate an average cut-off score to distinguish between low and high levels of mutuality for this population. However, Randolph and Reddy reported an average mutuality score of 4 for women in their sample, 64% of whom reported a history of sexual abuse. No cut-off score was used in the present research, because the full range of values for this variable was utilized for both hypotheses.

Perceived Quality of the Mother-Child Relationship

The women's perceived quality of relationships with their children was defined by the presence of positive and negative feelings experienced with regard to the target child (Lowman, 1980; Poehlmann, 2005). This relationship was assessed by utilizing the Inventory of Family Feelings (IFF) (Lowman, 1980). Possible scores for this measure

range from 0 and 38. Higher scores indicate more positive affect/higher quality of relationship, and lower scores indicate more negative affect/lower quality of relationship. Lowman suggested that scores fall into three categories: low (0-23), middle (24-31), and high (32-38). However, a cut-off score was not necessary for this study, since the full range of values for this variable was analyzed for both hypotheses.

Symptoms of Depression

Symptoms of depression include changes in appetite or weight; sleep or psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating, or making decisions; re-occurring thoughts of death, or suicide ideation; and plans or attempts to harm oneself (DSM-IV, 1994). The level of depressive symptoms was assessed with the use of the Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). The CES-D is hand-scored and has a range of possible scores from 0 to 60, with higher scores indicating the presence of greater symptomatology. A tally of 17 or above indicates possible depression, and a score of 23 or more indicates probable depression (Randolph & Reddy, 2006). No cut-off score was necessary in the present study, as the full range of values for this variable was correlated in the test of the hypotheses.

Self-esteem

Self-esteem is defined as positive regard and feelings of ability and worth for oneself. Self-esteem was assessed with the use of the Rosenberg Self-Esteem Scale (1965). The range of possible scores for this scale is from 10 to 40, with higher scores suggesting higher self-esteem. While no validated cut-off score distinguishes between "low" and "high" self-esteem on this instrument, Gutierres and Todd (1997) reported a

mean score of 24.3 for a sample of female substance abusers with a history of childhood abuse. For the present study, no cut-off score was necessary because the full range of values for this variable was analyzed in the test of the hypotheses.

Substance Abuse

Substance abuse is defined as the compulsive use of drugs and/or alcohol. Substance abuse was assessed with the use of the Short Michigan Alcohol Screening Test (SMAST) (Selzer, 1971) and the Drug Abuse Screening Test-10 (DAST-10) (Skinner, 1982). Both instruments were used for this study so that both alcohol and narcotic abuse could be investigated. Each instrument requires a cut-off score of 3 to indicate problematic drinking or drug abuse-related behavior, with higher scores indicating greater levels of lifetime severity. In the present study, no cut-off score was used because the full range of scores for this variable was analyzed in the test of Hypothesis 2.

Trauma Symptoms

Trauma symptoms are defined as experiences that result from the survival of a trauma, an event outside the victim's control in which the victim experienced or witnessed a physical threat such as sexual abuse, physical abuse, war combat, seeing someone killed, and/or surviving a natural disaster. After the trauma, the person may experience intense helplessness, fear, or horror (or, if a child at the time, agitated or disorganized behavior). The following problems are often suffered as symptoms: intrusion (memory of the trauma returns even when unwanted, as in nightmares, flashbacks, or images), avoidance (numbing, detachment, evading any reminder of the trauma), arousal (feeling hyped-up or easily startled, suffering sleep problems or anger), and lower functioning (problems with relationships, work, or other major areas of life)

(DSM –IV, 1994). Trauma symptoms were assessed with the use of the Trauma Symptom Checklist-40 (TSC-40) (Briere & Runtz, 1989). Scores range from 0 to 120, with higher scores indicating a greater level of traumatic symptomatology. In the present study, no cut-off score was necessary because the full range of values for this variable was correlated in the test of Hypothesis 2.

Participants

Study participants were mothers with a history of incarceration. All were over the age of 18 years. All were literate, English-speaking women of varying races, and may or may not have been on parole.

Instrumentation

Demographic and Motherhood Questionnaire

A demographic form was included in the questionnaire packet. This form allowed for the provision of age, race/ethnicity, level of education, partner status, type of charge, and amount of time since discharge. It also included the following child-oriented questions: number and age of children, and whether the mothers were currently living with these children.

Relational Health Indices (RHI)

The RHI (Liang et al., 2002) was used to assess experiences of engagement, authenticity, and empowerment/zest, which have been observed in mutually growth-fostering relationships (Miller & Stiver, 1997). The RHI, a relatively new measure of women's relationship quality, assesses for growth-fostering connections with mentors, peers, and communities. It was created with the use of principles from Miller's (1976) relational theory of women's psychological development. The RHI has three separate

for the present research because the full range of values for this variable was used for both hypotheses.

The Inventory of Family Feelings (IFF)

The IFF (Lowman, 1980) was administered to all participants in this study, to assess the mothers' perceived quality of relationships with a target child. The target child was defined as the child with whom the mother felt the closest. The IFF is a 38-item self-report instrument designed to measure the strength of positive and negative feelings in dyadic family relationships (Lowman). Mothers were asked to rate the quality of their relationships with only their target children by noting whether they agree, are neutral, or disagree with various descriptions of the relationship. Examples are "I feel wanted by this family member" and "I am seldom proud of this person." The IFF has strong internal consistency, reported at .98, and high temporal reliability, reported at .96.

This instrument was used in prior studies to examine the affective component of parent-child relationships (Burman, John, & Margolin, 1987; Gangong & Coleman, 1988). Kitzmann and Emery (1994), who employed the IFF to assess the quality of parent-child relationships, reported high internal consistency at .87 for the mothers in their sample. Moreover, Poehlmann (2005) utilized the IFF to evaluate incarcerated women's perceived quality of relationship with a target child and reported a Cronbach alpha of .85. This measure is hand-scored, with scores ranging from 0 to 38. Higher scores indicate a more positive affect/higher quality of relationship, and lower scores illustrate a more negative affect/lower quality of relationship. Lowman (1980) suggested that scores fall into three categories: low (0-23), middle (24-31), and high (32-38).

subscales that address three different types of relationships: peer, mentor, and community. These subscales can be used independently (Liang et al.). The peer subscale was used for this study since it was designed to assess dyadic peer relationships. This subscale is a 12-item self-report measure. In a study designed to examine the psychometric properties of the RHI, Liang et al. demonstrated alpha = .85 for the peer subscale.

This instrument was administered to all participants, who were asked to indicate on a 5-point Likert scale the "number that best applies to your relationship with a close friend" (Liang et al., p. 35). The Likert scale for this study was 0 (never) to 4 (always), with the eighth item reverse-scored, allowing scores to range from 0 to 48, with higher scores indicating better relational health. Items include "I feel understood by my friend" and "I am uncomfortable sharing my deepest feelings and thoughts with my friend." Frey et al. (2006) found a mean score of 38 for college women, with an alpha level of .88 for the peer subscale; Frey et al. (2004) reported a mean score of 34 for the same population, with an alpha level of .89 for the peer subscale. In addition, LaBrie et al. (2008) recently used this instrument with women to examine the effect of relational health on alcohol consumption and alcohol consequences, and reported an alpha level of .80 for the peer subscale. These scholars cited the strong reliability of the RHI peer subscale, confirming its utility for the present study. For the purposes of this research, no cut-off score was necessary, since the full range of values for this variable was used for both hypotheses.

The Mutual Psychological Development Questionnaire (MPDQ)

The MPDQ (Genero, Miller, & Surrey, 1992) was used to assess for perceived mutuality in the women's relationships with their partners. The scale was completed by

only those who identified themselves as being in a current intimate relationship with either a male or female. The MPDQ is a 22-item self-report hand-scored instrument that serves as a measure of perceived mutuality in close relationships. The participants were asked to indicate on a 6-point Likert scale how often they experience each of the following with their partner. Items include "When we talk about things that matter to my spouse/partner, I am likely to be receptive" and "When we talk about things that matter to me, my spouse/partner is likely to get frustrated." The first half of the questions address the respondents' experiences with their partners, while the second half address the respondents' perceptions of their partners' experiences.

A mutuality score is calculated by dividing the total on the two segments by the number of questions. Mean mutuality scores range from 1 to 6, with higher scores indicating higher levels of mutual relational support (Randolph & Reddy, 2006). While Randolph and Reddy derived an average mutuality score of 4 for women in their sample, 64% of whom reported a history of sexual abuse, the MPDQ has not yet been used with women who may have a history of substance abuse. This instrument has yielded strong inter-item reliability, with alphas ranging from .89 to .92 (Genero, Miller, Surrey, & Baldwin, 1992). Genero et al. (1992) demonstrated that the MPDQ is significantly correlated with the Dyadic Adjustment Scale (Spanier, 1976) for spouses/partners in the areas of relationship satisfaction ($r = .70$) and relationship cohesion (i.e., joint and active participation in the relationship) ($r = .75$). Additionally, mutuality and self-report ratings for depression, using the CES-D (Radloff, 1977), were found to be negatively correlated for spouse/partner relationships ($r = -.35$), indicating that low mutuality scores are likely to be coupled with significantly high levels of depression. No cut-off score was necessary

However, no cut-off score was necessary for this study, since the full range of values for this variable was used for both hypotheses.

Center for Epidemiological Studies Depression Scale (CES-D)

The CES-D (Radolff, 1977) was used to assess the presence and intensity of symptoms of depression. This scale was developed by Radloff (1977) at the Center for Epidemiological Studies and the National Institute for Mental Health. The CES-D is a 20-item self-reporting instrument designed to assess for symptoms of clinical depression in both adolescents and adults. All participants were asked to respond to the CES-D. Answers were reported on a Likert scale of 0 to 3 for frequency of each occurrence in the previous week (0 = rarely or none of the time/less than one day, to 3 = most of the time/5-7 days). Items include "I felt I was just as good as other people" and "I enjoyed life." The range of possible scores is from 0 to 60, with higher scores indicating the presence of greater symptomatology. The CES-D is a hand-scored instrument. A tally of 17 or above indicates possible depression, and a score of 23 or higher implies probable depression (Randolph & Reddy, 2006). However, for the purposes of this study, cut-off scores were not necessary because the entire range of values for this variable was used to examine the data.

Reliability of the CES-D has been demonstrated at r = .90 (Radloff, 1977), and internal consistency (alpha) was found to be .90 (Conerly, Baker, Dye, Douglas, & Zabora, 2002). This commonly used measure was previously employed in numerous studies of incarcerated women (Kubiak, Young, Siefert, & Stewart, 2004; Martin, Cotten, Browne, Kurz, & Robertson, 1995; Poehlmann, 2005).

The Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (1965) was employed to evaluate current level of global self-esteem. It is a widely used 10-item self-report measure. All research participants were asked to fill out this survey. Response options consist of a 4-point Gutman scale (1 = Strongly Disagree to 4= Strongly Agree). The scale is hand-scored; items 2, 5, 6, 8, and 9 are reversed, with possible scores ranging from 10 to 40. Higher scores suggest higher self-esteem. While no cut-off score has been validated to distinguish between "low" and "high" self-esteem on this instrument, Gutierres and Todd (1997) reported a mean score of 24.3 for a sample of female substance abusers with a history of childhood abuse. The Rosenberg Self-Esteem Scale has evidenced good internal consistency, with a reliability of .80 (Boyd et al., 2002; Wobie, Eyler, Garva, Hou, & Behnke, 2004). Moreover, it has been used with an incarcerated population of women, resulting in Cronbach's alpha of .81 (St. Lawrence et al., 1997). For the purposes of this study, cut-off scores were not necessary because the entire range of values for this variable was used to examine the data.

