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AGE DIFFERENCES IN SUBSTANCE USE AND SOCIAL SUPPORT AMONG RECENTLY INCARCERATED ADULT FEMALES

by

TIFFANY L. YOUNG

Under the Direction of Ann Pearman

ABSTRACT

While men retain the highest rates of incarcerations, the female prison population has tripled in the last decade (Covington, 2007; Henderson, 1998). The goal of this study was to examine micro-level forces, such as social support, substance use, and childhood trauma, in a sample of 188 recently incarcerated women, aged 18-58. Using an ANOVA with ages grouped 18-29, 30-39, and 40-58, age differences in substance use were identified, with the 30-39 year old group reporting more alcohol and drug use than the 18-29 year old group. There were no age differences on social support or childhood trauma. Multiple regression analyses revealed that older age and less social support predicted more alcohol use and older age alone predicted drug use. These results illustrate a need for deeper exploration of these micro forces across the life course of incarcerated women and the need for age-specific programs with at-risk populations to address different use patterns.

INDEX WORDS: Social support, Substance use, Childhood trauma, Age differences and incarcerated females

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by

TIFFANY L. YOUNG

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Georgia State University

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2009

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May 2009

To my friend: Samuel Curtis Tutt

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INTRODUCTION

The American population is “aging”, meaning the average American is getting progressively older. In 2000, 98 million Americans were the age 40 and over. By 2030, the number of individuals aged 40 and over is expected to reach 167 million (Day, 1996; U.S. Bureau of the Census, 1996, 2008). There are many societal issues related to the growing older adult population that must be addressed, such as Social Security, healthcare, and long-term care. While these issues hold great stock in the lives of the general older adult population, there are other issues that warrant attention within various sub-groups of older adults, such as incarcerations. It stands to reason that as the number of middle-aged and older adults increase, so will the number of middle-aged and older adult incarcerations (Anno et al., 2004; Kratcoski & Babb, 1990; Rikard & Rosenberg, 2007). However, in prison facilities, programs and services are usually tailored to younger inmates, thereby neglecting the sensitive health and social needs of older individuals (Johnson, 1989; Lemieux, Dyeson, & Castiglione, 2002). This problem is compounded by the fact that prison facilities in general are full to capacity and plagued with issues regarding budget cuts for program and services for inmates (Pizarro & Stenious, 2004; Rikard & Rosenburg, 2007). A continual increase in older adult incarcerations has the propensity to further exacerbate existing problems in the prison system. Therefore, it is important that researchers, policy makers, and corrections officials examine factors that influence older adult incarcerations in an attempt to understand and mitigate future older adult incarcerations.

Several research studies of the late 1970’s and 1980’s addressed the issues of older adult incarcerations (Cavan, 1987; Goetting, 1983; Kratcoski & Babb, 1990; Wiegand & Burger, 1979). These studies focused on types of offenses committed by older adults, adjustment to prison, mental and physiological health, security issues, and program and services. The majority

of these studies focused on older adult males. The studies that included older adult females did so only as a demographic comparison. To date, there are very few studies which focus solely on the issues surrounding incarcerated older adults females. One study conducted by Kratcoski and Babb (1990) focused on both the demographics of incarcerated older adult females and their adjustment to prison. Aside from much earlier work and the Kratcoski and Babb study, there is little published research on incarcerated adults over the age of 40. Moreover, the existing literature often only explores issues directly associated with serving a sentence, not the issues preceding and potentially serving as a catalyst for the incarceration. The purpose of the proposed research project is to examine profiles of women who recently entered prison and describe the issues facing these women, specifically in terms of social support and substance use (i.e. drugs and alcohol). Gaining a deeper appreciation of these issues will help us to understand the dynamic processes that may govern adult females' entry into prison at different points in the life course, especially later in life. Using a life course perspective, I will utilize prison diagnostic data, the Interpersonal Support Evaluation List, Sexual Abuse Exposure Questionnaire, childhood physical abuse and demographic data from a group of recently incarcerated females.

CHAPTER 1.

LITERATURE REVIEW

Overview

To understand age differences in the life experiences of incarcerated women, a multitude of multidisciplinary literature is presented. This literature review begins with the life course perspective focusing on female crime and deviance. Following the life course perspective is a discussion on older adult incarcerations and the lack of literature on older female's incarcerations. Finally, a review is presented on the main variables of interest: social support, substance use, and childhood physical and sexual trauma across young and old incarcerated and non-incarcerated women.

Life Course Perspective

The life course perspective seeks to study behavior and experiences by placing importance on and examining trajectories, transitions, and turning points and their effects on social development throughout life. A trajectory is a pathway that occurs over the life course (i.e. criminal behavior, parenthood, or work life). Trajectories are characterized by transitions, which occur in shorter time periods, incur status changes, and are time limited (i.e. giving birth or entering or leaving school). Together trajectories and transitions combine to produce turning points in the life course. In effect, one's coping response to life transitions and turning points can lead to different trajectories that are manifested and displayed through behaviors. In essences, life course analyses focuses on the duration, timing, and ordering of life events and their consequences in the future (Hser, Longshore, & Anglin, 2007).

Researchers posit that crime involvement and drug use trajectories may results from events that happened throughout the life course. For example, Sampson and Laub (1990) used

the life course perspective to understand adult crime and deviance and childhood delinquency. Using data from Sheldon and Eleanor Glueck's Unraveling Juvenile Delinquency Studies and their subsequent follow-up studies, the investigators examined childhood delinquency and adult crime and deviance in a sample of 1000 white males (age range 10-17) divided into two groups: delinquent and non-delinquent. The participants were matched on correlates of delinquency such as age, race, intelligence, and neighborhood socioeconomic status. All of the participants grew up in similar poverty stricken and high-risk neighborhoods. The participants were interviewed at ages 14, 25, and 32. Using descriptive statistics, the researchers found that the delinquent group was significantly more likely to be adult criminals and engage in deviant behaviors such as alcohol abuse than the non-delinquent group. Adult arrest rates for the delinquent group were seven times higher than the non-delinquent group and the delinquent group was four times more likely than non-delinquent group to report excessive alcohol use. This study clearly illustrates the continuity of crime and deviant behavior throughout the life course in males. Similar studies need to be conducted to understand female's entrance and trajectory of crime.

According to Sampson and Laub (1990), crime and deviance occurs as a result of weakened social bonds (i.e. familial, marriage, employment) throughout the life course. Researchers have suggested that social support may mediate both criminal involvement and drug use throughout the life course (Hser, et al., 2007). Using participants in the aforementioned Sheldon and Eleanor Glueck's Unraveling Juvenile Delinquency Studies, Sampson and Laub (1990), conducted multivariate analyses to examine how the formation of life transitions and adult social bonds mitigated crime and deviance and changed expected childhood trajectories. The researchers found that social bonding factors such as commitment to job, education, and marriage were important factors in mitigating adult crime and deviant behaviors regardless of

childhood delinquency. Because this study only included white males, similar research needs to be conducted with women to understand if and what types of social bonds affects women's desistance of crime.

