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Tarnished Golden Years:

Older Offenders with Mental Health Problems and Late Life First Time Offenders

by

Brianne M. Stanback

A dissertation submitted in partial fulfillment of the requirements for the degrees of Doctor of Philosophy School of Aging Studies

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Tarnished Golden Years:

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Brianne M. Stanback

ABSTRACT

Older offenders (offenders 50 years and older) are a distinct groups within the U.S. correctional system. Studies 1 and 2 were intended to investigate mental health and stressors among jailed older offenders.

Study 1 examined the prevalence rates of mental health disorders and explored the relationship between mental health disorders and stressors. Participants 50 years and older (N=330) from the 2002 wave of the Survey of Inmates in Local Jails (SILJ) were studied via descriptive analysis, factor analysis, and a logistic regression to determine which variables were related to the probability of having a mental health problem. 65.8% of participants had at least one mental health disorder, with high rates of substance abuse reported. Individuals who were between 50-59 years of age (compared with those over 60) and individuals who were unmarried had a significantly increased likelihood of being in the group with mental health problems. Caucasians and participants with fewer instances of childhood abuse were significantly less likely to be in the group with mental health problems.

Study 2 compared stressors over the life course between late life first time offenders (offenders whose first arrest occurred at age 50 or older; hereafter LLFTO) and habitual older offenders, who had one or more arrests. This study descriptively and

comparatively analyzed individuals who were age 50 or older at arrest and reported their age of first arrest from the 1996 and 2002 waves of SILJ, with a final sample of 62 LLFTOs and 357 older offenders with previous arrests. LLFTOs were significantly older, more likely to be married, and more likely to be female. Over the life course, LLFTOs were more likely to have lived with their father or other relative as children, were less likely to have used alcohol or had friends with a history of delinquency as adolescents, and were less likely to have been homeless as adults.

This dissertation research shows that older offenders have a variety of needs during their incarceration that may persist upon release. Addressing mental health disorders, and stressors across the life span, is needed to promote successful aging.

CHAPTER 1

INTRODUCTION

Older offenders (offenders 50 years and older) are among the fastest growing prison populations in the U.S. criminal justice system. As of June 2007, 197,000 offenders aged 50 and older were held in U.S. jails, state corrections, and federal prisons (U.S. Department of Justice, Bureau of Justice Statistics, 2008). Researchers anticipate that because of several current sentencing trends, these numbers will increase as many more adults age in the U.S correctional system (Yates & Gillespie, 2001). Several states have enacted various statutes, such as 3-strike laws, in which repeat offenders earn longer or a life sentence; determinant sentencing, in which some offenses carry a certain required length of sentence; and 85% laws, in which offenders must serve 85% of their sentence at a minimum before being considered for any form of release (See Yates & Gillespie, 2001), that are also expected to contribute to an increase in the number of older offenders in the correctional system.

The large population of aging offenders poses many challenges. Older offenders are frequently sentenced for their role in violent and sexual crimes, reducing their chances for parole or release (Fazel & Grann, 2002; Florida Corrections Commission (FCC), 2001; Goetting, 1984; Ham, 1976; Lewis, Fields, & Rainey, 2006). Studies find older offenders to have greater physical, functional, and mental health problems (Aday, 2003; Colsher, Wallace, Loeffelholz, & Sales, 1992; Fazel, Hope, O'Donnell, & Jacoby

2002; Fazel, Hope, O'Donnell, Piper, & Jacoby, 2001; Gallagher, 2001; Owens & Phillips, 2003). James and Glaze (2006) found that half of all inmates meet clinical criteria for one or more mental illnesses, which would suggest a higher prevalence for older offenders. Another critical issue with this group is the cost of care, including health care, long term care, and appropriate housing for aging inmates. In sum, older offenders present a number of policy questions, and no easy answers exist.

The dilemmas created by the increasing presence of older offenders in the U.S. criminal justice system warrant more research in a number of areas. Most of the research conducted on older offenders used samples from prisons. From a research perspective, prison samples include more people with violent offenses, more severe mental health problems, and longer, or even life, sentences. It also means that these samples have included mostly males and the studies about individuals aging in place. The literature largely describes this subset of older offenders (i.e., those in prison) with much of that research covered in Chapter 2. Chapter 3 provides an overview of the literature on health issues among older adults, including information on physical, functional, and mental health. Chapter 4 builds on the previous chapter with a discussion of stressors in late life. This section addresses the impact of stressors on health and its role in criminal behavior.

The information reviewed in Chapters 2, 3, and 4 is primarily based on research on older offenders who are in prison. Prisons are different from other arms of the U.S. correctional system. Although fewer offenders are in jail (780, 581 offenders at mid-year 2007 as compared with 1,532,800 in prisons), many jails operate at or near full capacity (Sabol & Minton, 2008; West & Sabol, 2008). Prisons typically house offenders with sentences of a year or more, and 53% of the over 1.5 million prison inmates in the U.S.

were guilty of violent offenses at mid-year 2007 (West & Sabol, 2008). Jails, on the other hand, are locally run correctional facilities that house offenders generally with sentences of a year or less for a wide range of less serious and often non-violent offenses (Sabol & Minton, 2008). At least superficially, older offenders in prisons and those in jails likely are different in terms of criminal background, sentencing, and prospects for their future. Older offenders in jail will typically have a less serious criminal record, will serve shorter sentences, and often return to the community in which they offended.

Although the focus on older offenders in prisons has yielded a great deal of information, it overlooks the experience of older offenders in local jails. The major purpose of this dissertation is to answer the following question: what individual characteristics contribute to the number of older offenders in U.S. jails? Chapters 5 and 6 present data to help answer this question. Chapter 5 concentrates on one possible explanation, that mental health problems may be an important factor in why an older adult is jailed. The chapter focuses on the prevalence of mental health problems of older offenders 50 years and older in the 2002 Survey of Local Jail Inmates (SILJ), which is a national survey of local jail inmates conducted every 5 years. The SILJ data contains thousands of items, ranging from questions on criminal history, family life, mental and physical health, socio-demographics, and jail life, making it an ideal source to learn about older jail inmates. High rates of mental health disorders are a common occurrence in all levels and age groups in the U.S. criminal justice system. The extent to which mental health disorders exist in older offenders at the jail level is largely unknown, and this study will be among the first to examine it.