Short Michigan Alcohol Screening Test (SMAST)

The SMAST (Selzer, Vinokur, & Rooijen, 1975), which was used to identify alcohol-related problems, was administered to all participants. This commonly used 13-item self-administered instrument is designed to screen for lifetime alcoholism in a variety of populations. The SMAST is an abbreviated version of the MAST, which was developed by Selzer (1971). It asks participants to answer yes-or-no questions regarding the behavioral consequences of alcohol consumption in their lifetime. Questions include "Do you feel you are a normal drinker?" and "Have you ever been in a hospital because

of drinking?" This instrument is hand-scored. A cut-off score of 3 is required to indicate problematic drinking behavior. The developers of the SMAST reported internal consistency reliability of .76 (Selzer et al.). The full range of scores was used for the purposes of this study.

Overall, the utility of the SMAST as a measure of alcohol-related problems is supported in the literature. Weighted reliability estimates, when centered on .80, indicated that the MAST and the SMAST often produce similar scores and acceptable reliability for most research purposes (Dyson et al., 1998; Shields, Howell, Potter, & Weiss, 2007). Breakey, Calabrese, Rosenblatt, and Crum (1998) also found the original MAST to have high sensitivity at .82. The long version of the MAST has been used with an incarcerated population (White, Ackerman, & Caraveo, 2001), and Najavits (2004) recommended it as a useful screening tool for possible substance-use disorder.

Drug Abuse Screening Test-10 (DAST-10)

The DAST-10 (Skinner, 1982) is a commonly used 10-item self-report instrument designed for clinical screening of drug-related problems. The DAST-10 was administered to all study participants. The three versions of the DAST are the DAST-28, the DAST-20, and the DAST-10. Research on the original long version, the DAST-28, evidenced an alpha coefficient of .92 (Skinner). Because the DAST-10 has shown strong concurrent validity with the DAST-28 ($r = .97$) (Cocco & Carey, 1998) and is much shorter, it was used for the present study, for practical purposes.

Like the original DAST-28, the DAST-10 contains yes-or-no questions related to the experience of potential consequences of drug use in a person's lifetime. Items include "Do your friends or relatives know or suspect you abuse drugs?" and "Do you try to limit

your drug use to certain situations?" The DAST-10 is hand-scored, with a cut-off score of 3 indicating a substance use problem (Skinner, 1982). This instrument is a widely administered measure and has evidenced internal consistency at .94 (Carey, Carey, & Chandra, 2003; Yudko, Lozhkima, & Fouts, 2007). Additionally, the DAST-28 has been used with a population of incarcerated women (Biron, Brochu, & Desjardins, 1995). Because of its high concurrent validity (r =.97), the utility of the DAST-10 is thought to be appropriate for this study. The full range of DAST-10 scores was used.

Trauma Symptom Checklist–40 (TSC-40)

The TSC-40, a revised version of the TSC-33 (Briere & Runtz, 1989), was used to assess for presence and frequency of trauma symptoms. The TSC-40 is a 40-item self-report research tool designed to assess for adult symptomatology of childhood or adulthood traumatic experience. It was administered to all study participants. The TSC-40 involves a four-point rating system to acquire a full-scale total score, ranging from 0 to 120, as well as six optional subscale scores for dissociation, anxiety, depression, Sexual Abuse Trauma Index (SATI), sleep disturbance, and sexual problems. Because the TSC-40 assesses for the presence and frequency of trauma symptoms, rather than a diagnosis of PTSD, it has no cut-off score. However, Gold, Milan, Mayall, and Johnson (1994) showed scores ranging from 70 to 77.4 for women with a history of sexual abuse. Only the full-scale total score was used for the purposes of this study.

Each item is rated according to the symptom's frequency of occurrence over the previous two months, ranging from 0 (never) to 3 (often). Examples include insomnia, nightmares, "spacing out" (going away in one's mind), loneliness, and headaches. Victorson, Farmer, Burnett, Ouellette, and Barocas (2005) reported good internal

consistency for the TSC-40 for full-scale total scores, with an alpha coefficient of .91. For a sample of female childhood sexual abuse survivors, Cronbach's alphas ranged from .76 to .85 (Ginzburg et al., 2006). Additionally, the TSC-40 has been used with populations of incarcerated women who have experienced both trauma and substance abuse (Messina & Grella, 2006; Saldgado, Quinlan, & Zlotnick, 2007). Scores range from 0 to120, with higher scores indicating a greater level of traumatic symptomatology.

Method of Recruitment

Approval to recruit participants was granted by the directors of three local community aftercare programs: Community Education Centers, Redeem-Her, and F.O.R.G.E. These programs are specifically designed to assist previously incarcerated women with re-entry support. The director at each aftercare community program was contacted and given an explanation of the study. A letter of solicitation was sent to the program director, and written agreements for participation were obtained.

Data Collection

The method of approaching potential participants and collecting data was as follows. The directors of the participating local community aftercare programs for former female prisoners granted approval to recruit participants during program meetings. Prior to the data collection, in program meetings at each site, the program coordinator announced the opportunity to participate in this study on designated dates. Additionally, a flyer was handed out at these meetings, indicating that participation was anonymous and confidential, and providing the date, time, location, and length of participation. Program members were told that if they volunteered to participate, they would be asked to attend a data collection meeting on a designated date and would be given the details of the study

along with a confidential instrument package at that time. Because participants might not have additional transportation and extra time for data collection, their participation on that day would involve their participation in the study instead of their regular program meeting. In addition, so that potential participants would not lose the benefit of their program meeting, a relational health workshop would be held at the end of the data collection meeting. Volunteers were also informed at all meetings that they were free to drop out at any time during the data collection. Data collection was conducted in a separate room so that neither program staff nor the primary investigator (PI) would know who participated.

At the time of data collection, the PI gave each interested volunteer an informed consent form. This document served as the consent form if the individual chose to participate after the introduction of the study. It also contained a description of the study and provided assurance that all data was both anonymous and confidential. Anonymity was upheld by having the PI and the program staff leave the room before participation was solidified. Once the PI and the program staff left the room, the research assistant informed the potential participants that they could choose not to participate and that this decision would not result in any consequences whatsoever. Their decision to decline participation was signified by choosing one of the following three options: (a) stop and turn in their incomplete instrument packet if they chose to leave early, (b) falsely fill out the instruments by indicating the same answer for each question, or (c) sketch directly on the questionnaires. The return of an incomplete, faulty, or sketched-on Confidential Instrument Packet indicated the decision not to participate.

It is important to note that the research assistant did not have access to any of the data collected, thereby insuring confidentiality of the data. Involvement in this study was voluntary, and the opportunity to ask questions about participation and the instruments was provided by the research assistant before, during, and after data collection.

The research assistant had no affiliation with any of the established sites. She reviewed the instruments and study protocol, and was trained to answer related data-collection questions as they arose. As a PhD student in the Family Psychology program at Seton Hall University, she had taken several research classes and had passed the Human Participants Protection Education for Research Teams course. Additionally, she had acted in the role of research assistant on two research studies. For both projects, her responsibilities included data collection. In this student's professional and academic career, she had worked in various settings, including incarcerated facilities and a community counseling agency where she worked with victims of domestic violence. In each of these settings, specific training was dedicated to crisis prevention and intervention. When individuals had stated or implied that they or someone else might be in danger of harm to self or other, this student was responsible for assessing the situation to determine if it was necessary to notify the proper authorities to ensure safety. Furthermore, as an African-American woman and a professionally trained psychotherapist, she was effective in establishing rapport and safety with participants, many of whom were women of color. These academic and professional training experiences were thought to qualify this doctoral student to assist in the data collection for this study.

Participants were assured that their choosing not to participate would involve no negative consequences. In order to proceed with participation, volunteers understood that their responses and decisions to participate would not be shared with anyone else. It was explained to the women that since no participant-identifying information would ever be gathered and the PI would not know who participated, they would always remain anonymous. As an additional safeguard, research participants did not sign an informed consent document, but signified consent simply by returning their completed surveys. It was made clear to them that if any participants were on parole, their parole officer would not be informed of their decision to participate or not participate, and that their decision would in no way impact their parole status.

Anonymity was maintained in two ways. First, participants were instructed not to put their names on any of the instruments, and there was no signed informed consent. Second, before data collection began, the PI left the room, and all volunteers present had the opportunity to decline participation without the knowledge of either the PI or program staff. Other than the volunteers, the research assistant was the only one in the room during data collection. All data was gathered in the strictest confidence. Confidentiality and anonymity of participation was upheld by having all materials, including the unanswered questionnaires, returned to a designated box that was not in view of program staff or the PI. The research assistant did have access to the collected data.

These measures were employed to assure that the PI would not know who participated. Collected surveys were kept in a secure location that was accessible to only this investigator. Upon agreement to participate, a Confidential Instrument Package was counter-balanced and distributed. This package included a demographic questionnaire,

the TSC-40 (Briere & Runtz, 1989), the SMAST (Selzer, 1971), the Rosenberg Self-Esteem Scale (1965), the RHI (Liang et al., 2002), the CES-D (Radloff, 1977), the MPDQ (Genero, Miller, & Surrey, 1992), the DAST-10 (Skinner, 1982), and the IFF (Lowman, 1980).

Participants were given as much time as they needed to finish all the instruments. Upon completion of the instruments, participants were asked to seal their questionnaires in the envelopes provided. The introduction of the research project, responses to questions or concerns, distribution of informed consent, and clarification of the voluntary, confidential, and anonymous nature of the study took approximately 15 minutes. The answering of the surveys took approximately 30 minutes, and the relational health workshop took 20 minutes. This workshop was simply an informational discussion on the ways different kinds of relationships make people feel and how relationship quality may affect substance abuse and relapse. A phone number that does not require callers to identify themselves was provided if any participants wanted to talk about any reactions, questions, or concerns that arose while answering the questionnaires. A list of counseling referrals was also available.

Finally, collected surveys were stored in a locked file cabinet that was accessible to only this researcher and this researcher's advisor, Dr. Ben Beitin. All data was stored electronically on a password-protected USB memory key that was kept in the locked file cabinet. Only this researcher and Dr. Ben Beitin, the research advisor, had access to the data.

Data Analyses Plan

Descriptive Statistics

Prior to testing the study hypotheses, descriptive statistics were computed for the demographic variables. Means and standard deviations were calculated for all study variables. The variables for this investigation included peer relational health (RHI), perceived mutuality in partnerships (MPDQ), perceived relationship with child (IFF), symptoms of depression (CES-D), self-esteem (Rosenberg Self-esteem Scale), substance abuse history (DAST-10 and SMAST), and trauma symptoms (TCS-40).

Power Analysis

Prior to conducting inferential statistical analyses to examine the study hypotheses, data was verified to ensure that appropriate assumptions were met for the use of parametric statistics (e.g., homogeneity of variance, normality, and linearity). Based on a power analysis using Cohen methodology and G-power computer software, participants (n = 90) were sought for the per protocol sample of participants, and the conventional parameters for calculation were assumed (alpha = 0.05; effect size = moderate, 0.30, power = 0.80).