The above research on males has illustrated that the life course perspective is an appropriate framework for explaining the relationship between childhood experiences and adult crime and deviant behavior in women. Therefore, this study will explore the relationship between early childhood trauma and both social support and substance abuse in adulthood in recently incarcerated women. The study will specifically seek to examine whether these relationships vary over the adult life course.

Older Adult Incarcerations

There has been a minimal focus within the life course literature and general research examining older adult incarcerations. It was not until the early 1970's and 1980's, that researchers began to explore the demographic profiles and offense patterns of older offenders in relation to mental and physical health and prison programs and services. Researchers predicted that incarcerations would increase as the older adult population continued to increase (Cavan, 1987; Goetting, 1983; Kratcoski & Babb, 1990; Wiegand & Burger, 1979). In 1999, 315,400 adults aged 40 and older were sentenced to prison. As of 2007, 484,900 adults aged 40+ were sentenced to prison (National Institute Justice (NIJ), 1999; 2007). Thus, from years 1999 to 2007 there was a 54% increase in the number of adults aged 40 and older sentenced to prison.

Researchers posit that the influx of older adults into the prison system is due to macro forces such as the increasing older adult population and federal and state sentence reforms (Anno et. al., 2004; Kratcoski & Babb, 1990; Rikard & Rosenberg, 2007). Kratcoski and Babb (1990) suggested that the number of incarcerated middle-aged and older adults is increasing simply

because there are a greater number of older adults to commit crimes. They also asserted that this increase will continue even if crime patterns and sentence length remained unchanged. However, other researchers believe that federal and state sentencing reforms are the primary cause of the increase in older adult incarcerations (Aday, 2003; Rikard & Rosenberg, 2007). Many of these federal and state mandates took away judicial discretions (i.e. age, health, perceived risk to the community) and replaced them with mandatory sentencing policies. Furthermore, “three strikes” and numerous “get tough” crime programs have also contributed to the increase in older adults incarcerations. Therefore, although many of the offenses committed by older adults remain more minor in nature compared to younger adults, these crimes have begun to meet incarceration criteria (Rikard & Rosenberg, 2007).

The majority of over-40 adult offenders are sentenced for misdemeanor offenses such as larceny-theft, assault, alcohol related offenses, disorderly conduct, sexual offenses and public drunkenness (Caven, 1987). According to Cavan (1987), older males far exceed women in these offenses. Moreover, Falter (1999) found that within the Federal Bureau of Prisons, white males accounted for 78% of the older adult incarcerated population. In addition, researchers who utilized statewide data also have reported a greater proportion of white in comparison to black older inmates (Aday & Webster, 1979; Fry, 1987; Kratocoski & Babb, 1990). While the majority of older prisoners are white males, research suggests the older adult female population is also increasing (Kratcoski & Babb, 1990). However, there is little research that explores female incarcerations in the middle to later decades of life. Therefore, the aim of this research to use a life course approach to explore micro factors, such as social support, substance use, and childhood physical and sexual trauma in different age groups of recently incarcerated females to

better understand how older women's life experiences differ from young and middle aged women's life experiences.

Social Support

Social support systems are made up of individuals and organizations that provide assistance and encouragement to people. Social support is defined as a coping resource that a person may draw upon during stressful experiences (Thoit, 1995). Cohen and Wills (1985) asserted that social support can serve as a "buffer" to mitigate the negative effects of stressful events. An individual's family, friends, and significant others usually serve as primary social support.

There are two types of social support: perceived and received. Perceived social support is the support that a person believes they are receiving; received social support is the support that a person is actually acquiring from others (Thoit, 1995). The most common type of social support described in the literature is perceived social support. Researchers have found a strong positive correlation between perceived emotional support and mental health (Wethington & Kessler, 1986); whereas, the relationship between actual received emotional support and mental health were significantly weaker (Thoit, 1995).

Social support plays a particularly vital role in lives of women. Researchers have noted that negative childhood familial support and interactions are positively related to drug use over the life course, particularly for women (Doherty, Kerry, Reisinger, & Ensminger, 2008). Singer, Bussey, Song, & Lunghofer (1995), found that women with substance abuse histories reported feeling lonely, isolated, and having a minimum level of social support. Furthermore, women with substance abuse problems often have incarceration and arrest histories. Combined, these findings suggest a relationship between lack of social support, substance abuse, and incarcerations

(Inciardi, Martin, Butzin, Hooper, & Harrison, 1997; Wexler, Deleon, Thomas, Kressel, & Peters, 1999). Clarifying these relationships, particularly at different points in the life course is an important step in understanding both younger and older women's incarcerations.

Social support and older adults

To describe the process by which older adults engage in relationships, Carstensen (1992) developed the socio-emotional selectivity theory. The socio-emotional selectivity theory asserts that as people age, they become mindful of the time they have left in their lives and it is this mindfulness that begins to increase their motivation to create important and emotionally meaningful social relationships. In addition, the theory notes that social networks simultaneously become smaller, but remain emotionally supportive. The foundation of this theory lies in age differences in goal attainment. Researchers posit that younger individuals are more concerned with the attainment of knowledge-related goals at the expense of emotion-related goals. Because older adults have accrued knowledge over the life course, they see great satisfaction and benefit in reaching emotion-related goals such as creating meaningful social ties. In essence, younger adults focus on knowledge attainment as a means of preparing for the future, while older adults focus on emotional satisfaction as a means of taking advantage of the present. Furthermore, researchers note that older adults engage in a pruning process to maintain and form social networks. The pruning process is necessary in discarding negative relationships, thereby ensuring and maintaining one's wellbeing (Cartensen, Fung, & Charles, 2003). Hence, it is important to understand whether this traditional theory of social support holds true in different populations. Therefore, one goal of this study is to examine levels of social support in a sample of older incarcerated women.

Social support and older females

Social support has been explored in many realms of the older adult's life. Research has consistently found women utilize social support more than men. In their review of the literature on social support, Krause and Keith (1989) reported that older women had a broader base of social support in comparison to older men. The authors attributed this difference to socialization patterns. In both Eastern and Western cultures, girls are usually expected to express emotions and be social, while boys are often expected to suppress emotions and act autonomously. Researchers posit that these expectations and beliefs continue throughout the life course and may account for the differences seen in social support utilization as people age. Krause and Keith also suggest that requesting social support may enhance feelings of personal control for women.

Researchers have found that the support of family and friends reinforces and assists in positive health behavior through motivation and encouragement (Shearer & Fleury, 2006). Shearer and Fleury conducted a study to examine social support and health promotion in a sample of older adult women utilizing a congregate meal site. Employing qualitative methods, researchers found that social support played an important role in health promotion in older adults through two mechanisms: collectivism (i.e. shared resources and strength) and connectedness (i.e. social engagement and emotional sharing). Although there is a large body of literature examining social support in many realms of adult female lives', there is a lack of literature on social support utilization in older females recently entering the prison system.