Chapter 6 takes a different approach with its focus on late life first time offenders. Late life first time offenders are offenders with a first conviction at 50 years or older. Previous research, mostly on samples of prison inmates, indicates that up to 50% of all older offenders are late life first time offenders, whose first offense was a serious crime. Waves of SILJ data from 1996 and 2002 are used in this study. Socio-demographic, physical and mental health items, and criminal history items are analyzed over the life course to develop a profile of this select group of older offenders and compare them with older offenders who have a criminal history. This study is among the few that focus on late life first time offenders who tend to receive less attention in the literature on older offenders.

Chapter 7 discusses the findings and limitations of the two studies, and Chapter 8 addresses their policy implications, as research on older offenders forces one to confront a myriad of related issues. Two of the most important issues are the cost associated with maintaining older offenders while in custody and the relative lack of post-release planning and support. The multi-dimensional issues and the need for a system that appropriately responds to the needs of older offenders underscores the overarching issues about how to approach the needs of vulnerable people as they age.

CHAPTER 2

WHO ARE OLDER OFFENDERS?

Aday (2003) remarks that the aging prison population and the increase of older offenders are not the result of an emergent elderly crime wave. The number of older offenders has increased across the U.S. criminal justice system because of recent trends in the criminal justice system and changes within the American mental health care system. Both factors share some responsibility for the growth of aging inmates in the U.S.

The aging of the general U.S. population has occurred at the same time as changes in the U.S. criminal justice system. Yates and Gillespie (2000) attribute the increase in older offenders to a shift in correctional philosophy and political ideology from reforming criminals for return to the community to their removal from society. Determinant sentencing, mandatory minimum sentences, and 'three-strike laws' contribute to long sentences and a greater number of adults aging in prison (Yates & Gillespie, 2000). Judges and parole boards are unable to alter sentences or consider age in sentencing recommendations. In some states, parole boards have been disbanded, and some violent offenses are no longer considered for parole (Aday, 2003). The result is an increase in older offenders aging in prison and serving time in local jails.

The transformation of mental health care during the 1960s and 1970s may be more important when explaining why the number of older offenders in U.S. jails and

prisons has risen. Historically, institutionalized care was the dominant form of mental health care (Bok, 1992). Patients received room, board, and physical health care in addition to treatment for mental health problems (Frank & Giled, 2006). By the 1970s, mental health care services transitioned from institutions to a community-based care model (Mechanic, 2000). Some of the reasons for the changes were reports of deplorable living conditions, under-funding of institutions, new drug therapies, other funding mechanisms to support care in the community, less stigmatism of mental health problems, and legal disputes about the rights of those with mental illness (Mechanic, 1999). The hope was that the overall quality of life and care would improve with the movement to community based mental health care.

In practice, however, the change in the delivery of care brought other consequences. The community offers less structure, a fractured community mental health care system, fewer in-patient beds for acute care, and freer access to substances like drugs and alcohol (Mechanic, 2000). Additionally, individuals with mental health disorders living in the community may exhibit symptoms of their condition, which may draw the attention of law enforcement (Lamb & Weinberger, 2005). The literature discussing the relationship between the mental health care system and increased incarceration suggest that the deinstitutionalization of mental health care appears to have increased the amount of contact some individuals with mental illness have with the criminal justice system (Lamb & Weinberger, 2005).

Types of Older Offenders

Most early research on older offenders was conducted on older offenders in prisons. Research identified two categories of older offenders, those committing a crime

before age 50 and those with an offense after the age of 50 (Aday, 2003). Recently, three types of older offenders have emerged from the literature: long timers or lifers who commit crimes as a young adult and age in prison because of a long or life sentence; recidivists or habitual offenders who offend and re-offend throughout life; and late life first time offenders who commit their first criminal offense in late life (Anno, Grahman, Lawrence, & Shansky, 2004, Morton & Jacobs, 1992, Neely, Addison, & Craig-Moreland, 1997). Each of the three groups has a different criminal history and different implications for the criminal justice system.

The first category of older offenders, long timers or lifers, are individuals serving a long-term sentence from a single crime committed in early life. As their name implies, long timers have spent most of their lives imprisoned, have assimilated into prison life, and may be convicted of more violent crimes (Yates & Gillespie, 2000). Long timers would mainly be housed in state prisons or federal corrections, though it would be possible to see a long timer in a local jail while waiting for a hearing, jailed under special circumstances, or in custody for a recidivist crime following release.

Recidivists, or habitual offenders, are another category of older offenders who bounce in and out of the criminal justice system throughout their lives (Aday, 2003). Depending on the nature of their offenses, this group of older offenders may have spent time in jail, prison, or a combination over the years. Typically, their criminal histories are extensive, but often their offenses are for property crimes and other less serious, non-violent offenses.

The third and final category of older offenders identified in the literature is the late life first time offender. By definition, these are individuals who commit and are

convicted of a first criminal offense in late life at 50 years of age or older. In a 1984 study of older offenders in state prisons in the U.S., about 41% were late life first time offenders (Goetting, 1984). Goetting's early findings agree with subsequent research, which estimates late life first time offenders to be almost 50% of all older offenders (Aday, 1994; Anno, et al., 2004; Krajick, 1979; McShane & Williams, 1990; Wilson, 2003).

Late life first time offenders have a different criminal history from long timers and recidivists. Continued research shows that their patterns of victims tend to include intimate family members, spouses, or some other person known to the older adult, crimes tend to involve substance abuse, in the home residence, and sometimes in response to a middle age or a late life crisis (Aday, 2004; Barak, Perry, & Elizur, 1995; Brache & Banchard, 1989; Cromier, 1971). The crimes committed by late life first time offenders may be related to their health status as well as caregiving situations gone awry (Aday, 2004). As a group, they may have more significant health care needs compared to the other groups of older offenders who tend to be a little younger (Aday, 1994; Knight, 1983; Rothman, 2004; Yates & Gillespie, 2000). Few studies have exclusively focused on them; thus, late life first time offenders are a group that needs further study.