Statistical Analysis

The present investigation involved testing two primary study hypotheses by analyzing a sample made up of mothers from the target population of previously incarcerated mothers.

Hypothesis 1. Higher levels of peer relational health, mutuality in partnerships, and relationship quality with children are associated with lower levels of depression and higher levels of self-esteem in a population of previously incarcerated mothers.

Hypothesis 1 was examined using two independent multiple regression models. The first examined depression with peer, partner, and child relational health. The second model tested self-esteem with peer, partner, and child relational health.

Initially, goodness of fit analysis using analysis of variance (ANOVA) was conducted to compare the ratio of regression variance (common factor variance) to residual variance (error) in each model. Significant ANOVAs were expected ($p < .05$). Following a significant ANOVA, regression coefficients (standardized beta, *t*-test of each predictor, sri^2) were examined to determine the pattern of relationships that existed between criterion and predictor variables. A significant negative relationship was expected to exist between depression and each of the three predictor variables, thereby supporting the hypothesis that higher levels of relational health are associated with lower levels of depression. Furthermore, a significant positive relationship was expected to exist between self-esteem and each of the three predictor variables, supporting the hypothesis that higher levels of relational health are associated with higher levels of self-esteem.

Overall variance within the models was examined via inspection of R and R^2 values for each model. Individual contribution (unique variance) of predictors to each model was examined via inspection of partial correlations.

Hypothesis 2. The risks (negative effects) of substance abuse history and trauma symptoms on depression and self-esteem for previously incarcerated mothers are buffered by higher levels of peer relational health, partnership mutuality, and relationship quality with their children.

In order to test this hypothesis, the Sobel methodology (Baron & Kenny, 1986) was employed to determine whether peer relational health, partnership mutuality, or child relationship quality mediates the impact of substance abuse and trauma history on depression and self-esteem. The Sobel methodology is a well-recognized test of mediation that employs a multi-step approach to determining the extent to which a variable serves as a mediator of a pre-specified relationship. The test involves the three-step process outlined below. Figure 1 depicts one iteration of this test using the variables of substance abuse, depression, and relationship quality.

1. Demonstrate that a significant relationship exists between the criterion and predictor variables (e.g., depression and substance abuse; Figure 1, Path c).
2. Demonstrate that a relationship exists between the proposed mediator and the predictor variable (e.g., relationship quality and substance abuse; Figure 1, Path A)
3. Demonstrate that a relationship exists between the proposed mediator and the criterion variable (e.g., relationship quality and depression; Figure 1, Path b)

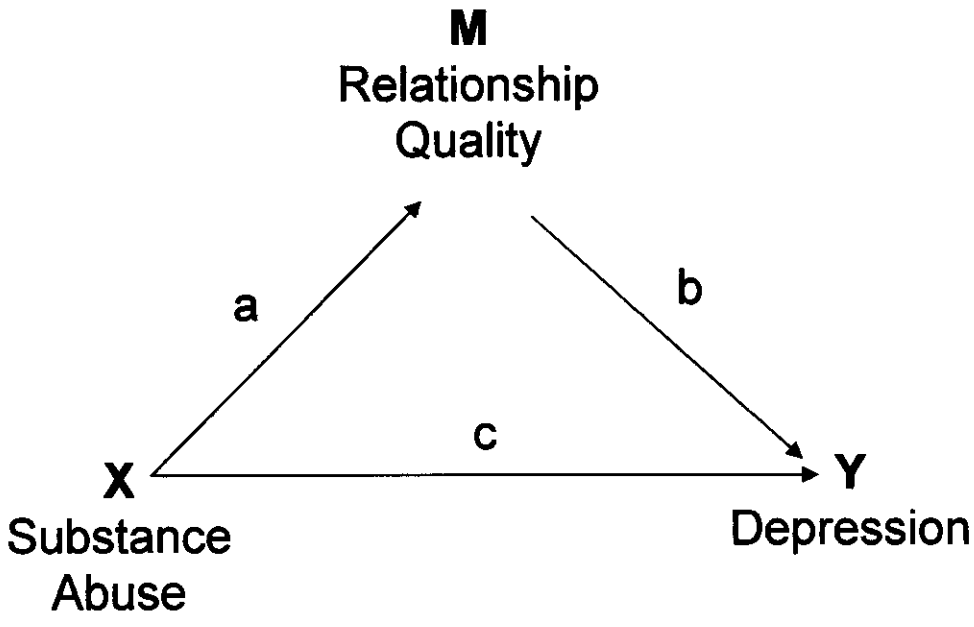

Figure 1. Sobel Methodology to Determine Relationship among Variables

Coefficients for the Sobel methodology were obtained using ordinary least squares (OLS) regression. A methodology similar to that used for Hypothesis 1 was employed initially to determine goodness of fit for each regression path of the model. Following significant ANOVA, the pattern of coefficients was then examined to determine if the data supported a mediating relationship, by using the three-step Sobel methodology. A variable was considered a mediator if, and only if, all three test requirements (paths) were met.

It was expected that when depression is the dependent variable, substance abuse history and trauma symptoms would be directly (+) related to depression, while relations with peers, partner, and, child were expected to be inversely (-) related to depression. When self-esteem replaced depression as the dependent variable, the signs were expected to be reversed, meaning that substance abuse history and trauma symptoms would be

reversed and that they would be negatively (-) related to self-esteem, while quality of peer, partner, and child relations was expected to be positively (+) related to self-esteem.

Chapter 4: Results

Demographics

The present study involved 91 participants, all of whom were mothers with a history of incarceration. Frequency counts were calculated for age (Table 1). Ages ranged from 21 to 63 years, with a mean of 37.7 years (SD = 8.5). All other demographic characteristics are indicated in Table 2. The majority of study participants were African-American (n = 64; 70.3%), followed by Caucasian (n = 15; 16.5%), Hispanic (n = 7; 7.7%), Asian (n = 1; 1.1%), and other (n = 1; 1.1%). Among the participants, 39% (n = 36) had at least some undergraduate college education, and 30.8% (n = 28) reported graduating from high school or obtaining a GED. Twenty-two percent reported some high school education (n = 20), while 6.6% (n = 6) reported an education level of eighth grade or less.

Consistent with the study protocol, 100% of participants were in a romantic relationship at the time of assessment. Among the reasons for incarceration were a reported drug-offense violation (n = 44, 48.4%), violent offense (n =22, 24.2%), and other offenses 20% (n = 20). Fifty-one percent (n = 47) of participants had been discharged from incarceration less than six months prior to the study: 17.6% (n = 16) had been released between 6 and 12 months prior, and 30.8% reported having been out of prison for over 1 year (n = 28).

On average, participants had 2.5 children (SD = 1.6) ranging in age from less than 1 year to 27 years (M = 7.1, SD = 5.6). Thirty of the women had one child; 61 had at least two; 39 had at least three; 21 had at least four; and 6 had five children. Tables 3 through 7 exhibit the frequency distribution of ages for all children. Of the total 223 children, 61%

(n = 136) were not living with their mothers, and 94.5% (n = 86) were under the age of 18 years.

Table 1. Frequency Distribution of Participant Age

Age	Frequency	Percent	Valid Percent	Cumulative Percent
21.00	1.00	1.10	1.10	1.10
23.00	1.00	1.10	1.10	2.20
24.00	1.00	1.10	1.10	3.30
25.00	2.00	2.20	2.20	5.49
26.00	3.00	3.30	3.30	8.79
27.00	1.00	1.10	1.10	9.89
28.00	5.00	5.49	5.49	15.38
29.00	5.00	5.49	5.49	20.88
30.00	7.00	7.69	7.69	28.57
31.00	2.00	2.20	2.20	30.77
32.00	1.00	1.10	1.10	31.87
33.00	2.00	2.20	2.20	34.07
34.00	2.00	2.20	2.20	36.26
35.00	2.00	2.20	2.20	38.46
36.00	2.00	2.20	2.20	40.66
37.00	5.00	5.49	5.49	46.15
38.00	5.00	5.49	5.49	51.65
39.00	3.00	3.30	3.30	54.95
40.00	10.00	10.99	10.99	65.93

41.00	2.00	2.20	2.20	68.13
42.00	3.00	3.30	3.30	71.43
43.00	5.00	5.49	5.49	76.92
44.00	3.00	3.30	3.30	80.22
45.00	4.00	4.40	4.40	84.62
46.00	1.00	1.10	1.10	85.71
47.00	3.00	3.30	3.30	89.01
48.00	1.00	1.10	1.10	90.11
50.00	2.00	2.20	2.20	92.31
51.00	1.00	1.10	1.10	93.41
52.00	1.00	1.10	1.10	94.51
53.00	1.00	1.10	1.10	95.60
54.00	2.00	2.20	2.20	97.80
55.00	1.00	1.10	1.10	98.90
63.00	1.00	1.10	1.10	100.00
Total	91.00	100.00	100.00	

Table 2. Sample Overall Demographic Characteristics (n = 91)

Variable	*n*	%
Ethnicity		
Black	64	70
White	15	16.5
Hispanic	7	7.7
Asian	1	1.1
Other	1	1.1
Education of Participant		
Some College or More	6	6.6
Some High School	20	22
High School Graduate or GED	28	30.8
Some College or More	36	36.9
Type of Offense		
Drug Offense	44	48.4
Violent Offense	22	24.2
Public Order (DUI/DWI)	1	1
Other Offense	20	22.2
Time Since Discharged		
Less than 1 week	5	5.5
1 to 2 weeks	10	11.0
3 to 4 weeks	11	12.1
1 to 2 months	8	8.8

Variable	*f*	%
3 to 5 months	13	14.3
6 to 8 months	9	8.8
9 to 12 months	8	8.8
Over 1 year ago	28	30.8
Children		
Total	223	
Adult	5	6
Not Adult	86	94
Living with Mother	87	39.9
Not living with mother	136	61

Table 3. Frequency Distribution for Age of First Child

Age	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	1.00	1.10	1.10	1.10
2.00	3.00	3.30	3.30	4.40
3.00	1.00	1.10	1.10	5.49
4.00	2.00	2.20	2.20	7.69
6.00	3.00	3.30	3.30	10.99
7.00	3.00	3.30	3.30	14.29
8.00	1.00	1.10	1.10	15.38
9.00	3.00	3.30	3.30	18.68
10.00	6.00	6.59	6.59	25.27
11.00	5.00	5.49	5.49	30.77
12.00	5.00	5.49	5.49	36.26
13.00	2.00	2.20	2.20	38.46
14.00	3.00	3.30	3.30	41.76
15.00	2.00	2.20	2.20	43.96
16.00	5.00	5.49	5.49	49.45
17.00	8.00	8.79	8.79	58.24
18.00	4.00	4.40	4.40	62.64
19.00	6.00	6.59	6.59	69.23
20.00	1.00	1.10	1.10	70.33
21.00	1.00	1.10	1.10	71.43
22.00	5.00	5.49	5.49	76.92

24.00	4.00	4.40	4.40	81.32
25.00	2.00	2.20	2.20	83.52
26.00	1.00	1.10	1.10	84.62
27.00	4.00	4.40	4.40	89.01
28.00	3.00	3.30	3.30	92.31
29.00	1.00	1.10	1.10	93.41
31.00	1.00	1.10	1.10	94.51
32.00	1.00	1.10	1.10	95.60
35.00	1.00	1.10	1.10	96.70
37.00	1.00	1.10	1.10	97.80
38.00	2.00	2.20	2.20	100.00
Total	91.00	100.00	100.00	