Social support and incarcerated adult females

Incarcerated women usually report lower levels of social support in comparison to other non-incarcerated women (Martin & Hesselbrock, 2001; Singer et al., 1995). However, once incarcerated women are exposed to social support either through training or staff support, they

report increased levels of social support. For example, Ivanoff, Schilling, and Gilbert (1995) provided social support enhancement and skill building training to a sample of (n=159) incarcerated adult females scheduled for prison release in 10 weeks. Participants were randomly assigned to an HIV/AIDS informational group (AI) or a skill building and social support enhancement group (SS). In addition to improving on a number of outcome measures, such as drug use, condom use, and safe sex practices, analyses revealed that the SS group was also 2.71 times more likely to show increases in their emotional support network than the informational group. In addition, the benefits of improved social support extended past the participants' sentences. After controlling for marital status and number of sessions attended, the follow-up data revealed that the SS group was 3.8 times more likely to increase safe sex behaviors after being released from prison than the informational group. This study illustrates the multifaceted benefits of social support. Further examining the interaction between social support and risky behavior such as, substance abuse in recently incarcerated women in different age groups, will help us not only understand the benefits of this support, but how it differs across the life course.

Substance Use

Substance use in older adult females

There is very little research that examines substance use, abuse, and dependency patterns among older adults (Benshoff, Harrawood, & Darwin 2003) and most of the existing research examining substance use in the older population does not specify by gender. There are a number of factors that contributes to a lack of research on substance use in older adults. First, there is an assumption that older adults "mature out" of drug use as they age (Benshoff et al., 2003). Moreover, since substance use research exploded in the 1960's, the majority of drug and alcohol literature and treatment focused on adolescents and younger adults. Therefore, policy, literature,

and treatments were built around addiction issues in younger adults. Also, family, friends, and caretakers tend to downplay drug or alcohol usage in older adults and often times mistake substance abuse for symptoms of depression or, in some cases, dementia (Benshoff et al., 2003; Fingerhood, 2000; Zimberg, 2005).

According to existing literature, alcohol is the most commonly used substance among older individuals. In 2007, 7.3 million adults age 40+ reported having a substance use disorder in the past year; alcohol disorders accounted for an approximate 87% of those substance disorders (Substance Abuse and Mental Health Services Administration (SAMHSA), 2005, 2008). However, unless an older adult presents with overt characteristics of alcoholism, diagnosis can be difficult. For example, when assessing older individuals using DSM-IV criteria, clinicians have to be aware that diagnostic criteria such as tolerance, withdrawal, and self monitoring may present differently with older adults compared to younger adults (Fingerhood, 2000). There are several common assessments that attempt to quantify alcohol use in adults (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) such as the Cut Annoyed Guilt Eye Assessment (CAGE: Ewing, 1984), the Michigan Alcohol Screening Test (MAST: Selzer, 1971), and the Alcohol Use Disorder Identification Test (AUDIT: Saunders, et al., 1993). However, only the MAST has been modified for older individuals. Additionally, while the MAST is modified for older adults, it only screens for alcohol abuse and not for other substance abuse (Blow, et al., 1992). There is dearth of assessment options for assessing both alcohol and other substance abuse in middle-aged and older adults (Benshoff et al., 2003) making this population more difficult to identify. This may also contribute to the lack of research on this population.

To date, researchers have found that illicit drug use (e.g. marijuana, cocaine, or heroin) among the current older population is rare (Zimberg, 1995). However, with the aging baby boom

cohort, illicit drug use is expected to become more common as they are the first cohort in U.S. history to have used these drugs in such large proportions. Recent research has indeed shown an increasing trend of age 40+ illicit drug abusers. From 2002 to 2007 in the United States, there was a 17% increase in drugs use in adults aged 40+ (SAMHSA, 2005, 2008). Prescription drug misuse and abuse are common among older adults as well. Older adults are likely to combine prescription drugs and over the counter drugs (i.e. analgesic, antihistamines, laxatives, cold and flu medicines, and sedatives), which can have deleterious effects that can be further exacerbated by alcohol use and abuse. One particular prescription drug class that is commonly misused and abused by older individuals is the benzodiazepines, which are often prescribed to treat anxiety and depression. However, benzodiazepines can be both physically and psychologically addictive. Because of the myriad issues surrounding substance use across the lifespan and the lack of literature exploring older adult females' substance use, another goal of this research is to examine substance use among older adults.

Substance use in incarcerated adult females

The number of women incarcerated in federal and state prison has dramatically increased over the past several years. The female prison population has tripled in the last decade (Covington, 2007). The "War on Drugs" is cited as a contributing factor because most women are incarcerated for drug offenses and drug abuse problems. Furthermore, drug related offenses were responsible for a 55% increase in female incarcerations between 1986 and 1991 (Henderson, 1998). According to the U.S. Department of Justice (1991) in a special report on women in prison, over half of incarcerated female admitted that their offenses had been committed while under the influence of drugs or alcohol. In addition, it was reported that more than half of women in prison had used drugs the month before committing their current offense

with 36% reported having used crack up to one month before committing their current offense. Women who admitted that the motive for committing their crime was to obtain money to buy drugs were twice as likely as other inmates to be incarcerated for robbery, burglary, larceny, or fraud (U.S. Department of Justice, 1991).

Epidemiological assessments suggest that incarcerated females are 5 to 25 times more likely to suffer from a substance use disorder compared to non-incarcerated women (Jordan, Schlenger, Fairbank, & Cadell, 1996). Staton, Leukefeld, and Webster (2003) conducted a study examining substance use, physical and mental health problems, and service utilization in incarcerated females. The sample of 60 women participants reported using multiple drugs in the 30 days before entering prison. Specifically, participants reported using alcohol, cocaine, and marijuana more often than opiates. Ninety percent of the participants reported drug use as their most prominent health problem (Staton et al., 2003). Drug use and abuse clearly plays a significant role in the lives, crimes, and subsequent incarcerations of women.

Substance use and social support in incarcerated young females

Unlike their older female counterparts, social support and substance use have been examined in younger adult female incarcerated populations. Staton-Tindall, Royse, and Leufeld (2007) assessed a sample of 100 incarcerated females and found that more severe substance use was correlated with a decreased perception of social support and social networks. A study conducted by Martin and Hesselbrook (2001) also examined social support and substance use, but within the context of incarcerated women's mental health vulnerabilities, risks, and resilience. Using a sample of 49 incarcerated females with a mean age of 28.5, researchers measured alcoholism, antisocial personality disorder, PTSD, and social support and coping mechanisms. Participants were divided into four groups (older, oldest, younger, & youngest).