Criminal History

While some older offenders commit non-violent crimes, the typical criminal history of older offenders involves convictions for violent and sexual crimes committed when younger (Aday, 2004; Fazel & Grann, 2002; FCC, 2001; Goetting, 1984; Lewis, Fields, & Rainey, 2006). One of the first large studies of older offenders used a national sample of 248 older offenders in state prisons and found that 70% were serving sentences

for violent crimes (Goetting, 1984). Fazel and Grann (2002) found that homicide (23%), assault (20%), and sexual crimes (26%) were the most often cited criminal offenses in a sample of 210 offenders aged 60 years and older derived from national crime and hospital registries. Lewis et al (2006) found approximately 9% had committed a sexual crime and 26.3% had committed murder in a sample of older offenders in a South Carolina forensic unit. Most of the studies with information on violent crimes are based on the criminal histories of older offenders in state prisons, which may have samples of inmates with more serious convictions.

The prevalence of sexual offenses, including rape, pedophilia, and exhibitionism, among incarcerated older offenders is high (Aday, 2004). Nearly half of all older offenders in Western countries are serving sentences for sexual offenses (Fazel, et al., 2001). Aday (2004) cites a U.S. Department of Justice report from 2001 that 10% of all sexual offenses were committed by individuals 50 years and older. Further, a report from the Southern Legislative Conference (2006) that surveyed state corrections (including jails, state prisons, individuals on parole or in other community release programs) in 16 southern states found that nearly 20% of older offenders were incarcerated for sexual offenses. Nineteen states have a variety of civil commitment programs for sexual offenders who have finished their sentence but still require rehabilitation, with the oldest offenders ranging in age from 50- 102 years old for commitment programs that focus on adults (New York Times, 2007). Older offenders with a criminal history of sexual offenses are a particularly difficult group because the nature of their crime may disqualify them for parole or restrict where they can live and work post-release. Like the literature

on violent offenders, most of the research to date on sexual offenses has come from samples of older offenders in prisons.

CHAPTER 3

HEALTH ISSUES AMONG OLDER OFFENDERS

Health issues are one of the most active areas of research on older offenders because these offenders tend to have serious health care needs. A 1998 review of Canadian inmate data reported that 54% of inmates over age 50 presented with poor physical health at time of prison intake (Gallagher, 2001). Over 30% of Florida's older inmates presented at intake with either poor or very poor health, requiring placement at a special facility to meet their health care needs (FCC, 2001). The health status of older offenders may also be complicated by lifestyle and health behaviors prior to prison such as risky sexual behavior, substance abuse, accidents, and smoking (Aday, 2003). The combination of health problems presented by older offenders may be difficult and expensive to treat in a correctional setting.

Older offenders have the same age-related physical changes, chronic conditions, and other health problems as all older adults. The few longitudinal studies of older offenders' health status show a group of inmates aging at a faster pace and in worse physical health than older adults in the community (Colsher, Wallace, Loeffelholz, & Sales, 1992). Colsher and colleagues found increased instances of incontinence, cancer, cardiovascular disease, sensory impairments, and respiratory illness among older offenders. The same study found high rates of arthritis, high blood pressure, prostate issues, stroke, and ulcers among their sample (Colsher, et al., 1992). As many as 85% of

the older male offenders in a sample from 15 prisons in Britain and Wales had one or more major medical illnesses and 83% had one or more chronic illnesses in their health records (Fazel, et al., 2001). Mental health disorders, cardiovascular, musculoskeletal, and respiratory health problems were most often reported (Fazel, et al., 2001). Agerelated cognitive impairment, changes in the muscular-skeletal system, inability to regulate body temperature, and different nutritional needs are other age-related health concerns for older offenders and older adults alike (Anno, et al., 2004; Ferrini & Ferrini, 2008; Quadagno, 2008). Between age-related changes, chronic conditions, and other medical conditions, older offenders have a variety of physical health needs.

Another dimension of health is functional status, and research on the functional status of older offenders offers conflicting findings. Using a shortened version of the activities of daily life (ADL) questionnaire, almost 98% of a sample of 79 older offenders in Michigan needed some help with at least one ADL (Douglass, 1991). The Georgia Department of Corrections found that 69% of older inmates had at least one physical limitation (Owens & Phillips, 2003), although in a larger sample of offenders 60 years and older from Tennessee only about 18% needed some help on at least one ADL (Aday, 2001). Despite a lack of consensus, it is fair to say that some older offenders have at least one functional limitation that impacts their daily living.

In addition to physical health problems and the presence of functional limitations, older offenders also seem to have a disproportionately high rate of mental health problems. In fact, it is estimated that at least 40% of all older offenders worldwide have mental health problems (Barak, Perry, & Elizur, 1995). In the U.S., approximately 55% to 80% of older offenders have a mental health disorder (Brink, 2005). Common mental

health disorders identified in older offenders are serious mental illness (schizophrenia, bipolar disorder, delusional disorders, and forms of psychoses), depression, anxiety disorders, substance abuse, personality disorders, and cognitive disorders and dementia. Of older offenders aged 55 years and older, almost 40% of state inmates, 36% of federal prisoners, and over 52% of local jail inmates had mental health problems when surveyed for symptoms and/or a diagnosis of major depression, mania, and psychotic disorders in the previous year (James & Glaze, 2006). With the presence of mental health problems so great for older offenders, a natural question is, does this contribute to why an older adult commits a crime and is jailed?