Table 4. Frequency Distribution for Age of Second Child

Age	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	30.00	32.97	32.97	32.97
1.00	1.00	1.10	1.10	34.07
2.00	3.00	3.30	3.30	37.36
3.00	2.00	2.20	2.20	39.56
5.00	3.00	3.30	3.30	42.86
6.00	3.00	3.30	3.30	46.15
7.00	2.00	2.20	2.20	48.35
8.00	3.00	3.30	3.30	51.65
9.00	4.00	4.40	4.40	56.04
10.00	4.00	4.40	4.40	60.44
11.00	1.00	1.10	1.10	61.54
12.00	1.00	1.10	1.10	62.64
13.00	3.00	3.30	3.30	65.93
14.00	3.00	3.30	3.30	69.23
15.00	2.00	2.20	2.20	71.43
17.00	1.00	1.10	1.10	72.53
18.00	3.00	3.30	3.30	75.82
19.00	3.00	3.30	3.30	79.12
20.00	2.00	2.20	2.20	81.32
21.00	1.00	1.10	1.10	82.42
22.00	2.00	2.20	2.20	84.62

23.00	2.00	2.20	2.20	86.81
24.00	4.00	4.40	4.40	91.21
25.00	1.00	1.10	1.10	92.31
26.00	1.00	1.10	1.10	93.41
28.00	1.00	1.10	1.10	94.51
29.00	2.00	2.20	2.20	96.70
32.00	1.00	1.10	1.10	97.80
37.00	1.00	1.10	1.10	98.90
38.00	1.00	1.10	1.10	100.00
Total	91.00	100.00	100.00	

Table 5. Frequency Distribution for Age of Third Child

Age	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	52.00	57.14	57.14	57.14
0.30	1.00	1.10	1.10	58.24
2.00	1.00	1.10	1.10	59.34
3.00	2.00	2.20	2.20	61.54
4.00	1.00	1.10	1.10	62.64
5.00	4.00	4.40	4.40	67.03
7.00	3.00	3.30	3.30	70.33
8.00	2.00	2.20	2.20	72.53
10.00	1.00	1.10	1.10	73.63
11.00	2.00	2.20	2.20	75.82
13.00	3.00	3.30	3.30	79.12
14.00	3.00	3.30	3.30	82.42
15.00	3.00	3.30	3.30	85.71
16.00	1.00	1.10	1.10	86.81
17.00	1.00	1.10	1.10	87.91
18.00	3.00	3.30	3.30	91.21
20.00	2.00	2.20	2.20	93.41
21.00	1.00	1.10	1.10	94.51
22.00	1.00	1.10	1.10	95.60
23.00	1.00	1.10	1.10	96.70

28.00	1.00	1.10	1.10	97.80
35.00	1.00	1.10	1.10	98.90
42.00	1.00	1.10	1.10	100.00
Total	91.00	100.00	100.00	

Table 6. Frequency Distribution for Age of Fourth Child

Age	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	70.00	76.92	76.92	76.92
2.00	1.00	1.10	1.10	78.02
3.00	2.00	2.20	2.20	80.22
4.00	1.00	1.10	1.10	81.32
6.00	3.00	3.30	3.30	84.62
7.00	1.00	1.10	1.10	85.71
9.00	1.00	1.10	1.10	86.81
10.00	1.00	1.10	1.10	87.91
11.00	1.00	1.10	1.10	89.01
12.00	1.00	1.10	1.10	90.11
13.00	2.00	2.20	2.20	92.31
16.00	1.00	1.10	1.10	93.41
17.00	2.00	2.20	2.20	95.60
18.00	2.00	2.20	2.20	97.80
28.00	1.00	1.10	1.10	98.90
30.00	1.00	1.10	1.10	100.00
Total	91.00	100.00	100.00	

Table 7. Frequency Distribution for Age of Fifth Child

Age	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	85.00	93.41	93.41	93.41
2.00	1.00	1.10	1.10	94.51
4.00	1.00	1.10	1.10	95.60
8.00	2.00	2.20	2.20	97.80
11.00	1.00	1.10	1.10	98.90
24.00	1.00	1.10	1.10	100.00
Total	91.00	100.00	100.00	

Scale Reliability Analyses

Prior to conducting planned analyses, scales were examined for inter-item reliability, using Crohnbach's coefficient alpha. Table 8 provides a summary of coefficient alphas for all of the primary study variables. All coefficients were above 0.70 and suggest good reliability for the scales employed in this study.

Table 8. Coefficient Alpha Inter-item Reliability Coefficients for Study Scales

Scale	Alpha
CES-D	0.91
MPDQ – Part A	0.84
MPDQ – Part B	0.84
TSC-40	0.96
DAST	0.91
IFF	0.94
RHI	0.91
SMAST	0.87

Multicollinearity

As a means of understanding shared variance among the primary study variables, all domain scales were intercorrelated (Table 9). Most of the variables included in the present study share variance, therefore indicating a substantial degree of overlap within the domains assessed. This finding might be expected, considering the high degree of association between the constructs assessed in this study.

Table 9. Intercorrelations for Primary Study Variables

	1	2	3	4	5	6	7	8
1. CES-D	1.00	-0.55*	-0.60*	0.64*	0.11	-0.57*	-0.52*	0.28*
2. MPDQ		1.00	0.53*	-0.37*	-0.04	0.52*	0.67*	-0.29*
3. Rosenberg			1.00	-0.32*	-0.18	0.39*	0.52*	-0.23*
4. TSC-40				1.00	0.19	-0.48*	-0.38*	0.21*
5. DAST-10					1.00	-0.18	-0.09	0.37*
6. IFF						1.00	0.44*	-0.35*
7. RHI							1.00	-0.31*
8. SMAST								1.00

Note. *$p < 0.05$

Descriptive Statistics for Primary Study Variables

Table 10 provides means and standard deviations for primary study variables that were examined in this study. The mean CES-D depression score was 18.9 (*SD* = 12.4; range = 0-50), with 43% of the sample classified with "possible depression" (scores 0-17) and 65% classified with "probable depression" (scores 17 to 50). With regard to trauma,

the TSC-40 assesses for the presence and frequency of trauma symptoms rather than a diagnosis of PTSD; therefore, no diagnostic cut-off score exists. However, Gold et al. (1994) found scores to range from 70 to 77.4 for women with a history of sexual abuse. In the present study, the average score was 35.6 (SD = 26.5; range = 0-97), with only 12.1% of participants scoring in the 70.0+ range identified by Gold et al. Rosenberg self-esteem scores ranged from 14 to 40, with a mean of 29.8 (SD = 6.7; range = 14-40). While no validated cut-off score exists to distinguish between "low" and "high" self-esteem on this instrument, Gutierres and Todd (1997) reported a mean score of 24.3 for a sample of female substance abusers with a history of childhood abuse. The present sample of previously incarcerated women produced a mean score of 28.9, suggesting that the current sample's self-esteem was slightly higher than that of Gutierres and Todd's sample.

Using the SMAST (Selzer, 1971) criteria of a cut-off score of 3 or greater, 54.9% of participants were classified as "alcoholic," with scores ranging from 0 to 12 (M = 4.1, SD = 3.6). Similarly, the DAST-10 (Skinner, 1982) criteria of a cut-off score of 3 or more revealed drug abuse problems in 73.6% of participants, with scores ranging from 0 to 10 (M = 5.4, SD = 3.6).

Scores for the relational variables collected for this study were reported as follows. The mean score for the MPDQ (partner relationship variable) was 4.1 (SD = .82). Randolph and Reddy (2006) derived an average mutuality score of 4 for women in their sample, 64% of whom reported a history of sexual abuse. Prior to the present study, the MPDQ had not been used with women with a history of substance abuse. Participants in this study produced a mean RHI (peer relationship variable) score of 33.9 (SD = 9.5),

with 52.7% of the sample scoring below 35. Frey et al. (2006) found a mean score of 38 for college women; and Frey et al. (2004) reported a mean score of 34 for the same population. Prior to the present study, this instrument had not been employed for assessing women with a history of incarceration. Lastly, the sample in this study produced a mean of 26.0 and $SD = 11.9$ for the IFF (child relationship variable). Higher scores indicate more positive affect/higher quality of relationship, and lower scores denote more negative affect/lower quality of relationship. Lowman (1980) reported that scores fall into three categories: low (0-23), middle (24-31), and high (32-38). In the present sample, 35.1% of the participants were in the low category; 16.4% were in the middle category; and 48.5% reported high affective quality.

Table 10. Mental Health Variables (n = 10)

Variable	M	(SD)	Range
Peer Relational Health	33.90	(9.56)	13-51
Mutuality in Partnerships	4.12	(.825)	2.80-6.00
Mother-child Relationship Quality	26.05	(11.99)	0-38
Depression	18.94	(12.45)	0-50
Self-esteem	29.82	(6.78)	14-40
Trauma Symptoms	35.62	(26.58)	0-97
History of Drug Abuse	5.47	(3.649)	0-10
History of Alcohol Abuse	4.15	(3.684)	0-12

Hypotheses

The present investigation involved testing two primary hypotheses with a sample of mothers who were previously incarcerated.

Hypothesis 1

Hypothesis 1 stated that within the collected sample, higher levels of peer relational health, mutuality in partnerships, and relationship quality with children are associated with lower levels of self-reported depression and higher levels of perceived self-esteem. This hypothesis was examined using two independent multiple regression models. In the first model, depression was a criterion, with peer, partner, and child relational health as predictors. The second model had self-esteem as the criterion, with peer, partner, and child relational health as predictors.

Initially, a model fit for each regression was conducted with ANOVA in which the ratio of regression variance (common factor variance) to residual variance (error) was examined. A significant ANOVA suggested that the model was a good fit and provided a sufficient amount of regression variance to be considered predictive.

Depression. When depression was entered as the dependent variable, a significant model emerged ($F(3, 87) = 22.6, p < .001$). As Table 11 reveals, negative relationships existed between depression and each of the three predictor (relational) variables, thereby supporting the hypothesis that higher levels of relational health are associated with lower levels of depression. However, while the initial ANOVA was significant and the relationship variables accounted for 43% ($R = .662$) of the variance, only the mother-child relationship emerged as significant ($p < .001$). It is important to note that the partner

variable, while not statistically significant, did tend toward statistical significance (p = .053) and may have theoretical relevance that could be further explored in future studies.

Table 11. Hypothesis 1: Relational Variables and Depression

Variable	Beta (Standardized)	t	p	Partial Correlations
Peer Relational Health	-0.21	-1.88	0.06	-0.20
Mutuality in Partnerships	-0.23	-1.97	0.05	-0.21
Mother-child Relationship Quality	-0.36	-3.81	0.00	-0.38

Dependent variable: Depression

Self-esteem. With regard to self-esteem, it was expected that significant positive relationships existed between self-esteem and each of the three predictor (relational) variables, supporting the hypothesis that higher levels of relational health are associated with higher levels of self-esteem. The data supported this hypothesis. The initial ANOVA was significant ($F(3,87) = 14.9, p < .001$). Specifically, the relational predictors accounted for 34% (R = .583) of the variance in self-esteem. As indicated in Table 12, while all three relational variables were related to self-esteem, only peer and partner relationships emerged as statistically significant. Therefore, in contrast with the variable of depression, the child variable did not appear to have a significant effect on self-esteem in this study.