Results showed that compared to the other three groups, the oldest group reported higher levels of social support and lower levels of alcohol and cocaine abuse, but the highest levels of opiate usage. While this research displays how social support and types of drug abuse may differ among age groups, what is missing from this study is an examination of the relationship between substance abuse and social support among the groups. In addition, the authors did not report a numeric age breakdown of their four groups. The only information that is given about the age of the participants is a mean overall age of 28.5. Although this study has some interesting findings, it, along with many other studies is missing an examination of the rates of substance use and rates of perceived social support among incarcerated women 40 and older.

Singer et al., (1995) also conducted research on social support and drug abuse in a sample of 201 incarcerated women. Again, the average age of their sample was a 29.5 years old. Most of the women in this study scored low on the social support scale. The women reported that their significant others provided more support than their friends and family. The authors also found that the majority of participants reported drug usage. Specifically, 62% of the sample reported using cocaine and 26.2% reported using alcohol (Singer et al., 1995). In both aforementioned studies, researchers explained the individual roles that social support and drug use play in the lives of incarcerated women, but did not explore the relationship between these variables. This study will examine the interplay of these variables at various points in the life course.

Childhood Physical and Sexual Trauma

Researchers and theorists have suggested that incarceration is a common consequence of previous childhood trauma for women. In a 1997 survey of U.S. state and federal correctional facilities, women were two to four times more likely than men to report having experienced physical or sexual abuse as a child. In addition, the rate of incarcerated women reporting

previous abuse was two to three times greater than the non-incarcerated female population. Of the 44% of incarcerated women who reported experiencing physical or sexual abuse, 69% reported that the abuse(s) occurred before age 18 (Harlow, 1999). Harlow (1999) also found that illegal drug use and regular drinking were more common among women who experience childhood physical and sexual abuse. Some researchers and clinicians believe that women may engage in substance use as a means of coping with childhood trauma (Polusny & Follette 1995; McClellan, Farabee, & Crouch, 1997). The use of these drugs combined with lowered self-image and a lack of familial support may facilitate involvement in prostitution and violent crimes which result in incarceration (Chesney-Lind, 1997; Browne, Miller, & Maguin, 1999).

Studies specifically examining childhood sexual trauma in the context of crime and delinquency have similar findings. Seigal and Williams (2003) conducted a prospective study comparing 206 women who experienced child sexual abuse in the 1970's with a matched control comparison group who did not experience abuse. Upon examining subsequent juvenile and criminal records in 1995, researchers found that women (average age 28) who experienced childhood sexual abuse were significantly more likely to have been arrested. The majority of those arrests were for drug related offenses.

Similar to previous studies (Harlow, 1999; Siegal & Williams, 2003), Katz (2000) examined female crime and substance abuse in the context of childhood abuse using the National Longitudinal Study of Youth. At Wave 1, the participants were between the ages of 11 and 17; at Wave 2, participants were between the ages of 22 and 28. Women who experienced childhood sexual abuse were significantly more likely to be heavy drinkers. Furthermore, upon testing a model of life course and strain theories, those women who reported regular heavy alcohol use also reported strained relationships with parents.

Clearly, childhood trauma has a long-term negative impact on adult women's lives. The effect of childhood abuse influence rates of substance abuse and incarceration. Furthermore, perceived social support may impact these associations (Katz, 2000). The extent of this impact is unclear and deserves further exploration. Hence, a goal of this study is to examine the relationship between early childhood trauma and both substance use and social support across several age groups of recently incarcerated women.

There is great concern regarding the increased population of women prisoners. Contributing macro factors such as the "War on Drugs" and other public policies are held primarily responsible. While these systemic changes do hold some responsibility for the increase in rates, micro factors such as social support, substance use, and childhood trauma may also be associated with this issue and hold great stock in the problem as well. Furthermore, while researchers have examined social support, substance use, and child trauma individually, the research is scattered and neglects to examine a vast age range of women, resulting in a fragmented view of the influence of these factors in women's lives. Therefore, the goal of this study is to explore the associations between social support, substance use, and childhood trauma more deeply using the life course perspective to begin to create a more seamless understanding of incarcerated women's life experience at different ages.

CHAPTER 2.

CURRENT STUDY AND RESEARCH DESIGN

Current Study

This study utilized a sample of recently incarcerated women divided into three age groups 18-29 (young), 30-39 (middle), 40-59 (old). The construction of the 'old' group is based on the fact that there is no consistent age defining the "older" prisoner in United State's correctional system. In addition, this construction is based on life stress factors that speed the aging process, such as legal problems, adjusting to prison and avoiding conflict, substance abuse withdrawal, lack of healthcare, and personal circumstances (Anno, Graham, Lawrence, & Shansky, 2004). Levels of substance abuse, social support, and childhood physical and sexual abuse were examined both within and across these age-groups. The following hypotheses were tested:

Hypothesis 1

Based on previous research suggesting that people develop stronger support networks as they age (Keith & Krause, 1989), it is hypothesized that perceived social support will be highest in the old group and sequentially lower for each of the younger groups.

Hypothesis 2

Based on literature asserting that older adults mature out of substance use (Benhoff et. al., 2003), it is hypothesized that substance use will be lower in the older group and sequentially higher for each of the younger groups.

Hypothesis 3

It is hypothesized that there will be no difference in incidents of childhood physical and sexual abuse between the groups based on research stating that most incarcerated women have

experienced childhood physical and sexual abuse (Browne, et al., 1999; Chesney-Lind, 1997; Harlow, 1999; Siegal & Williams, 2003).

Hypothesis 4

It is hypothesized that levels of perceived social support and childhood trauma will both be associated to substance abuse. Specifically, it is hypothesized that women with lower levels of social support and higher levels of trauma will report the highest levels of substance use. This hypothesis is based on research suggesting that incarcerated women have lower levels of social support due to severed relationships with family and friends as well as research suggesting these same incarcerated women who have experienced childhood trauma often cope with the trauma by using drugs (Chesney-Lind 1997; Browne et. al, 1999; Seigal & Williams 2003 & Katz, 2000).

Research Design

Data for this study were drawn from a larger project called the Women's Life Experience Project (WLEP) (Cook & Goodman, 2006), which explored the nature and scope of events women experience throughout their lives in a sample of incarcerated and healthcare seeking women. This study conducted cross-sectional analysis of the incarcerated participants.

CHAPTER 3.

METHODS

Participants

The current study utilized a subset of WLEP data collected from an incarcerated sample of women. This subset represents women aged 18 to 58, who were randomly selected from the diagnostic unit of a maximum security women's state prison in Georgia. Upon entry to the prison, new inmates spent two to four weeks in the prison's diagnostic unit and underwent physical examinations and mental health assessments. In addition to the assessments, this period of time also helped the inmates learn prison rules and regulations and generally acclimate to life in a correctional facility. This prison served as the central receiving and diagnostic unit for the state correctional system and also served as the central jurisdiction for serious mental illness and special healthcare needs. On a weekly basis, researchers selected approximately twenty women from a list of all women entering the diagnostic unit using a random number table. Using institutional mail, researchers invited these women to an informational meeting about the study. During this meeting, the study was explained in further detail and informed consent was administered. As part of the informed consent process, the research team stressed that the study was voluntary, sponsored by the National Institute of Justice, and conducted independently from the Department of Corrections and Board of Pardons and Parole. All women who entered the prison between June 2000 and June 2001 were eligible to participate. The final sample included 402 participants. Of these participants, 188 women completed all of the measures used in this study. These women were separated into three age groups: 18-29 (young), 30-39 (middle), and 40-59 (old). The mean age of the groups respectively were 25.6 (SD = 3.1), 34.6 (SD = 2.72), and 45.2 (SD = 4.25).