At a societal level, changes in the mental health care system, current sentencing guidelines for drug offenses, and reduced access to health insurance, have been cited as explanations for the disproportionately high prevalence rates of mental illness in the U.S. correctional system for offenders of all ages (Lamb & Weinberger, 1998, 2005). Looking specifically at older offenders, some scholars have identified the accumulation of late life problems and losses, grief, difficult interpersonal relationships, disability, and retirement as potential factors associated with their criminal offense (Aday, 1994, 2003, 2004; Alston, 1986; Brache & Banchand, 1989; Kraaij, Arensman, & Spinhoven, 2002; Kraaij & de Wilde, 2001). The stresses, social isolation, and loss of self-esteem older offenders experience in prison may exacerbate pre-existing mental health problems and could increase the risk of developing disorders while in custody (Anno, et al., 2004; Faiver, 1998; Vega & Silverman, 1988). The unifying feature of all those factors is that they may all be characterized as stressors, which, in combination with a mental health problem, may be related to why this individual is jailed.

Specific Mental Health Disorders Among Older Offenders

Research on older offenders has consistently found a wide range of mental health problems, with many disorders occurring at high rates in this population. Serious mental illness (SMI; schizophrenia, bipolar disorder, delusional disorders, and forms of psychoses) occurred in 3.5 to 33% of older offenders (Barak, Perry, & Elizur, 1995; Coid, Fazel, & Kahtan, 2002; Curtice, Parker, Wismayer, & Tomison, 2003; Fazel & Grann, 2002; Fazel & Hope, 2001; Lewis, Fields, & Rainey, 2006; Washington, 1989), and a similar range has been found for rates of depression in this population (3 to 42%) (Barak, et al., 1995; Coid, et al., 2002; Curtice, et al., 2003; Fazel & Grann, 2002). Substance abuse has been found to occur in 29% to 79% of older offenders (Lewis, et al., 2006; Coid, et al., 2002; Curtice, et al., 2003). Studies have placed the prevalence rates of personality disorders between 3.5 and 43% (Barak, et al., 1995; Coid, et al., 2002; Fazel & Grann, 2002; Fazel, et al., 2001), and found rates of dementia and cognitive impairment among older offenders at between 7 and 30% (Fazel & Grann, 2002; Heinik, Kimhi, & Hes, 1994; Lewis, et al., 2006; Rosner, Wiederlight, Harmon, & Cahn, 1991). While little or no information is available about anxiety disorders or bipolar disorder as separate conditions afflicting older offenders, studies have affirmed that significant rates of mental health problems are present in samples of older offenders.

Serious Mental Illness (SMI)

Serious mental illness (SMI) includes schizophrenia, bipolar disorder, delusional disorders, and various forms of psychoses. A study by Kessler, Chiu, Demler, and Walters (2005) found that SMI had a prevalence of 6% in adults aged 18 and older in the U.S. Among older adults, SMI occurs at a rate of 0.9% in adults 55 years and older (U.S.

Department of Health and Human Services (hereafter DHHS), 1999). Although most forms of SMI develop during late adolescence and young adulthood, SMI can have a late onset or not be diagnosed until late life. Although SMI has lower prevalence rates when compared to other disorders, older adults afflicted with SMI require more services into late life and spend more money on treatment (Bartels, Miles, Dums & Pratt, 2003; Cuffel, Jeste, Halpain, Pratt, Tarke, & Patterson, 1996). Studies have found high rates of SMI among older offenders, with prevalence of schizophrenia, schizoaffective disorder, delusional disorder, and/or bipolar disorder to be between 3.5 and 33% (Coid, Fazel, & Kahtan, 2002; Lewis, et al., 2006).

Schizophrenia is one form of SMI. About 2.4 million people, or 1.1% of the adult population in the U.S., have been diagnosed with schizophrenia (Reiger et al., 1993), with a prevalence of about 0.6% among adults 55 years and older (DHHS, 1999). Schizophrenia affects men and women with similar frequency. The average age of onset for a woman is in the 20s and early 30s and in the late-teens and early 20s for men (Robins & Reiger, 1991; Smyer & Qualls, 1999). Studies have found that between 23-28% of people with schizophrenia were diagnosed with the illness after age 40, and 12% of new cases were diagnosed after age 64 (Castle & Murray, 1993; Harris & Jeste, 1988). Women are at the greatest risk for late life onset of schizophrenia, with paranoia as the most dominant symptom (DHHS, 1999). Prevalence of schizophrenia in samples of older offenders varies from 3.5 up to 33% as compared with less than 1% for the general population of older adults (Barak, et al., 1995; Coid, et al., 2002; Curtice, Parker, Wismayer, & Tomison, 2003; Fazel & Grann, 2002; Washington, 1989).

Bipolar disorder (manic depressive illness) is a mood disorder characterized by cycles of low mood and periods of exuberance, bookended by dangerous states of mixed moods. Affecting 5.7 million, mostly young adults, bipolar disorder is a serious condition at any age (Kessler, Berglund, Demler, Jin, & Walters, 2005). It exists within older adults at a prevalence of 0.3%, lower than the general public (DHHS, 1999). A combination of genetic disposition, co-morbid mental disorders, and other factors can contribute to the development of the illness (Jamison, 1999). Bipolar disorder is treatable with a combination of pharmacological and adjunctive therapies (Kessler, et al., 2005). The little research conducted on older adults with bipolar disorder suggests higher mortality rates for those with the disease, because of suicide, substance abuse, and accidents that may occur in a manic state (Jamison, 1999; Smyer & Qualls, 1999). However, the majority of older adults with bipolar disorder live independently in the community. It is unclear from the literature how prevalent bipolar disorder is among older offenders, usually because bipolar disorder is grouped as SMI when surveyed.

The last broad category of SMI is assorted kinds of psychoses. Psychoses may present with a variety of symptoms such as hallucinations, delusions, or paranoia.

Additionally, psychoses may be a symptom of dementia. Individuals may become capable of hurting themselves or others during a psychotic episode (Smyer & Qualls, 1999). It is estimated that anywhere from 4 to 32% of older offenders have a diagnosis of psychoses (Coid, et al., 2002; Fazel & Grann, 2002; Fazel & Hope, 2001), while between 4 and 6% of community dwelling adults are estimated to suffer from a psychotic disorder (DHHS, 1999).