Table 12. Hypothesis 1: Relational Variables and Self-Esteem

Variable	Beta (Standardized)	*t*	*p*	Partial Correlations
Peer Relational Health	0.27	2.28	0.03	0.24
Mutuality in Partnerships	0.29	2.32	0.02	0.24
Mother-child Relationship Quality	0.12	1.18	0.24	0.13

Dependent variable: Self-esteem

Hypothesis 2

The second hypothesis was constructed to test whether the risks (negative effects) of substance abuse history and trauma symptoms on depression and self-esteem for previously incarcerated mothers are buffered by higher levels of peer relational health, partnership mutuality, and relationship quality with their children.

In order to test this hypothesis, the Sobel methodology (Baron & Kenny, 1986) was employed to identify whether peer relational health, partnership mutuality, or child-relationship quality mediates the impact of substance abuse and trauma history on depression and self-esteem. Coefficients for the Sobel methodology were obtained using OLS regression. As with the first hypothesis, all regression models were tested for fit prior to interpreting regression coefficients.

Mediation of substance abuse and depression. A significant ANOVA was revealed for the effect of previous alcohol (SMAST) and drug (DAST-10) abuse on indicators of depression ($F(2,88) = 3.776$, $p = .027$). However, examination of the coefficients to determine if the data supported a mediating relationship (Table 13)

revealed that only alcohol had a significant impact on indicators of depression, with drug use not significantly related to depression in this sample. Further regression analyses were not warranted for investigation of mediation effects of drug use on depression, given that the two variables were not found to be related.

Table 13. Hypothesis 2: Step I/Substance Abuse and Depression

Variable	Beta (Standardized)	*t*	*p*	Partial Correlations
History of Alcohol Abuse	0.28	2.53	0.01	0.26
History of Drug Abuse	0.01	0.05	0.96	0.01

Dependent variable: Depression

However, with regard to alcoholism, as seen in Table 14, when mother-child relationship was entered as the dependent variable, it was significantly related to past alcohol abuse, thereby meeting the criteria for the second step of the Sobel methodology.

Table 14. Hypothesis 2: Step 2/History of Alcohol Abuse and Mother-Child Relationship Quality

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
History of Alcohol Abuse	-0.35	-3.56	0.00	-0.35

Dependent variable: Mother-child relationship quality

In the third step (Table 15), the mother-child relationship was significantly related to depression. While this third step was already confirmed in testing Hypothesis 1, it is repeated here for convenience.

Table 15. Hypothesis 2: Step3/Mother-Child Relationship Quality and Depression (as seen in Hypothesis 1)

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Mother-child Relationship Quality	-0.36	-3.81	0.00	-0.38

Dependent variable: Depression

Therefore, the above three-step Sobel methodology provides support for the first component of Hypothesis 2, which proposed that the mother-child relationship can potentially buffer the impact of previous alcohol abuse on indicators of depression.

Due to the lack of statistical significance in the relationship between the partner variable and depression, further data analysis was not warranted with regard to the potential buffering effect of the partner variable. However, the significant mediating effect of the child relationship, combined with the presented theoretical framework of this study, provided potential support indicating that the partner variable may buffer the impact of a history of alcohol abuse on the experience of depression.

Mediation of trauma symptoms and depression. In the investigation of whether the mother-child relationship mediates the impact of current trauma symptoms on indicators of depression, the three-step Sobel methodology was again employed. The first step was to demonstrate that a significant relationship exists between current trauma symptoms and indicators of depression. Significant results emerged ($F(1,89) = 61.684, p < .001$). Table 16 provides the coefficients for this finding.

Table 16. Hypothesis 2: Step 2/Trauma Symptoms and Depression

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Trauma Symptoms	0.64	7.85	0.00	0.64

Dependent variable: Depression

The second step was to ascertain whether a statistically significant relationship existed between current trauma symptoms and the mother-child relationship. As shown in Table 17, a significant relationship existed between these two variables. Data obtained in Hypothesis 1 showed that in this study, peer and partner relationships could not serve as potential mediators for depression (i.e., peer and partner relationships were not significantly related to depression). Therefore, further statistical analysis of these variables was not warranted.

Table 17. Hypothesis 2: Trauma Symptoms and Mother-Child Relationship Quality

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Trauma symptoms	-0.48	-5.15	0.00	-0.48

Dependent variable: Mother-child relationship quality

The third step of the Sobel methodology, conducted under Hypothesis 1 but repeated in Table 18 for convenience, illustrates that the mother-child relationship was significantly related to depression.

Table 18. Hypothesis 2: Step 3/Mother-Child Relationship Quality and Depression (as seen in Hypothesis 1)

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Mother-child Relationship Quality	-0.36	-3.81	0.00	-0.38

Dependent variable: Depression

The three-step Sobel methodology supports the first component of Hypothesis 2, which states that the mother-child relationship significantly mediates indicators of depression in mothers who are currently experiencing trauma symptoms. These results provide potential support of the theoretical relational model proposed in this study and therefore strengthen the possible mediation of the partner variable in buffering the influence of trauma symptoms on depression, although not actually attaining statistical significance ($p = .05$).

For the second component of Hypothesis 2, the Sobel methodology (Baron & Kenny, 1986) was again employed. An initial ANOVA was conducted to determine whether prior substance abuse (SMAST and DAST-10) had a significant relationship with self-esteem. The ANOVA did not emerge as significant ($F(2,88) = 2.88, p = .06$), nor did the coefficient data for history of alcohol (Standardized Beta = -.19, partial correlation = -.17, $t = -1.68, p = .10$) or drug abuse (Standardized Beta = -.108, partial correlation = -.10, $t = -.97, p = .33$). Because the initial criteria of the Sobel methodology were not met (i.e., that variables potentially mediated must be related), no further analysis was conducted to determine whether relationship quality buffers the impact of substance abuse history on self-esteem. Therefore, this element of Hypothesis 2 was not supported,

and it was assumed that these relationships do not mediate substance abuse history and self-esteem.

Mediation of trauma symptoms and self-esteem. The relationship between current trauma symptoms and the relationship variables of peer and partner, determined significant in Hypothesis 1, was also investigated. The initial ANOVA indicated a significant relationship between trauma symptoms and self-esteem ($F(1,89) = 10.029, p = .002$), thereby supporting the first criteria for Sobel mediation of both the peer and the partner variables. As illustrated in Table 19, the significant coefficients obtained provided rationale for further analysis.

Table 19. Hypothesis 2: Step 1/Trauma Symptoms and Self-Esteem

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Trauma Symptoms	-0.32	-3.17	0.00	-0.32

Dependent variable: Self-esteem

To investigate the potential mediation effect of the peer relationship on current trauma symptoms and self-esteem, the second step of the Sobel methodology was employed. This step involved investigating whether a significant relationship existed between current trauma symptoms and the peer relationship. This step revealed a significant ANOVA ($F(1,89) = 15.2, p < .001$). The coefficient data shown in Table 20 supports this finding.

Table 20. Hypothesis 2: Step2/Trauma Symptoms and Peer Relational Health

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Trauma Symptoms	-0.38	-3.90	0.00	-0.38

Dependent variable: Peer relational health

The third requirement of the Sobel method was to establish significance between the peer relationship variable and self-esteem. This step, initially examined under Hypothesis 1, is presented again in Table 21 for convenience, and demonstrates that the peer relationship was significantly related to self-esteem.

Table 21. Hypothesis 2: Step3/Peer Relational Health and Self-Esteem

Variable	Beta (Standardized)	*t*	*p*	Partial Correlations
Peer Relational Health	0.27	2.28	0.03	0.24

Dependent variable: Self-esteem

As evidenced by the three-step Sobel methodology, peer relational health can potentially mediate the impact of current trauma symptoms and their effect on levels of self-esteem in previously incarcerated mothers. These data provide support for this portion of Hypothesis 2.

With regard to the potential mediation of the partner relationship on current trauma symptoms and self-esteem, the three-step Sobel methodology was again utilized. The first step of verifying the significance between trauma symptoms and self-esteem was determined earlier in the analysis of Hypothesis 2 (standardized beta = -.32, partial correlation = -.32, t = -3.17, p <.00). The second step was intended to verify the

relationship between trauma symptoms and the partner relationship $F(1,89) = 13.93, p < .001$. The relationship was significant, as is reflected in Table 22.

Table 22. Hypothesis 2: Step 2/Trauma Symptoms and Mutuality in Partnerships

Variable	Beta (Standardized)	*t*	*p*	Partial Correlation
Trauma Symptoms	-0.37	-3.73	0.00	-0.37

Dependent variable: Mutuality in partnerships

The third requirement of the Sobel method was to exhibit significance between the partner relationship variable and self-esteem. This step, originally tested earlier in the analyses, is provided again as Table 23, and demonstrates that peer relationship was significantly associated with self-esteem.

Table 23. Hypothesis 2: Step 3/Mutuality in Partnerships and Self-Esteem

Variable	Beta (Standardized)	*t*	*p*	Partial Correlations
Mutuality in Partnership	0.29	2.32	0.02	0.24

Dependent variable: Self-esteem

This three-step method revealed findings to support this portion of Hypothesis 2. Specifically, the data suggest that a healthy partner relationship can potentially buffer the impact of current trauma symptoms on feelings of self-esteem of previously incarcerated mothers.

Overall, the results show strong statistical significance in the hypothesized directions for the three-pronged relational model (peer, partner, and child) on the mental health variables of depression and self-esteem. In particular, the positive impact of a healthy mother-child relationship on symptoms of depression and the potential capacity

of peer and partner relationships to improve self-esteem are significant. Despite this study's shortcoming in actually attaining statistical significance, the statistical support for the relational model as a whole, in conjunction with the presented theoretical framework, gives credibility to the partner relationship's ability to influence depression. Significant findings also confirmed that peer relational health and perceived mutuality in partnerships can buffer the effects of trauma symptoms on self-esteem. The perceived quality of the mother-child relationship can buffer the impact of trauma symptoms and history of alcoholism on depression.

Chapter 5: Discussion

This chapter provides a restatement of the problem and purpose of the study, followed by a review of the major findings and a discussion of these findings with reference to the hypotheses and previous literature. Clinical implications are discussed, along with study limitations and implications for future research.

Restatement of the Problem

Tragically, it has been well-documented that women in prison have extremely high rates of mental health incidents that are often related to childhood and adulthood interpersonal abuse (Browne et al., 1999; Bradley & Davino, 2002; Jenkins, 2004). Several researchers have taken the theoretical position that the high incidence of drug-related crimes and substance abuse, combined with inadequate treatment for the extensive trauma histories of women in prison, is largely responsible for high recidivism rates (Bill, 1998; Garcia-Coll et al., 1997; Kubiak, 2004; Zlotnick et al., 2003). Previous research, focusing on the prevalence of traumatic events in the lives of incarcerated women, found that 78% to 85% of these women experienced at least one trauma in their lifetimes (Browne et al., 1999; Pomeroy, 1998; Kane & DiBartolo, 2002). These data indicate that incarcerated women have trauma rates two to three times higher than those of the general population of women. Moreover, 70% of women in prison are mothers who, prior to incarceration, were often the primary caretakers of their children (Bureau of Justice Statistics, 2000b); Zaplin & Dougherty, 1998).