Procedure

The database for this study consists of data obtained from interviews with prison participants and prison diagnostic files. Upon the receipt of the database, the data was cleaned. The following information describes the procedure of initial collection of the WLEP data. In the initial WLEP data collection, graduate research assistants conducted interviews. All interviewers completed an intensive, weeklong training session at the prison where they learned about institutional security/safety, prison life/culture, and policies/procedures for routine events and emergencies. Consenting participants were escorted to a designated area and interviewed. The researchers administered a survey consisting of many psychological and social measures. The entire procedure took approximately two hours to complete and participants were debriefed at the conclusion of the interview. The women did not receive compensation due to the rules and regulations of the Department of Corrections. In addition to the interviews conducted by research assistants, data from prison diagnostic files collected by prison staff is also included in WLEP database and is used in the analyses for the current study.

Measures

The measurements used in this study includes the Interpersonal Support Evaluation List (Cohen, 1985), Sexual Abuse Exposure Questionnaire (Ryan, Rodgriguez, Rowen, & Foy 1992) and physical childhood abuse, substance use, demographic, and criminal history data.

Perceived social support.

Perceived social support immediately before entering prison was measured with the Interpersonal Support Evaluation List (ISEL) (Cohen, 1985). This measure consists of 14 items asking participants to rate the item as true or false as it relates to them. Total scores range from 0-14 with higher scores indicating increased levels of social support. The measure is further

divided into three subscales: appraisal support, belongingness, and tangible support. Internal reliability has been assessed with the general public with a full scale alpha at .89 and the subscales ranging from .75 to .77. For the current study, reliability (Cronbach's alpha) was .85 for the entire scale, .63 for the appraisal subscale, .79 for the belongingness subscale, and .69 for the tangible support subscale.

Childhood sexual and physical abuse.

Occurrence of sexual abuse before age 16 was measured using the Sexual Abuse Exposure Questionnaire (SAEQ). The measure consists of 10 items that asked respondents to answer "yes", "no", "don't know", or "refuse to answer" to questions regarding sexually inappropriate activities before age 16. Total scores range from 0-10 with higher scores indicating increased levels of sexual abuse. Two psychometric studies assessed the average test-retest reliability of the SAEQ to be .84 (Ryan et. al., 1992; Ryan, 1993). Childhood physical abuse was assessed by six questions addressing the following topics: witnessing family violence and being hit, burned, or threatened with a knife or gun. Respondents answered "yes", "no", or "refuse to answer" to the questions. Total scores range from 0-6 with higher scores indicating increased levels of physical abuse. The reliability (Cronbach's alpha) of the six physical abuse questions in this sample was .66.

Substance abuse.

All substance use data was retrieved from prison files. Drug and alcohol use frequency was self-reported as "experimental", "socially", "occasionally", "frequently", addiction, "seldom", or "other". Because very few participants reported low usage, for the purposes of this study, "experimental", "socially", "seldom", and "occasionally" was combined into one category entitled "sometimes". All remaining frequency categories (frequently, addiction, and other)

remained as originally captured by correction officials. Type of drug used was self-reported in prison files and categorized as amphetamine/speed, barbiturates/valium, cocaine/crack, heroin/opiates, marijuana, and other.

Intravenous (IV) drug use frequency was self-reported as “frequently”, “never”, “experimental”, “past use”, or “occasionally”. Again, because very few participants reported low usage, for the purposes of this study “experimental” and “occasionally” were combined into the category “sometimes”. All other IV drug use frequency categories (never, frequently, and past use) remained as originally captured by corrections officials.

Demographics.

Using survey data and prison files, the following demographic characteristics were also used: race, education, number of children, income, and marital status.

Criminal history.

Past criminal history was obtained from prison diagnostic files and was measured as number of prior Georgia incarcerations and number prior of sentences.

Analyses

For age-group analyses, participants were separated into three categories: 18-29 (n=59), 30-39 (n=86), and 40-59 (n=43). Utilizing descriptive analyses, the demographic variables (race, education, number of children, income, marital status, and criminal history) were examined by age group. Mean differences between demographics variables across groups were determined using chi square analysis for nominal variables (marital status and race) and analysis of variance (ANOVAs) for all other variables. ANOVAs were also used to explore potential differences between the three age groups in social support, substance use, and childhood physical and sexual trauma. For significant ANOVAs, post hoc analyses were conducted. Finally, hierarchical linear

regression analyses were conducted to determine whether age, social support, and childhood trauma were significant predictors of substance use. In addition, age by social support interactions were tested.

CHAPTER 4.

RESULTS

Descriptive Analyses

Descriptive analyses were conducted to examine the demographic characteristics of the sample (see Table 1) and identify differences between the age groups. Demographic differences between age groups were explored using ANOVA's and chi square analyses. There were significant age-group differences on number of children ($F(2,154) = 7.51$, $p=.001$), education level ($F(2,187) = 4.41$, $p=.013$), and prior GA incarcerations ($F(2,184) = 6.66$, $p=.002$). Post hoc analysis revealed that 30-39 year olds had more children than both the 18-29 year olds and 40-59 year olds. Post hoc analyses also revealed that 30-39 and 40-59 age groups had more education than 18-29 year olds. Finally, post hoc analyses revealed 30-39 and 40-59 year olds had more prior Georgia incarcerations than 18-29 year olds. The difference between the 30-39 and the 40-59 year olds approached significance ($p=.056$) with the older group having slightly more incarcerations than the 30-39 year olds. Chi square analyses revealed there was a difference in marital status among the groups, χ^2 (4, N= 176) = 19.10, p = .001. There were no significant age-group differences among any of the other demographics variables, which included race, income, and prior number of sentences.

Descriptive analyses were also performed on the ISEL, substance use, and trauma variables (see Table 2). The mean ISEL scores for age groups 18-29, 30-39, and 40-59 were 9.92 (SD=2.74), 9.70 (SD=3.28), and 9.37 (SD=3.32), respectively. There were not significant age-group differences on general level of social support or any of the social support subscales.