Depression

With an average age of onset of 30 years old, almost 21 million American adults suffer from major depressive disorder (Kessler, Chu, Demler, & Walter, 2005). Even though younger adults suffer from major depressive disorder at a higher rate than older adults, it is one of the top three conditions affecting older adults (Smyer & Qualls, 1999). A report on mental health and older adults conducted by the U.S. Surgeon General (1999) puts the prevalence of depressive symptoms in older adults between 8 and 20% in community settings and the prevalence of major depressive disorders at about 5%. A smaller sub-group of older adults with depression may have late-onset depression, in which a first episode of depression occurs after the age of 60 and possibly in conjunction with dementia or another illness (DHHS, 1999).

Across studies, rates of depression in older offenders range between 3 and 42% (Barak, et al., 1995; Coid, et al., 2002; Curtice, et al., 2003; Fazel & Grann, 2002). Aday (1994) found that depression following loss and grief in late life was an extenuating circumstance in crimes committed by older adults. Regan, Alderson, and Regan (2002) found a significant relationship between older women with depressive disorders and an increased likelihood of committing murder. Depression is a serious issue for older offenders and older adults alike.

Anxiety Disorders

Anxiety disorders have the highest prevalence (11.4%) among all mental health disorders, and, in addition to adults diagnosed with the disorder, 17% of adult men and 21% of adult women may exhibit symptoms below the clinical threshold for anxiety (Himmelfarb & Murrell, 1984). Prevalence rates for anxiety disorders among older

adults are lower than younger adults, but many older adults who do not meet the clinical threshold for anxiety disorders still indicate they suffer from many symptoms (Smyer & Qualls, 1999). Older adults can suffer from generalized anxiety disorder (GAD), post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), panic disorder, and assorted phobias. Pinquart and Duberstein's (2007) analysis of 32 studies about the treatment of anxiety in older adults found that pharmacological and behavioral interventions both work well, with pharmacology being the first course of treatment because of its positive effects. Among older offenders the literature is inconclusive about rates of anxiety, as items about it are not usually included in questionnaires.

Substance Abuse

Substance abuse is a significant mental health concern for older adults. The prevalence rate ranges from 3-9% for heavy drinking (Liberto, Oslin, & Ruskin, 1992) and between 0.9 and 2.2% for alcohol abuse and dependency (Reiger, Narrow, Rae, Manderscheid, Locke, & Goodwin, 1993). Older adults typically have alcohol-related problems and misuse over the counter (OTC) medicines or prescription drugs, as opposed to younger adults who tend to abuse illegal drugs at higher rates. The majority (1/2 to 2/3) of older adults who abuse alcohol do so throughout life, while anywhere from 1/3 to 1/2 start abusing in late life (Atkinson, Tolson, & Turner, 1990). Misuse of prescription and OTC drugs usually begins as pain management or as treatments for insomnia, other mental health disorders, or family problems (Smyer & Qualls, 1999). Substance abuse, for older adults, may be a form of coping to ease socialization, control social anxiety, and avoid other problems (Smyer & Qualls, 1999). With many proven interventions designed for older adults, substance abuse problems can be treated in late life.

Substance abuse has been found to occur between 29% and 79% in older offenders (Lewis, et al., 2006; Coid, et al., 2002; Curtice, et al., 2003). Studies have shown that older adults are more likely to be arrested for an alcohol–related crime compared to younger adults (Arndt, Turvey, & Flaum, 2002; Teller & Howell, 1981). In a sample of violent older offenders, almost 68% were alcohol dependent (Lewis, et al., 2006). Coid et al found substance abuse among 29% of older offenders. Similarly, Curtice et al found 79% of their sample of older offenders had a history of alcohol use, 41% regularly consumed alcohol, and 9% stated that alcohol use was related to their criminal offense.

The reported rates of substance abuse vary widely in these studies. The samples may have contributed to both the variability and the likelihood of having higher rates of observed substance abuse. For example, Lewis, et al. (2006) used a population of older offenders in a state forensic unit for their study, rather than a more psychologically healthy population of older offenders. Likewise, Coid, et al. (2002) reported on a sample of older offenders from a secure forensic unit with a high prevalence of violent offenders and other comorbid mental health disorders. Some of the literature on substance abuse draws on samples of older offenders where one would expect to see a higher than average prevalence, a contributing factor to such wide distribution across studies.

Personality Disorders

Personality disorders tend to be stable across the life span and often can be traced back to adolescence or early adulthood, with a prevalence ranging from 1 to 15% in community populations (American Psychiatric Association, 1994; Zarit & Zarit, 2007).

There are three clusters that fall under the umbrella of personality disorders: individuals

in Cluster A exhibit odd or eccentric behaviors and may be diagnosed with schizoid, paranoid, and schizotypal personalities; individuals with a Cluster B personality disorder have histrionic, narcissistic, antisocial, and borderline personalities characterized by dramatic and impulsive behaviors; and those who have obsessive-compulsive, avoidant, and dependent diagnoses fall into Cluster C. Over time, of the three clusters, Cluster C diagnoses may become more prevalent in older adults (Agbayewa, 1996). Commonly, older adults with a personality disorder have experienced symptoms and issues related to their illness throughout their lives (Zarit & Zarit, 2007). For others, a full-blown personality disorder may occur as a result of a late life loss or change that intensifies premorbid personality traits (Sadavoy & Fogel, 1992) or may emerge with the onset of depression or other cognitive disorders (Zarit & Zarit, 2007). It is difficult to diagnose a personality disorder at any age, and changes in severity or symptoms can occur over time. Within samples of older offenders, the prevalence rate of personality disorders is between 3 and 43% (Barak, et al., 1995; Coid, et al., 2002; Fazel & Grann, 2002; Fazel, et al., 2001), while between 1-15% of community dwelling older adults have a personality disorder (U.S. Department of Health and Human Services, 1999).