Despite the rapidly increasing rates of women in prison, most of whom are mothers, and the devastating effect incarceration has on the lives of their children, therapeutic models are still often based on the needs of men and stem from an individual

medical model that does not adequately attend to women. Proponents of male-oriented models stress rules and offer ways to advance within a structured environment, while advocates of female-oriented programs believe treatment is more successful when it focuses on relationships with other people and offers ways to manage life successfully, both during and after incarceration, while keeping these relationships intact (Belknap et al., 1997, as cited in Covington, 1998a).

These issues indicate the presence of a growing problem in correctional institutions. And little empirical data substantiates the recommended relational paradigms and systemic models thought to be useful in the treatment of women both during and after imprisonment. Furthermore, there is a dearth of empirical research that explores the mental health incidences and specific relational experiences of mothers post-incarceration.

Significance of the Study

The present study was designed to address this gap in the literature by exploring the link between the mental health and the relational health of mothers who have been incarcerated. Currently, little empirical data addresses how different types of relationships and specific qualities of relational interaction influence the mental health of previously incarcerated mothers. Therefore, this study explores whether and how relationships may buffer the psychological distress of mothers who have been in prison. Specifically, this study examines whether peer-relational health, the perceived quality of one's relationship with children, and perceived mutuality in partnerships can buffer the effects of trauma symptoms, a history of substance abuse, or the co-occurrence of these mental health issues on self-esteem and depression in post-incarcerated mothers.

Buffering effects refer to the degree of protective influence that the relationship quality variables have on the mental health variables of depression and self-esteem.

The relevance of this investigation is based upon previous research indicating that women in prison have extremely high rates of both childhood and adulthood interpersonal abuse and that 78% of these women are mothers (Bloom, 1995; Browne et al., 1999; Bradley & Davino, 2002; Garcia-Coll et al., 1997b; Jenkins, 2004; Najavits et al., 1999; Zlotnick et al., 2003). These data underscore the twofold utility of this research. First, the incidence of the identified mental health variables (depression, self-esteem, trauma symptoms, and substance abuse) in mothers post-incarceration is still relatively unknown, but the sample in this study provides useful data on this topic. Second, the analysis of the data addresses assertions by female psychological development theorists who contend that relational health and experiences of mutuality are crucial to the psychological well-being of women in general and in the treatment of previously imprisoned women in particular (Covington, 1998a; Jenkins, 2004; Jordan, 2004; Miller, 1976; Poehlmann, 2005; Swift, 1998).

The results of this study not only assist in clarifying the connection between the relational health and the mental health of post-incarcerated mothers, but also reveal the nuances of how different types of relationships and specific qualities of relational interactions may influence the mental health of previously incarcerated mothers. The research questions and hypotheses in this study are based upon a review of the literature and were proposed to assist in exploring these possibilities.

Overview of the Sample

Demographics

The present study involved 91 participants, all of whom were mothers with a history of incarceration. Ages ranged from 21 to 63 years with a mean of 37.7 years (*SD* = 8.5). The majority of participants were African-American (*n* = 64, 70.3%), followed by Caucasian (*n* = 15, 16.5%), Hispanic (*n* = 7, 7.7%), Asian (*n* = 1, 1.1%), and other (*n* = 1, 1.1%). Among the participants, 39% (*n* = 36) had at least some undergraduate college education, while 30.8% (*n* = 28) reported graduating from high school or obtaining a GED. Twenty-two percent reported some high school education (*n* = 20), while 6.6% (*n* = 6) reported an education level of 8th grade or less. The elevated levels of education for the present sample were surprising, in light of previous literature that suggested incarcerated women generally show lower levels of education (Covington, 1998b). However, at the time of the study, 30.8% of the sample had been out of prison for over one year and therefore may have had the opportunity to go back to school to earn a high school diploma or GED and/or take some college courses. Additionally, one of the data-collection sites was a local community college that collaborates with the aftercare program to assist women in going back to school.

Consistent with the study protocol, 100% of the participants were in a romantic relationship at the time of assessment. Among reasons for incarceration, a substantial proportion reported a drug-offense violation (*n* = 44, 48.4%), followed by a violent offense (*n* =22, 24.2%) and other offenses 20% (*n* = 20). The reported offense demographics were consistent with those of previous literature, which showed that incarcerated women typically had committed non-violent crimes (Covington, 1998b; Garcia-Coll et al., 1997; Grella et al., 2005; Jenkins, 2004). More specifically, however,

the crime demographics for the present study showed both drug offenses and violent crimes to be higher than those reported by the Bureau of Justice Statistics' *Special Report on Women Offenders* (2000), which indicated drug offense rates of 30% to 34% and violent offense rates of 12% to 28%. The differences between these figures and those of the present study suggest that drug use and perhaps violence is increasing in the lives of incarcerated women.

Fifty-one percent ($n = 47$) of the participants had been discharged from incarceration less than 6 months prior to this study; 17.6% ($n = 16$) had been released between 6 and 12 months prior; and 30.8% ($n = 28$) had been out of prison for over 1 year. It is important to note that the data were collected from women seeking re-entry support services at local aftercare organizations. This fact, combined with the high number of participants who had been discharged over 1 year earlier, suggested that obtaining a stable life post-incarceration is a long and difficult, and highlighted the need for an extended continuum of care.

On average, participants had 2.5 children ($SD = 1.6$) ranging in age from under 1 year to 27 years ($M = 7.1$, $SD = 5.6$). Notably, of the total 223 children ($n = 136$), 61% were not living with their mothers, and 94.5% ($n = 86$) were under the age of 18. Previous research by Zaplin and Dougherty (1998) indicated that prior to incarceration many women were the primary caretakers of their children. Thus, these figures underscore not only the vital role these women play in the development of their children, but also the consequential disrupted bonds and the inevitable emotional repercussions both parties experience, even post-incarceration. Specifically, somatization, depressive symptoms, and levels of anxiety related to parenting stress have been shown to be

elevated in incarcerated mothers (Houck & Loper, 2002; Poehlmann, 2005). These findings concur with the data from the current study that showed 65% of the mothers were above the clinical cut-off score of 16, and therefore experiencing elevated levels of depression. This result is especially salient in light of the emphasis that the CES-D (Radloff, 1977) places on the affective elements of depression. Moreover, the study's combined findings of high levels of depression, with a mother-child separation rate of 61%, are disturbing and call for the development of gender-specific re-unification programs both during and after incarceration.

Primary Study Variables

High levels of depression were found in the present sample of previously incarcerated mothers. Sixty-five percent of the mothers in this sample scored above the clinical cut-off score of 16 (Poehlmann, 2005; Radloff, 1977) and therefore were classified as experiencing levels of clinical depression. Additionally, because the CES-D assesses present affective state, scores suggest that these women were experiencing a depressive mood at the time of data collection. Although elevated, these scores were slightly lower than those reported by Poehlmann (2005), who found that 79% of currently incarcerated mothers experienced clinical levels of depression, signifying that incarceration may add to a mother's depression level. With regard to trauma, the TSC-40 instrument used in this study assesses for the presence and frequency of trauma symptoms rather than a diagnosis of PTSD; therefore, no PTSD classification rates were obtained for this study. Gold et al. (1994) found TSC-40 scores ranging from 70 to 77.4 for women with a history of sexual abuse. The average score in the present study was 35.6 (SD = 26.5), with only 12.1% of participants scoring in the 70.0+ range identified by

Gold et al. However, these numbers are in line with Goff et al.'s (2007) review of the literature, which revealed PTSD rates of 4% to 21% in prison samples, with women more highly affected. It is also important to keep in mind that the TSC-40 assesses for trauma symptoms experienced in only the previous two months. Therefore, additional women in the sample might have experienced more trauma symptoms (just not within the last two months), possibly explaining the discrepancy between the Gold et al. study and the current one.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) scores ranged from 14 to 40, with a mean of 29.8 (SD = 6.7). While no validated cut-off score exists to distinguish between "low" and "high" self-esteem on this instrument, Gutierres and Todd (1997) reported mean scores of 24.3 for a sample of women substance abusers with a history of childhood abuse. The present sample of incarcerated women produced scores higher than the Gutierres et al.'s sample. These higher scores could possibly be explained in two ways. First, previous research by Twenge and Crocker (2002) showed, in a meta-analysis of race and self-esteem, that Black women scored higher than White women and that White women scored higher than Hispanic, American Indian, and Asian women. Overall, highest to lowest self-esteem was as follows: Blacks, Whites, Hispanics, American Indians, and Asians (Twenge & Crocker, 2002). Therefore, the higher self-esteem level in the current study was consistent with the literature, especially considering that the sample from Gutierres and Todd (1997) was made up of American Indian, Mexican American, and Caucasian women, whereas the majority of participants in present research were African-American (n = 64, 70.3%), followed by Caucasian (n = 15, 16.5%), Hispanic (n = 7, 7.7%), Asian (n = 1, 1.1%), and other (n = 1, 1.1%).

A second possible reason for the higher self-esteem scores in this study could be the context of one of the data-collection sites. The women at this site regarded the meetings as much-anticipated reunions. They had been incarcerated together, were excited to see each other, and perhaps felt good as a result. This experience may have contributed to their sense of self-esteem at the time of data collection--especially if, as found in the present study, peer relationships are positively related to self-esteem (p = .02).

Using the SMAST (Selzer, 1971) criteria, 54.9% of participants were classified as "alcoholic." Similarly, the DAST-10 (Skinner, 1982) revealed drug abuse problems in 73.6% of the participants. These numbers are considerably higher than those reported in the *Special Report on Women Offenders* (2000), which showed that only 40% of women offenders reported a drug history on every measure that was used by the Bureau of Justice Statistics to obtain substance abuse data (i.e., ever used, used regularly, used one month before offense, and at time of offense). These differences suggest that substance abuse, along with drug offenses and violent crime, may also be on the rise among women with a history of incarceration.

Scores for the relational variables collected for this study were as follows. The mean score for the MPDQ (Genero, Miller, & Surrey, 1992) was 4.1 (SD = .82), coinciding with the results of Randolph and Reddy (2006), who obtained an average mutuality score of 4 for women in their sample, 64% of whom reported a history of sexual abuse trauma. For the RHI (Liang et al., 2002), the mean score was 33.9 (SD = 9.5), which was consistent with prior studies. Frey et al. (2004) reported a mean score of 34 for a population of college women. Finally, this sample yielded a mean of 26.0 and SD

of 11.9 for the IFF (Lowman, 1980). Higher scores indicate more positive affect and higher quality of relationship, and lower scores illustrate more negative affect and lower quality of relationship. Lowman (1980) suggested that scores fall into three categories: low (0-23), middle (24-31), and high (32-38). In the present sample, 35.1% of the participants were in the low category; 16.4% were in the middle category; and 48.5% reported high affective quality. While these results are contrary to those reported by Poehlmann (2005), who noted that results for the IFF were negatively skewed for a sample of incarcerated women, they are congruent with the data in the present study, demonstrating that low levels of current trauma symptoms were associated with healthy mother-child relationships.

Major Findings with Discussion and Integration of Hypothesis with Previous Literature

This study was designed to answer two research questions: (a) Are levels of peer relational health, mutuality in partnerships, and relationship quality with children associated with levels of depression and self-esteem in a population of previously incarcerated mothers? (b) Are the associations between relational variables and mental health variables affected by histories of substance abuse and current experiences of trauma symptoms in a population of previously incarcerated mothers?