Table 1

Demographic Characteristics of Participants in Age Groups (N=188)

Characteristics	18-29		30-39		40-59	
	n	%	n	%	n	%
Race						
Black	33	55.9	49	57.0	22	51.2
White	25	42.4	36	41.9	20	46.5
Other	1	1.7	1	1.2	1	2.3
Children						
1	17	37.0	14	18.9	13	37.1
2	13	28.8	19	25.7	15	42.9
3 or more	16	23.9	41	55.5	7	20.0
Marital Status						
Single	41	69.5	30	37.5	14	32.8
Married/Common law	5	8.5	22	27.5	6	16.2
Separated/Divorced	13	22	28	35.0	17	45.9
Education						
Did not complete HS	32	54.2	36	41.9	13	30.2
High school/GED	18	30.5	25	29.1	15	34.9
Trade/Tech	3	5.1	9	10.5	3	7.0
Some college	6	10.2	12	14.0	9	20.9
College degree	0	0	4	4.7	3	7.0
Income						
0-500	10	16.9	19	22.1	9	20.9
501-1000	14	23.7	22	25.6	8	18.6
1501-2000	8	13.6	10	11.6	5	11.6
2001-2500	2	3.4	3	3.5	4	9.3
2501-3000	4	6.8	5	5.8	2	4.7
3001+	21	35.6	27	31.4	15	34.9
Prior GA incarcerations						
0	47	79.7	53	63.1	24	57.1
1	12	20.3	23	27.4	8	19.0
2	0	0	4	4.8	5	11.9
3 or more	0	0	4	4.8	5	11.9
Prior Sentences						
1	42	76.4	47	60.3	26	72.2
2	9	16.4	20	25.6	6	16.7
3 or more	4	7.3	11	14.1	3	11.1

Descriptive analyses were also used to explain substance use among the age groups. Percent alcohol usage of the age groups 18-29, 30-39, and 40-59 were as follows: 49.1%, 64.9%, and 65.8% respectively. Among the women who reported drinking alcohol, the majority in each age group reported using alcohol "sometimes". A significant difference was found with alcohol usage, F (2,187) = 3.08, p =.048. Post hoc analyses revealed the age group 30-39 drank more alcohol than the 18-29 age groups.

Percent drug use of age groups 18-29, 30-39, and 40-59 were as follows: 64.3%, 78.0%, and 70.7%, respectively. The majority of participants across all three groups indicated they use drugs "frequently". The ANOVA showed a significant age-group difference with drug usage, F (2,187) = 5.268, p =.006. Post hoc analyses illustrated that the 30-39 age groups used drugs more frequently than the 18-29 age groups. Across all groups, the most common drug of choice was "crack/cocaine". Percentage of IV drug use in age groups 18-29 was 15.3%. In age group 30-39, 15.1% of women reported IV drug use, and in age group 40-59, 11.6% reported IV drug use. Majority of these women across all groups reported using IV drugs "sometimes". These differences were not significant.

Finally, descriptive analyses were used to examine rates of childhood trauma. The percentage of women across the three age groups (18-29, 30-39, and 40-49) who experienced child physical trauma is as follows: 76.3%, 76.7%, and 79.1% respectively. The percentage of women across the three age groups (18-29, 30-39, and 40-49) who experienced child sexual trauma is as follows: 67.2%, 52.9%, and 53.5% respectively. ANOVAs revealed no significant age-group differences on either of the trauma variables.

Multiple Regression Analyses

Three regression analyses were conducted to examine the predictive relations of the independent variables of social support and childhood physical and sexual trauma on the three dependent variables of substance use (alcohol, drug, IV drug). Results from these analyses are presented in Table 3. For these analyses, age was considered a continuous variable so as to lessen the restrictive nature of groups.

Table 2

Means, Standard Deviations, and One-Way Analyses of Variance (ANOVAs) of Social Support, Substance Use, and Childhood Trauma among Three Age Groups

	18-29 (n=59)		30-39 (n=86)		40-59 (n=43)		ANOVA	
Variable	M	SD	M	SD	M	SD	F (2,187)	p
Social support								
Appraisal	2.76	1.19	2.62	1.23	2.56	1.32	0.40	0.675
Belonging	2.93	1.32	3.01	1.38	3.00	1.40	0.06	0.939
Tangible	3.27	0.10	3.16	1.14	2.93	1.10	1.25	0.289
Total score	9.92	2.74	9.70	3.28	9.37	3.32	0.36	0.688
Substance use								
Alcohol	0.76	1.00	1.24	1.28	1.16	1.17	3.08	0.048
Drug	1.00	0.83	1.47	0.90	1.23	0.87	5.27	0.006
Intravenous	0.20	0.52	0.20	0.50	0.16	0.48	0.09	0.912
Childhood trauma								
Physical	1.90	1.68	1.73	1.46	1.7	1.37	0.29	0.752
Sexual	2.73	2.78	1.91	2.40	1.65	2.38	2.78	0.065
Total score	4.63	4.00	3.64	3.49	3.35	3.46	1.88	0.156

For alcohol use, both age and social support were significant predictors. Age, which was added in the first step, accounted for 2.6% of the variance in alcohol use ($\beta = .16$, $p < .05$) and social support, which was entered in the second step of the analysis, accounted for an additional

2.1% of the model's variance (β = -.14, $p < .05$). That is, older age and less social support were predictive of higher alcohol abuse. Neither of the trauma variables, nor the age by social support interaction was significantly related to alcohol use.

For drug use, age was the only significant predictor accounting for 2.2% of the model's variance when entered at Step 1 (β = .15, $p < .05$). Neither social support, childhood sexual abuse, nor the age by social support interaction term was significant predictors of drug use. However, childhood physical trauma approached significance (β = .18, $p = .06$).

Lastly, regression analyses revealed childhood physical abuse alone significantly predicted IV drug use and accounted for 5.2% of the model's variance (β = .26, $p < .01$), such that higher levels of childhood physical abuse were associated with higher levels of IV drug use. None of the other variables, including the age by social support interaction term, were significant. Additional regression analyses which included all of the other demographic variables were not significant.

Table 3

Regression Analyses Predicting Substance Use with Social Support and Child Trauma Variables

Outcome variables, steps, and predictor variables	ΔR^2	β	*p*
Alcohol Use			
Step 1	0.026		
Age		0.163	0.026
Step 2	0.021		
Age		0.151	0.038
Social support		-0.144	0.048
Step 3	0.012		
Age		0.146	0.048
Social support		-0.112	0.656
Child sexual trauma		-0.091	0.325
Child physical trauma		0.146	0.128

Drug Use			
Step 1	0.022		
Age		0.148	0.043
Step 2	0.008		
Age		0.140	0.056
Social support		-0.092	0.206
Step 3	0.021		
Age		0.150	0.043
Social support		-0.033	0.679
Child sexual trauma		-0.041	0.663
Child physical trauma		0.179	0.063
IV Drug Use			
Step 1	0.000		
Age		-0.016	0.829
Step 2	0.002		
Age		-0.012	0.873
Social support		-0.047	0.523
Step 3	0.052		
Age		0.010	0.892
Social support		0.145	0.068
Child sexual trauma		-0.024	0.792
Child physical trauma		0.263	0.006

CHAPTER 5.