Dementia and Cognitive Impairment

Approximately 24.3 million people around the world in a 2005 global prevalence study had some form of dementia, with 4-6 million new cases projected to be diagnosed every year (Ferri, Prince, Brayner, Brodaty, Fratigilioni, et al., 2005). In America, about 4.5 million people have Alzheimer's disease, the most common form of dementia (Hebert, Scherr, Bienias, Bennett, & Evans, 2003). Age is the most important risk factor associated with the onset of dementia (Katzman, 2004), with prevalence increasing as a

person ages, from 1% at age 60 to 7% by the mid-70s and between 20-30% in the 80s (Canadian Study of Health and Aging Working Group, 1994; Zarit & Zarit, 2007). Only in rare instances does dementia strike adults in middle age, and this is usually an inherited form of dementia.

Studies have found rates of dementia and cognitive impairment among older offenders between 7 and 30% (Fazel & Grann, 2002; Heinik, Kimhi, & Hes, 1994; Lewis, et al., 2006; Rosner, Wiederlight, Harmon, & Cahn, 1991). Fazel and Grann (2002) found dementia in 7% of all prison cases from 1988-2000 for a sample of offenders aged 60 and older. Fazel and Grann's rates were significantly lower than those found by Rosner et al and Heinek et al (1994) in which dementia ranged from 19 to 30% in the respective study populations of offenders. The highest prevalence rate of dementia- nearly 45%- was found in a sample of violent offenders (Lewis, et al., 2006). Epidemiological data on elderly inmates suggests higher instances of dementia and neurological impairments because of chronic drug and alcohol abuse, among other risky lifestyle choices and negative health behaviors (Zarit & Zarit, 2007).

Mental health disorders have been associated with life time exposure to stressors, as will be discussed in the next chapter. A goal of this dissertation is to study individual characteristics of older offenders. One dimension to be explored is the relationship between mental health disorders and exposure to lifetime stressors in older offenders.

CHAPTER 4

STRESSORS AND THEIR IMPACT ON HEALTH

The general definition of stressors includes anything that requires people to use their adaptive resources, although the nature of the stressor may involve the use of different types and amounts of individual resources (Pearlin & Schooler, 1978). In some cases, the stressor is a distinct life event, such as getting married or having children, while other stressors can be cumulative or chronic. Whether temporary or persistent, one stressor can cause other stressors to develop, creating an overlapping web of primary and secondary stressors (Pearlin, 1999). Many people experience stressors over the course of their lives, and it doesn't necessarily mean that they develop problems as a result (Pearlin, Schieman, Fazio, & Meersman, 2005). However, for some individuals, the occurrence, emergence, and convergence of stressors can become overwhelming, with physiological and psychological consequences across the life span.

Cohen and Williamson (1991) elucidated the relationship between stress and infectious diseases, illustrating how symptoms and conditions are exacerbated by stress and how stress can lead to negative health behaviors such as smoking, drinking, risky sexual activity, failure to comply with health directives, or failure to seek health care. Although the relationship between stress and physical health is multifaceted, connections between stress and cardiovascular disease (Dong, Giles, Felitti, Dube, Williams, Chapman, & Anda, 2004), cancer (Heffner, Loving, Robels, & Keicolt-Glaser, 2003),

liver disease (Dong, Dube, Felitti, Giles, & Anda, 2003), HIV/AIDS (Cole, Kemeny, Fahey, Zack, & Naliboff, 2003), adult obesity (Gunstad, Spitznagel, Cohen, Williams, Kohn, & Gordon, 2006), inflammation (high C-reactive protein) in adulthood (Danese, Pariante, Caspit, Taylor,& Poulton, 2007) and other physical ailments have been established in the literature.

Research has suggested that stress increases the risk for mental health problems such as depression and affective disorders (Cohen, Janicki-Deverts, & Millers, 2007; Hammen, 2005; Kessler, 1997; Mazure, 1998) and cognitive problems such as Alzheimer's disease (Pardon & Ratthay, 2008). Stressors from early life and within the previous year have shown to be important in the onset of stress-related mental health problems. Zarit and Zarit (2007) describe how bereavement can lead to depression. In addition to depression, older widowers may drink excessively in response to the death of a spouse and the loneliness and isolation that may result, which could lead to many other secondary problems (Zarit & Zarit, 2007). The social timing of the stressor in the life course, whether it is on-time or non-normative, is an important factor in the emergence of a mental health disorder, with non-normative stressors associated with greater negative outcomes (Pearlin & Radabaugh, 1985).

The stressors that impact health and wellbeing may originate from a variety of conditions in early life. A significant body of literature has examined the impact of early life stressors (death of a parent, neglect, abuse, other forms of trauma, economic deprivation, and discrimination) and has shown more physical health problems, interpersonal problems, psychological problems, substance abuse, and suicidal behavior over the life course for individuals exposed to early life stressors (Anda, Felitti, Bremner,

Walker, Whitfield, Perry, Dube, & Giles, 2006; Pearlin, Schieman, Fazio, & Meersman, 2005; Wilson, et al., 2006). Lately, research into the influence of childhood adversity has included older adults and found that increased risks of alcohol and substance abuse, impaired memory of childhood, mental health problems, risky sexual activity, somatic problems (sleep disturbance, severe obesity, and other conditions), less ability to control anger, and greater likelihood of committing intimate partner violence increased when respondents reported four or more adverse childhood events (Anda, et al., 2006). A more recent study confirmed the work of Anda et al., finding that older adults with more childhood stressors experience more negative emotions, more feelings of emotional isolation, and have a smaller social network (Wilson, et al., 2006). The stressors with antecedents in early life adversity appear to have potentially lifelong implications for a variety of negative outcomes in late life, including the occurrence of a mental health problem.