Two hypotheses were investigated in this study. The first stated that higher levels of peer relational health, mutuality in partnerships, and relationship quality with children are associated with lower levels of depression and higher levels of self-esteem in a population of previously incarcerated mothers. The second stated that the risks (negative effects) of substance abuse history and trauma symptoms on depression and self-esteem

for previously incarcerated mothers are buffered by higher levels of peer relational health, partnership mutuality, and relationship quality with their children.

These hypotheses arose from expectations about the sample characteristics, based on previous research on depression, self-esteem, trauma symptoms, substance abuse history, and relationship quality as the variables of interest (Browne et al., 1999; Houck & Loper, 2002; Moe, 2004; Poehlmann, 2005; Swift, 1998; Zlotnick et al., 2003), as well as the theoretical expectations of the role of relationships in trauma theory suggested by Herman (1992) and female psychological development theorists who propose that healthy connections with others are essential to psychological well-being (Gilligan, 1982; Jordan, 2004; Jenkins, 2004; Miller, 1976). The hypotheses predict that relatively high levels of peer relational health, quality of one's relationship with children, and perceived mutuality in partnerships may act as buffers against the negative effects of trauma symptoms and substance abuse history (e.g., depression and low self-esteem).

Hypothesis 1

The present study's data showed that when peer, partner, and mother-child relationship quality was high, indicators of depression were low, thereby supporting the first part of Hypothesis 1: higher levels of relational health are associated with lower levels of depression. However, while the relational model accounted for 43% of the variance, only the mother-child relationship revealed a significant negative relationship with levels of depression (partial correlation = -.38, t = -.36, $p < .001$). While peer (p = .06) and partner (p = .05) relationships did not reach statistical significance ($p < .05$), the partner variable was just below significance and therefore warrants cautious interpretation.

The finding regarding perceived mother-child relationship quality as being negatively associated with indicators of depression is supported in previous research. Houck and Loper (2002) found that incarcerated mothers experienced intense stress when separated from their children, and parenting stress while in prison was also related to high levels of depression. Additionally, regular visitation by children has been associated with more positive maternal perceptions of the mother-child relationship (Snyder et al., 2001). Thus, the previous research, combined with the revealed 61% post-incarceration separation rate between mother and child, gives credence to the present study's data, which reveals the vital role that the mother-child relationship plays in the mental health of women upon discharge. These results also underscore the detrimental effects of mother-child separation both during and after incarceration.

The findings regarding the association between the peer and partner relationships and depression did not statistically support the hypothesis. Considering the mother-child separation rate of 61%, it is possible that mothers post-discharge often experience intense feelings of loss with regard to their children. Therefore, rather than reuniting with their children upon discharge, the relationship remains as a loss, contributing to feelings of unprocessed grief and potentially leading to indicators of depression. In contrast, reunification with a peer or partner is more likely. While the peer and partner relationships are important in generating feelings of support and self-esteem, they are unable to affect the deeper feelings associated with probable depression due to the separation from a child.

The mother-child relationship did not significantly influence level of self-esteem; therefore, the results did not support the second part of Hypothesis 1. One possible reason

for this result is that while this population of previously incarcerated mothers experiences symptoms of depression, due to in part to the status of their relationship with their children, they may not derive their entire sense of self-worth from being a mother; due to separation/incarceration, they have had to find other avenues to feel good about themselves. The 61% of women upon discharge who are not living with their children are probably spending their time with other adults, namely peers and partners, rather than their children. This possibility converges with claims by RCT proponents. While past relationship disconnections are thought to have a cumulative impact, current relationship processes are vitally important to women's mental health as well (Jordan, 2004). Moreover, scholars of female psychological development posit that woman's self-esteem development and psychological growth occur within a relational context (Gilligan, 1982; Gilligan et al., 1990; Miller, 1976). If the available relational context for a post-incarceration mother is made up of peers and/or partners, her self-esteem is influenced by her peer and partner relationships rather than her relationship with her child.

Hypothesis 2

The second hypothesis under investigation entailed exploring whether peer, partner, and child relational variables mediate the effects of histories of substance abuse and current experience of trauma symptoms on mental health variables in a population of previously incarcerated mothers. It was hypothesized that the risks (negative effects) of substance abuse history and trauma symptoms on depression and self-esteem for previously incarcerated mothers are buffered by higher levels of peer relational health, partnership mutuality, and relationship quality with their children. Obtaining results for the second hypothesis was a three-step process: (1) establish if a significant relationship

exists between a history of substance abuse and trauma symptoms on indicators of depression or levels of self-esteem; (2) establish if a significant relationship exists between substance abuse or trauma variables and relational quality variables; (3) establish if a significant relationship exists between relational quality variables and depression or self-esteem. If all three of these conditions are established, then it can be concluded that relational quality variables mediate the relationship between depression or self-esteem and substance abuse or trauma variables. The mediation is a buffering effect if the signs of these two relationships are in the opposite directions.

Depression

In the initial analysis, when depression was the dependent variable the data showed that only a history of alcoholism and current trauma symptoms were significantly associated to indicators of depression. Specifically, when a mother reported having a high level of current trauma symptoms or past alcohol abuse, her depression level was significantly high. Previous drug use, however, was not related to depression in this sample. Consequently, further analysis was performed with regard to only alcoholism and trauma symptoms. Because full investigation of this hypothesis was dependent on obtaining significant results on the relational variables in Hypothesis 1, only the mother-child relationship was explored as a mediator between a history of alcohol abuse and levels of depression. The peer and partner relationships did not show significance and therefore were not explored.

The investigation revealed that if a previously incarcerated mother is experiencing trauma symptoms and/or has a history of alcoholism, a healthy relationship with her child can possibly lessen the experience of depressive affect. This finding is vital in light of

previous data confirming that women in prison have extremely high rates of trauma (75% to 85%) and substance abuse, and approximately 75% of these women are mothers (Bloom, 1995; Browne et al., 1999; Bradley & Davino, 2002; Bureau of Justice Statistics Special Report, 2000b; Garcia-Coll et al., 1997; Jenkins, 2004; Kane & DiBartolo, 2002; Najavits et al., 1999; Pomeroy, 1998; Zlotnick et al., 2003). Furthermore, researchers have suggested that the high incidence of drug-related crimes and substance abuse, combined with the extensive trauma histories of women, is largely responsible for high recidivism rates (Bill, 1998; Garcia-Coll et al., 1997; Kubiak, 2004). This assertion underscores the importance of the possible buffering effect of the mother-child relationship revealed in the current study. Also notable is the statistical support for the three-pronged relational model as a whole and the trending relevance of the impact of the partner variable on depression. These findings are particularly pertinent, in light of the data indicating that the rate of increase in the number of women on parole between 1989 and 1998 (132%) was three times that of the increase for men (48%) (Harm & Phillips, 2001).With female incarceration rates still rapidly increasing, a rise in the number of women and children needing post-incarceration gender-specific and family services is inevitable.

These findings reflect the necessity of therapeutic interventions aimed at addressing not only co-occurring trauma symptoms and substance abuse, but also improving a previously incarcerated mother's relationship with her child. If these types of interventions can potentially buffer the impact of trauma symptoms and previous alcoholism on indicators of depression, perhaps relapse and recidivism will be less likely to occur. Earlier research supports the influence of the mother-child relationship. Boudin

(1998) stated that when a mother becomes incarcerated, often her primary emotional focus is her children, and her relationship with her child can be the source of both hope and distress. She may experience tremendous guilt, anxiety, and a sense of failure, as well as a motivation to change and grow in order to maintain a connection to her children and the part of herself that is a mother.

Moreover, qualitative data provided by Harm and Phillips (2001) showed that formerly incarcerated women identified their families as both the best and most difficult part of re-entry adjustment. Samples of the qualitative data portrayed the women voicing both the positive and negative aspects of discharge with regard to their children. On the positive side, the mothers indicated that their children were sources of inspiration and companionship, saying "they kept me going" (p.11) and "the best part of [being released] was being able to spend time with family and getting to know my daughter" (p.10). Conversely, other women reported experiences as negative: "I never felt good about myself....I felt a lot of guilt about the kids. The kids blamed me for everything that went wrong in their life. I just didn't have a base" (p. 12). Combined with the elevated levels of probable depression found in the present study, these data indicate that even upon discharge, mothers still struggle with symptoms of depression related to past trauma and alcoholism.

Self-esteem

When self-esteem was the dependent variable, initial analysis revealed that a history of alcohol or drug abuse was not significantly related to self-esteem. Therefore, no further analysis was conducted to determine whether relationship quality could mediate the impact of substance abuse history on self-esteem. This portion of Hypothesis

2 was not supported, suggesting that relationships could not buffer substance abuse history and self-esteem because the two constructs were unrelated in this sample.

The relationship between current trauma symptoms and self-esteem was also investigated. Initial analysis demonstrated that as trauma symptoms grew more intense, the mother's self-esteem dropped, thereby allowing further analysis to investigate the possible buffering effects of peer and partner relationships on self-esteem. As determined by the results of Hypothesis 1, the mother-child relationship was not significantly related to self-esteem, so further analysis was not warranted. In contrast, both peer and partnership variables significantly mediated the impact of current trauma symptoms on self-esteem. These data illustrate that when a mother is experiencing trauma symptoms, healthy peer and partner relationships may help her feel better about herself; therefore she may be less likely to relapse.

These quantitative findings reinforced previous qualitative data gathered by O'Brien and Bates (2005), who explored possible factors that may help women succeed upon re-entry from incarceration to society. These researchers found that in addition to a new environment that offers concrete goods such as clothing, bus fare, and money, it was also essential to have emotional and social supports that emphasize interpersonal and mutually rewarding relationships.

These findings were also affirmed by Harm and Phillips (2001), who pointed to the negative impact that partner relationships can have in the re-entry experience of previously incarcerated women. These researchers reported that of the 6% of the women who went home to partners or spouses upon release, only one of these women went home to a man who was not abusive. Most of the women highlighted themes similar to the

following statement, concurring with present findings suggesting that partner relationships are connected to self-esteem (and possibly depression):

> I did okay until I met a guy who started beating me. That's where it started. I lost my personal key, my emotional key. He told me I was no good as he'd kick me. I started smoking crack and when I start doing good it's like someone's beating me saying no, you don't deserve this, you're no good. (p. 13)

The women's testimonies demonstrate the central role that relationships play in the matrix of substance abuse, trauma, relapse, recidivism, and recovery, as well as the complex family dynamics these women encounter upon release.

The culmination of both the present and previous research provides both quantitative and qualitative support for the findings of previous scholars who contended that a reconceptualization of recidivism from prediction to process is necessary if society is to meet the needs of women upon discharge (Zamble & Quinsey, 1997). For example, previous thinking centered on the strength of various historical-predictor variables such as levels of education and prior adult convictions, rather than emphasizing current dynamic factors such as employment opportunities, relationship quality, and effective programming (Zamble & Quinsey).