DISCUSSION

Overview

This study was designed to investigate age differences in social support, substance use, and childhood trauma in a sample of recently incarcerated women. Several of the hypotheses were supported by the results, while others were not. Specifically, the hypothesis predicting no age difference in childhood physical and sexual trauma was supported. However, the hypothesis predicting age differences in social support was not supported. In addition, the hypothesis predicting that older prisoners would report lower levels of substance use was also not supported. In fact, the regression analyses revealed that older age was significantly related to more, not less, drug and alcohol use. Finally, the hypothesis predicting an overall relationship among social support, substance use, and childhood trauma was only partially supported. Overall, the results suggest that social support, substance use, and childhood physical and sexual trauma do play a role of the lives of these women. However, the results also suggest that traditional theories of substance use and social support may not be as relevant to incarcerated women.

Lack of Social Support Age Differences

Contrary to expectations, there were no significant age differences in social support. The hypothesis was based on the socio-emotional selectivity theory which suggests that although older adults may reduce the actual size of their social support networks, they also tend to form closer, more meaningful relationships than younger adults. The reason cited for these social emotional changes is differing perceptions of time, with older adults perceiving time as more limited (Carstensen, Fung, & Charles, 2003). However, the findings in this study support the work of Krause (2006), who suggests that the socio-emotional selectivity theory does not

account for all individual differences and age related changes. It may be true that the life experiences of older incarcerated women are vastly different from the general population of aging adults and may not follow the same patterns of socio-emotional change.

Another possible reason for the lack of age differences in social support may be due to a lifetime of severed relationships that may occur as a result of the deviant behavior(s) that also influenced the incarceration. This effect may be far reaching and extend across prisoner age groups. Family and friends may become jaded with the deviant behaviors. As a result, women in this sample and perhaps in other troubled populations may not have as many social supports as their peers in the general population. Although more research is needed to further understand this phenomenon, if it is the case that women prisoners chase away their social support, then perhaps programs within the prisons should be designed to encourage social relationship building.

Substance Use Age Differences & Predictions

The second and fourth hypotheses predicting older age would be related to less substance (both drug and alcohol) use were also not supported. In fact, in this sample older age predicted higher levels of both drug and alcohol use, as evidenced by the middle age group (30 – 39) having significantly higher mean levels of both drug and alcohol use than the younger group. There was also a non-significant mean level difference between the middle and oldest group with the middle group again having the highest use patterns. In non-incarcerated populations, frequent alcohol and drug use typically begins to wane around age thirty (Chen & Kendal, 1995). In addition, the maturation hypothesis specifically suggests that with advancing age the use of both drugs and alcohol becomes less frequent (Benshoff et. al, 2003). As with the socio-emotional selectivity theory, it is possible that the theory of maturation is not relevant to incarcerated

populations. Another possibility is that the maturation theory may be just beginning to take effect, as seen by the trend toward less use in the oldest group. However, given the study's small older sample size, there was not enough power to detect significance. It is possible that larger scale studies and, perhaps, longitudinal studies are needed to elucidate this pattern.

It is also possible that because this is an incarcerated population there may be life events, such as childhood trauma or other life stressors, such as low income and single parenthood that either initiate or perpetuate drug and alcohol usage. In this sample, 77% of participants reported physical childhood and 57% reported sexual abuse. This is significantly higher than the general population where estimates of childhood abuse range from 12% to 17% (Gorey & Leslie, 1997). In addition to the high levels of childhood trauma, most of the women in the sample are single parents in an extremely low income bracket. In fact, the 30-39 age group reported having the highest number of children (M=2.91) and lowest monthly average income ($1616). The life experience of childhood trauma in addition to the stress of raising children alone on a minimal income may be the stressors leading to increased drug and alcohol use in the 30-39 age group. However, it is also plausible that the reverse scenario may be true. High levels of substance use may explain the higher number of children as substance abusing women tend to be more likely to engage in risky sexual behaviors (i.e. unprotected sex) and more likely to have low incomes as they are unable to maintain stable employment because of their substance abuse (Alemagno, 2001; Pilowsky et. al, 2007; Pollock, 2002).

Further examination of the data revealed that both the 30-39 and 40-59 year old women use multiple types of drugs, including crack/cocaine, opiates, barbiturates, speed, and/or marijuana more often than the 18-29 age group who acknowledged using primarily crack, speed, and/or marijuana. Furthermore, reviewing frequencies illustrates that the older groups (i.e. 30-39

and 40-59) were more likely to used two or more substances at one time (e.g. alcohol and drugs). Acknowledged multiple substance use may be used a proxy for severity of drug use. Engaging in multiple drugs and substances at one time illustrates how women may indulge in dangerous and unhealthy behaviors to further displace themselves from negative life experiences.

Another reason age and drug and alcohol use may be positively related is drug tolerance. A person experiences tolerance when their body becomes less responsive to the same amount of drugs or alcohol because of repeated use resulting in an increase in the amount needed to experience the same euphoric effect or "high." Over time to overcome the tolerance, many choose to experiment with new drugs or use multiple drugs at once (Harris & Buck, 1990). Hence, older users may need to engage in drugs more frequently to overcome the effect of tolerance resulting in higher levels of drug and alcohol use at older ages.

Alcohol use was predicted by both age and social support, with higher age and lower social support predicting higher levels of alcohol use. As discussed previously, continuously engaging in deviant behaviors throughout the life course may result in a loss of family and friends. Cyclically, these network losses may result in a person engaging in risky behaviors, such as alcohol abuse, as a way to cope with the loss of relationships. Alcohol abuse may then lead to more risky behaviors and more incarcerations.

Alcohol abuse by a loved one may be the source of contention for many friends and family and over time these relationships start to dissipate because of the stress associated with the alcohol use. Furthermore, the women may further reject family and friends if she views them as critical or judgmental. Because of the loss of social support the women may further increase her dependency on alcohol use as a measure of coping. Lemieux (2002) suggests that people who abuse drugs and alcohol often isolate themselves from friends and family and surround

themselves with fellow users. Lemieux notes that fellow drug addicts and criminals do not serve as actual social supports in the traditional sense as people do not report feelings of perceived support even when having a number of fellow users as “friends”. Indeed, incarcerated women often report feeling lonely and isolated with little social support and also report strained relationships with family and friends prior to incarcerations (Lemieux, 2002).

A final interesting result was the regression analysis that revealed childhood physical abuse as a significant positive predictor of intravenous drug use. Research has previously identified adult substance use as an indirect consequence of previous childhood trauma (Feerick, Haugaard, & Hein, 2002; McClellan, Farabee, & Crouch, 1997; Polusny & Follette 1995). Thus, the study’s findings support the literature. However, what is particularly interesting about this result is the specificity of the abuse (physical) and substance (IV drug). Researchers examining the typology of adults who experienced physical abuse as children posit that these individuals are often aggressive and impulsive (Briere & Runtz, 1990). Receiving drugs through an IV injection into the blood stream ensures a rapid euphoria because the drugs travel quickly to the brain to produce their effects. It is possible that women who experienced childhood physical abuse may chose to use IV drug as means to satisfy aggressive and impulsive urges.