Stressors and Criminal Behavior

In addition to the physical and mental health disorders associated with stressors throughout, a large amount of research has been devoted to understanding the relationship between stress and criminal behavior. In fact, one of the most studied theories in criminology is General Strain Theory (GST). GST focuses on society's expectations and whether an individual can achieve those goals accordingly, examining structural disparities as a source of stress that influences individual behavior (Merton, 1938). Agnew (1992) and Agnew and White (1992) updated Merton (1938)'s classic model by including modern stressors such as bad work environments, death or serious health problems of family or friends, moving to a new school, dissolution of parents'

marriage, living in a bad neighborhood, experiencing childhood adversity, and having negative relationships with adults, all elements that increase the likelihood of experiencing disappointment, depression, fear, and anger. Studies focusing on youthful offenders have generally confirmed the role of stressors in deviant and criminal behavior (Agnew & Brezina, 1997; Mazerolle, 1998; Paternoster & Mazerolle, 1984; Piquero & Sealock 2000' 2004) with similar results in college-aged adults (Briody, 2001; Capowich, et al., 2003; Eitle, 2002, Eitle & Turner, 2002, 2003; Mazerolle & Piquero, 1997, 1998). Many scholars (Agnew, Cullen, Burton, Evans, & Dunaway, 1996; Ostrowsky & Messener, 2005) indicate that GST appears to be applicable across race, gender, and, most importantly for this study, age.

Many of the same themes and characteristics shown to be related to crime via the GST are likewise important in the development of mental health problems over the life course. Income, employment status, marital status, and living arrangements can also play a role in the quality of one's life, the availability of social support, access to physical and mental health care, and the number of choices a person has as they age (Longino & Mittelmark, 1996). Age itself is a major risk factor for dementia, but it is often associated with a decreased prevalence of other mental health problems (Gurland, 1996). Gender differences exist in the emergence of depression (more prevalent in women) and substance abuse (more prevalent in men), and, because women outlive men, they are more likely to develop dementia. Prevalence of mental health disorders also seems to vary by ethnicity and cultural background, although that may be attributed to diagnostic difficulties, communication problems, help seeking behaviors, and cultural bias (Sakauye, 1996).

The impact of stressors and strain may be important to consider when studying older offenders. Thinking about the life course, simply by being older, there is more opportunity to face more adversity and for it to accumulate over time. The literature suggests that older offenders suffer from more physical health problems and experience higher rates of mental health disorders. Many older offenders, especially those with a long criminal history, may experience stressors related to their incarceration (Aday, 1994) or as a result of being released into the community and challenged to support one's self. To explore this more thoroughly, Study 1 will look at older offenders in jails, the prevalence of mental health problems, and the relationship between mental health problems and stressors. Related to Study 1, Study 2 will focus on older offenders in jail who commit a first time offense in late life. Both studies seek to offer potential explanations for why there are so many older offenders in local jails.

CHAPTER 5

STUDY 1: OLDER OFFENDERS WITH MENTAL HEALTH DISORDERS: PREVALENCE IN U.S. JAILS AND STRESSORS

Introduction

Older offenders have been shown to have disproportionately higher rates of several mental health disorders, compared with older adults living in the community (Fazel, Hope, O'Donnell, & Jacoby, 2001; James & Glaze, 2006). Previous research has suggested that lifetime stressors can have an impact on physical well being, mental health, and criminal behavior across the lifespan (Anda, Felitti, Bremner, Walker, Whitfield, Perry, Dube, & Giles, 2005; Ostrowsky & Messener, 2006). James and Glaze (2006) illustrate that there are a significant number of offenders throughout all arms of the criminal justice system and across age groups who suffer from mental health disorders. Combining what is known about the role of stressors with what is known about aging may enhance our understanding of the high rates of mental health disorders in older offenders. The overarching intent of Study 1 is to study older offenders in U.S. jails, to learn more about mental health disorders among them, and to look at the role of stressors as predictors of mental health status.

Jailed older offenders are the sample for this study, rather than imprisoned older offenders, for several reasons. As mentioned in Chapter 1, there are differences between jails and prisons. Individuals in prisons typically have committed more serious offenses,

multiple offenses, and are serving sentences longer than a year. People who are in jail are typically incarcerated for less serious, often non-violent offenses and are released in a year or less back to the community. The differences between being jailed versus being sentenced to prison suggest that these two groups may differ in their previous experience of stressors and their mental health status. To date, most of the research on older offenders has been conducted on offenders in prison. Understanding older offenders in jails is important because they may show different patterns of mental health disorders than older offenders in prisons. Mental health disorders in older jailed inmates are especially critical, as these offenders will return to society, usually in less than a year. Estimates of mental health disorders may have practical significance in that they allow an opportunity to identify how many older offenders return to the community still in need of further care, possibly leading to higher recidivism.

When examining mental health disorders, a natural question is to consider the circumstances that may have contributed to being jailed. Many of the experiences individuals have throughout their life and in late life may be categorized as stressors. As noted in Chapter 4, stressors may contribute to poor physical and emotional well-being, and they have been associated with criminal offending, especially in younger offenders. The present study explores whether stressors are more frequent in the history of older offenders with mental health disorders, compared to offenders without mental health disorders. In addition, this study looks at stressors from childhood experiences and from recent experiences to see if they differentially are associated with mental health disorders in this sample of older offenders. The current study uses data from the 2002 wave of the Survey of Inmates in Local Jails (U.S. Department of Justice, 2002) to derive prevalence

rates of mental health disorders and to investigate the role of stressors in the lives of older offenders with mental health disorders compared to those older offenders without a mental health disorder.

Methods

Data Source and Subject Sample

Data for this study are from the 2002 wave of the Survey of Inmates in Local Jails (SILJ) (U.S. Department of Justice, Bureau of Justice Statistics, 2006). SILJ data have been collected in 1972, 1976, 1983, 1989, 1996, and 2002. The U.S. Department of Commerce, Bureau of the Census conducted hour-long interviews using Computer Assisted Personal Interviewing (CAPI). CAPI provides interviewers with questions based on participants' responses, individually tailoring the interview by skipping items and leaving blank responses for questions that do not apply to the participant. The SILJ questionnaire has comprehensive sections on individual characteristics, current offenses and detention status, pretrial release and trial, current sentence, incident characteristics, criminal history, socioeconomic characteristics, alcohol and drug use and treatment, medical conditions, mental health and disabilities, and jail programs and activities. The data are self report and are available for public use from the University of Michigan's Inter-university Consortium for Political and Social Research.