Theoretical Implications

The theoretical implications of this study's findings are consistent with assertions by scholars who argue that therapeutic interventions for women both during and after incarceration should be based on both women's relational experiences and female psychological development theories (Covington, 1998a, Garcia-Coll et al., 1997; Jenkins, 2004). For example, the findings in the present study not only link peer, partner, and

child-relationship quality to mental health, but specifically show that the mother-child relationship and possibly the partner relationship can buffer the impact of trauma symptoms and history of alcohol abuse on indicators of depression. In addition, peer and partner relationships have the capacity to alleviate the impact of trauma symptoms on a mother's self-esteem. These data provide empirical support for the role of relationships in Herman's (1992) trauma theory and in RCT. Herman suggested that the intensity of distressing feelings does not leave the victim when the traumatic event is over:

> Core experiences of psychological trauma are disempowerment and disconnection from others. Recovery, therefore, is based upon the empowerment of the survivor and the creation of new connections. Recovery can take place only within the context of relationships; it cannot occur in isolation. (p.133)

Herman asserted that the primary effects are not just the destruction of the psychological structures of the self, but that the systems of attachment and meaning that link the survivor to others are also shattered. RCT theorists have also proposed that depression and severe relationship disconnections involving traumatic violation such as abuse, domestic violence, death, desertion, absent or unavailable parental figures, or prolonged separations can have a severely detrimental impact on the psychological health of women and their children (Miller & Stiver, 1997).

This theoretical perspective often views families as the most influential contexts in which relational and emotional development occur (Miller, 1988). Growth-fostering relationships and all disconnections are thought to be constructed within interpersonal and cultural contexts, and healthy development is fostered in families who have a high degree of mutuality and empathy among all members (Stiver, 1990). Relationships and

connections with others are necessities (Gilligan, 1982; Miller & Stiver, 1997; Miller, 1976; Stiver, 1990). They serve as the central organizing principles of women's lives, and disconnections are the source of psychological problems. The empirical data provided in this research, suggesting that a positive mother-child relationship can significantly buffer the impact of current trauma symptoms and a history of alcoholism on symptoms of depression, provides further evidence in support of these theoretical assertions.

This study makes an important contribution to the scientific literature, since no other study has examined the particular combination of variables investigated here. Furthermore, the formalized and deliberate empirical exploration of potential mediating relationships within this population methodologically enhances previous work in this area, and clearly lends additional conceptual support for the theoretical and clinical relevance of interpersonal relationships as they relate to trauma, substance abuse, self-reported self-esteem, and depression.

Clinical Implications

The present study was designed to explore the link between the mental health and the relational health of mothers who have been incarcerated. The objective for doing so was to provide empirical data on how different types of relationships and specific qualities of relational interaction influence the mental health of women who have been incarcerated, so that appropriate aftercare and re-entry programs can be developed.

Complex relationships exist among the psychological issues of depression, self-esteem, substance abuse, trauma symptoms, and women's perceived quality of their relationships with their peers, partners, and children. Therefore, it would be a clinical error to attempt to treat previously incarcerated women through the lens of an individual

medical model that focuses on only her and her substance abuse. While many would agree that the aim is to assist previously incarcerated women achieve successful re-entry, it must be recognized that they (and their feelings) do not exist in isolation; rather, they are intertwined in a complex relational matrix that has larger and further-reaching systemic implications.

Specifically, the finding that the mother-child relationship can buffer the impact of previous alcoholism and current trauma symptoms on depression clearly calls for the development of gender-specific, family re-unification programs aimed at enhancing and nurturing the connections between the mother and child and those within the entire family system. The value of maintaining and nurturing these connections both during and after incarceration cannot be overemphasized. Without family cohesion, effective parenting, and healthy attachments, the family cycle of incarceration is likely to continue. Corresponding research to investigate the effects of parental incarceration on children strengthens this argument by showing that children of incarcerated women suffer in several ways. Bloom (1995) found that these children show significant signs of distress that manifest as depression, aggression, poor school performance, and truancy. Progressive programming aimed at eradicating these negative outcomes has demonstrated that addressing the emotional and relational issues of incarcerated mothers is extremely valuable to both mother and child (Boudin, 1998; Marcus-Mendoza, 2004; Zaplin, 1998).

From this perspective, couple therapy--grounded in principles of RCT and aimed at generating feelings of mutuality, empathy, and empowerment--could also be of assistance in improving partner relationships so that feelings of safety, hope, and self-esteem can be generated. On a community level, the feelings of powerless and isolation

that so often plague trauma survivors may be alleviated by the creation of peer support groups that utilize women's relational strengths to provide them emotional connection and networking opportunities. From a social policy perspective, the implementation of programs to assist formerly incarcerated women is often a costly endeavor that requires state and federal funding. Because the attainment of these funds is often based on quantitative empirical research with significant results supporting specific types of programs, it is hoped that the findings of this study will assist in that endeavor.

Overall, the data reported in this study demonstrate that the implementation of therapies founded on individual medical paradigms that view women in isolation may not adequately attend to their needs. Instead, family re-unification efforts, community- based programming, and social policies leading to the funding of therapeutic interventions founded on systemic relational theory are thought to be essential. It has been demonstrated that women thrive when they are connected to others, and are more at risk when they are in unhealthy relationships that are void of mutuality. Psychological issues such as depression, substance abuse, self-esteem, and trauma symptoms are linked to relational problems in women who have been incarcerated; therefore, treatment providers, program developers, and policy makers should focus on building safe and healthy relational contexts in which these women can heal.

Study Limitations

The following are potential limitations of this study. Because the sample consisted of only previously incarcerated mothers who were involved in a partner relationship, primarily of African-American descent, more educated than previous literature suggested, and resided in an urban setting, results should be applied with caution to other groups.

Additionally, this study employs a cross-sectional research design and therefore provides only a snapshot of this sample at one point in time. This feature is of particular relevance to this research because both mental health and relational variables are dynamic and may fluctuate, depending on circumstances that may trigger various feelings and perceptions. Therefore, external reliability concerns may be warranted.

Controlling for internal reliability issues throughout the study was a top priority, and all aspects of the study were implemented and completed. However, fidelity to the data collection and scoring procedures were not assessed by anyone other than the researcher. Additionally, a central aspect of this research was the assessment of the subjectivity of the women's experiences, making self-report a necessary means of data collection. The clinical data (e.g., depression and self-esteem assessments) were not cross-validated, thus allowing for possible elements of participant bias. Potential sample bias is also a possible concern, since the sample was limited to previously incarcerated mothers who were actively seeking aftercare assistance. These women may have a different clinical profile than women who do not seek aftercare. For example, women who voluntarily seek aftercare assistance may be experiencing lower levels of depression and trauma symptoms than women who do not seek aftercare; therefore, they may be higher-functioning, more motivated, and more hopeful about recovery.

Implications for Future Research

An exploration of whether and how relationships may buffer the psychological distress of previously incarcerated mothers has been presented. In general, implications for future research may include the development and assessment of treatment models including accessing women's relational strengths, addressing the co-occurrence of trauma

and substance abuse, and facilitating the development of safe and healthy relationships for women both during and after incarceration. Additionally, the portions of the hypotheses that were not supported merit further exploration. The finding that neither previous drug abuse nor alcohol abuse was related to self-esteem warrants investigation, as do the data showing that prior alcohol abuse was associated with depression while drug abuse was not. Also, it was surprising that peer and partner relationships buffered trauma symptoms' effect on self-esteem but the mother-child relationship did not. All of these inconsistencies deserve further examination and suggest additional avenues of inquiry.

A particular area of relevance for future research is the trend of the partner variable in potentially impacting depression. The result, although thought to be theoretically credible, was just below the threshold for statistical significance ($p = .053$). Given the high level of intimate partner violence that many previously incarcerated women encounter, further research is necessary to verify this trend. This area of investigation is essential, so that therapies aimed at addressing the impact of the often violent partner relationships in the lives of previously incarcerated women can be funded and appropriately implemented.

Finally, no other instruments were available to evaluate the particular theory-based constructs of peer relational health and mutuality in partner relationships. The use of the RHI (Liang et al., 2002) and the MPDQ (Genero, Miller & Surrey, 1992) was theoretically essential to the core premise of this research. While these instruments have previously been used with samples of women who presented clinical profiles similar to those of the present sample, neither measure had been used previously with a population

of incarcerated or post-incarcerated women. Further research investigating the internal consistency and validity of these instruments and substantiating their use with women who have a history of incarceration would be valuable.

Summary and Conclusion

This study provides empirical support for the claim that the mental health and the relational health of mothers post-incarceration are intertwined. Healthy peer, partner, and child relationships were hypothesized to be essential ingredients in buffering and possibly healing the effects of trauma and substance abuse. The conclusions regarding this assertion received varying levels of empirical support, depending on the relationships between these variables and the mental health variables of depression and self-esteem. Peer relational health and perceived mutuality in partnerships can buffer the effects of trauma symptoms on self-esteem. The perceived quality of the mother-child relationship can buffer the impact of trauma symptoms and history of alcoholism on depression. Additionally, strong statistical and clinical significance was apparent in the hypothesized directions for the three-pronged relational model (peer, partner, and child) on the mental health variables of depression and self-esteem. Especially significant are the positive impact of a healthy mother-child relationship on symptoms of depression and the capacity of peer and partner relationships to raise self-esteem.

Conclusions and implications for theory and clinical practice are that cultural and feminist relational theorists of trauma and psychological development are correct in linking the role of relationships to emotional well-being and recovery from trauma (Gilligan, 1982; Herman, 1992; Jordan, 2004; Jenkins, 2004; Miller, 1976). This connection was shown to exist even for women with a history of incarceration who have

the powerful risk factors of current trauma symptoms and substance abuse history in their lives. This link between theory and the present data underscores the need for the development of treatment programs aimed at improving the family system and thus the relational health of these women.

The results of this research highlight both how the mental health issues of depression and self-esteem for previously incarcerated mothers are affected by interpersonal trauma and substance abuse, and how this relationship is mediated by the quality of relational health for these women. The findings support the critical need for gender-specific and family-oriented treatment both in the prison setting and upon discharge. This treatment should be grounded in feminist relational theories of psychological development and focus on the family system as well as both substance abuse and trauma. Without comprehensive treatment models to address these multiple issues, the potential for negative outcomes and chronic recidivism will continue. However, with the utilization of current research and appropriate theory to design gender-specific pilot programs, incarcerated mothers will have the opportunity to heal and to become empowered and compassionate members of society.

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Appendix

OFFICE OF INSTITUTIONAL
REVIEW BOARD
SETON HALL UNIVERSITY

October 16, 2008

Erin Walker, MA
224 Prospect Street, #3B
Westfield, NJ 07079

Dear Ms Walker,

The IRB hereby approves the requested amendments to your research protocol, "Risk and Protective Factors in Mothers with a History of Incarceration: Do Relationships Buffer the Effects of Trauma Symptoms and Substance Abuse History":

1. to add the F.O.R.G.E. program, located at Essex County College, as a performance site;
2. to modify your procedure so that volunteers who choose not to participate may either:
   (a) stop and turn in their incomplete instrument packet if they choose to leave early;
   (b) falsely fill-put the instruments by indicating the same answer for each question;
   (c) sketch directly on the questionnaires.

Your stamped Consent Form for this performance site is enclosed along with the recruitment flyer.

NOTE: According to federal regulations, if any participant becomes detained in a treatment center as a condition of parole during the course of your research, that subject must be eliminated from participating in the study. If this happens, you must inform the IRB office as soon as possible.

Sincerely,

Mary F. Ruzicka, Ph.D.

Mary F. Ruzicka, Ph.D.
Professor
Director, Institutional Review Board

cc: Ben Beitin, Ph.D.