In addition, IV drugs are often times seen as a socially undesirable drugs as they are painful to inject and have many negative connotations (HIV and AIDS). However, one who has experienced childhood physical abuse may embody a sense of fearlessness being that they have endured childhood physical abuse and developed an aggressive attitude (Briere & Runtz, 1990). Thus, one may consider the pain associated with IV drugs minor in comparison to the pain associated with physical abuse. The sense of fearlessness may also account for the lack of regard for society’s negative attitudes towards IV drug use.

Understanding the risk for a specific type of drug use is important as it may help community programs tailor drug prevention curriculums to groups of individuals with specific types of experiences.

Lack of Childhood Trauma Age Differences

The third hypothesis was supported. There was not a difference in reported incidents of childhood physical and sexual abuse between the age groups. As previously stated, 77% of the study sample reported physical childhood and 57% reported sexual abuse in contrast to 12-19% (Gorey & Leslie, 1997) of non-incarcerated women reporting childhood trauma. This result is consistent with previous research that has found the majority of incarcerated women have experienced some type of childhood physical and sexual abuse (Browne, et al., 1999; Chesney-Lind, 1997; Harlow, 1999; Siegal & Williams, 2003).

The theories on early childhood abuse and later behavior suggest that many women are often incarcerated as adults as an indirect result of childhood trauma. Children who are abused often indulge in risky and deviant behaviors as adults such as drug use and crime. It has been suggested that they often engage in these risky behaviors to cope with the previous abuse and that they engage in adult crime as a consequence of disrupted early life relationships resulting in insecure attachments in adulthood (Feerick, et al., 2002). Therefore, it is not surprising that early childhood trauma may yield its residual negative effects (e.g. engaging in crime or/and drug abuse) throughout the lifespan and, hence, in all of the age groups in this study. Women who did not have access or encouragement to work with their trauma (e.g. see a therapist or talk to a preacher) may continue to suffer its consequences. These consequences may include incarcerations. Developing mechanisms to help incarcerated women process and cope with their trauma may be helpful in preventing further incarcerations.

Limitations

It is important to note that this study has limitations. One limitation is that all of the variables, including substance use, social support, and childhood trauma, were self reported. Each of these measures may have been affected by social desirable reporting tendencies. However, given the high reports of drug and alcohol abuse, this is probably not the case. The cross-sectional nature of the study is another limitation because this makes it impossible to explore causality. For example, it is actually not determinable if low social support causes higher alcohol use or if higher alcohol use leads to lower social support. The study is only able to infer based on previous research and theory. Future research should utilize longitudinal design with multiple waves of data. For instance, a future study could conduct a longitudinal study of young girls who have experienced childhood trauma to examine their life course trajectories measuring substance use, social support, and incarceration.

Another limitation is the measurement of substance use and childhood physical trauma. Substance use was measured on an ordinal scale in terms of frequency of use (i.e. none, sometimes, frequently, and addiction). As with any ordinal scale, the numerical distances between the frequencies are not defined. Therefore, it is impossible to determine what specific amount of usage (duration of usage or weight of drugs) qualifies as a particular type of frequency. That is, because no definition was applied to the levels of frequency, what “frequent” drug use means to one woman, may not mean the same level of frequency for another woman. This problem could affect the relationship between these variables and all of the other study variables.

Another issue is that the childhood physical trauma scale has not been validated. Although the questions have strong face validity, the scale has not been validated against more

traditional measures of trauma. In addition, the scale only had moderate reliability at .66. Future studies should include multiple measures of childhood physical trauma to both accurately measure this construct and to validate this scale.

Future Directions

Despite these limitations, the study's findings provide some initial indications that social support and childhood trauma do intermingle in incarcerated women lives across all ages. The results from this study provide valuable information which can inform research, prison mental health and treatment programs, and community prevention programs.

In addition, within the future longitudinal studies, researchers should also examine severity of substance use (i.e. multiple substances and amount of substances) in conjunction with social support and childhood trauma. This analysis could better highlight the breakdown in family and friend support and/or childhood trauma that results from substance use and incarcerations. Findings from this study also illustrate the importance of considering age as it relates to social support, substance use, and childhood trauma. It is clearly important for mental health and treatment specialists to tailor their programs to the age appropriate needs of these women. Furthermore, it is important for correctional officials and policy makers to understand the importance of sufficiently funding mental health services and treatment programs as many of these women deviant behaviors may stem from childhood trauma and therefore may need intense counseling and psychotherapy to learn to cope with the trauma. This attention to treatment may mitigate these deviant behaviors and prevent recidivism. It will also be important for treatment programs to understand that they are not just treating drug use, but a history of circumstances that lead to the drug use such as poverty, family problems, and trauma. Furthermore, will be is important that treatment programs use age-appropriate assessments and interventions.

Community prevention programs may also benefit from the findings of this study, particularly in the case of younger girls who have experienced childhood abuse. The study has highlighted the possible trajectory of young girls and women who have experienced childhood trauma and the potential for decreased social support, and increased engagement in substance use. Prevention programs may need to include early interventions for young abuse victims with continuing support through their life course. Communities need to be able to better identify these young women and girls to assist them in developing adequate coping and life skills to ensure they begin and maintain a positive trajectory throughout their life course. Community interventions programs should also make greater attempts to identify older adult drug users as society tends to believe this population does not exist.

The results of this study also illuminate the relationship of social support and alcohol. Therefore, alcohol treatment programs can incorporate social skills and network building related to creating and maintaining relationships in their curriculums. As family and friends may be integral to sobriety, these programs can also include family and friend in treatment plans. While the literature and results from this study suggests older adult primarily abuse alcohol, the data in this study suggest that they also use other types of drugs (i.e. marijuana & cocaine). Thus, treatment program need to be prepared to treat not only older adult alcohol use, but also other types of drug use. Furthermore, for older substance users, community programs may need to focus on older adult issues and how these issues may be related to their drug use.

CONCLUSIONS

The findings presented in this study provide evidence that social support, substance use, and childhood trauma are important factors in the life course of incarcerated women. Hence, researchers and interventionist need to be cognizant and proactive in identifying and intervening in the lives of youth and young women who have experienced childhood trauma and engage in deviant behaviors to prevent them from continuing on a possible negative trajectory. Furthermore, this study suggests the need for age appropriate in-prison mental health and substance treatment programs. Older women in prison may need extra support to deal with higher levels of substance use accompanied by a lifetime of untreated trauma issues. Attention to these findings and future directions are likely to help researchers further understand the relationship between social support, substance abuse, and childhood abuse in different ages of incarcerated women and aid correctional mental health and community programs in providing therapy and preventing a life course of risky and deviant behaviors.

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