In the 2002 wave of the SILJ, a national sample of jails was selected based on the size of their inmate population, with larger jails having a higher probability of being in the facility sample. The target was 460 jails, with a final facility sample of 417 jails. SILJ participants were chosen from a randomly predetermined state and sample selection rate, wherein all types of inmates had an equal chance of being selected. The participants

were informed (verbally and in writing) that their involvement with the study was voluntary, their responses would be kept confidential, and all reports would use aggregate data to insure confidentiality. There was an 84% response rate from 7,750 inmates, and the final sample was 6982 inmates for the 2002 wave. From the total sample of the SILJ 2002 wave, a sub-set of participants 50 years and older (n=330) at the time of their interview was the focus of this study.

Variables

A subset of variables from the SILJ 2002 was used in this study. The primary outcome variable was the presence of one or more mental health disorders. The predictor variables included demographics, stressors, and variables describing the individual's criminal history was included to more fully understand these older offenders in local jails. The specific variables are listed below.

Outcome Variables

Mental Health Variables. SILJ has many items about symptoms, diagnoses, and treatments, and other items that directly address cognitive impairment and dementia. Specific mental health disorder diagnoses (depressive disorders, bipolar disorder, psychotic disorder, post traumatic stress disorder, other anxiety disorders, personality disorders, other mental conditions) and the presence of substance abuse or dependency were used as outcome variables.

Predictor Variables

Demographic Variables. Items about sex, age, race, and the highest level of education completed before admission to jail were included.

Stressors

Family Characteristics Variables. These items consist of current marital status, which yielded information about interrupted marriages and widowhood.

Employment and Income Variables. Employment status prior to incarceration, amount of monthly income, and receipt of public assistance as an adult were used.

Living Arrangements Variables. Items about living arrangements, such as being homeless and living with family, were included.

Abuse Variables. Items about history of physical abuse and history of sexual abuse were used.

Chronic Conditions and Disability Variables. Chronic health problems (high blood pressure, diabetes, asthma, and arthritis), use of a physical aid in daily activities, and sensory impairment (hearing impairment and visual impairment) were included in the analyses.

Criminal History Variables

The study also used items to generate a basic criminal history. The age of first arrest and mean number of arrests as well as information about the nature of their current offense for their most recent admission to jail (drug use at the time of the offense, alcohol use at the time of the offense, and whether the controlling offense- most serious charge of current offense if there are multiple offenses- was violent or non-violent).

Analysis

The first goal of the study was to determine the prevalence rates for mental health disorders in the total sample of offenders aged 50 years and older and residing in the jail at the time the data were collected. The sample was then divided into two groups, those

older offenders with one or more mental health disorders and individuals without a mental health problem. A descriptive analysis by group of socio-demographic characteristics, criminal history, current offense history, and stressor variables for each group was conducted.

The second goal of the study was to investigate the role of stressors in the lives of older offenders with and without mental health disorders. Factor analysis was first conducted to determine if there was an underlying structure among the stressor variables. Because of the large number of stressor variables, reducing them to a smaller number of factors allowed for greater parsimony in the regression model. The final phase of the analysis was a logistic regression to determine which variables were related to the probability of having a mental health problem. The predictor variables for the model included age, gender, marital status, education, ethnicity, and any meaningful stressor factors identified during the factor analysis. The outcome variable was the presence or absence of a diagnosed mental health disorder. It is important to note that the term predictor is used throughout the study in the statistical sense. The objective is to find associations between the variables, not assess the causes of mental health disorders in aging offenders. SPSS 17.0 was used for all statistical analysis.

Results

Prevalence of Mental Health Disorders

Among the sample of older jail offenders, 65.8% (N=217) of participants had at least one mental health disorder and/ or substance abuse problem defined as dependency or abuse of alcohol and/or drugs. Only 113 participants did not have a mental health and/or substance abuse disorder at the time the data were collected. Table 5.1 shows the

prevalence of those mental health problems in the total sample of older offenders. As can be seen, substance dependency/abuse was the most prevalence disorder, affecting fully half of the inmates. Depression was present in over a quarter of the offenders and some form of anxiety disorder was present in approximately 20% of the offenders.

Table 5.1 Prevalence Rates of Mental Disorders in Older Offenders in Jails

Disorder	Older
	Offenders in
	Jail
% with 1 or more mental health disorder(s)	65.8%
Substance dependency/abuse	50.9%
Depression	27.3%
Anxiety Disorder (including PTSD)	$22\%^{1}$
Bipolar Disorder	10.3%
Personality Disorder	6.4%
Psychotic Disorder/Schizophrenia	7.3%
Cognitive Impairment	N.A.
Other Mental Health Problems	3.9%

Note. Percent do not add to 100 due to multiple disorders. N.A. = not available. 1 Prevalence rate for PTSD was 12% and other anxiety disorders were 10% in the jail sample, totaling 22%.

Criminal History Characteristics of Offenders with and without Mental Health Disorders

The sample was then divided into two groups, individuals who reported a mental health disorder and/or substance abuse (n=217) and those who did not (n=113). The two groups were compared using t tests and Chi square statistics. Table 5.2 outlines the criminal history and basic information about the current offense for these offenders. The mean ages of first arrest and the mean number of prior arrests are significantly different t (329) = 22.9 and 10.9 respectively. Those with mental health problems, on average, were younger at the time of their first offense and had a large number of prior arrests. The rates of current controlling offenses committed under the influence of alcohol or drugs

were significantly higher for the group of older offenders with mental health problems, whereas there were no differences in the percent of non-violent offenders.

Table 5.2 Criminal History of Offenders Age 50 and Older by Mental Health Status, SILJ 2002

	No Mental Health Disorder	Mental Health Disorder	Chi Square/ t test (329)
Variables	(N=113)	(N=217)	
Criminal History			
Mean age of first	32.7	25.9	22.9
arrest***			
Mean number of prior arrests***	3.5	5.4	10.9
Current Offense History			
%Non-violent offense	73	78	1
% Using alcohol at	10.6	28.1	13.9
offense***			
%Using drugs at	0	12.9	15.9
offense***			

^{*}p < .05. **p < .01. ***p < .001.

Late Life Stressors of Offenders with and Without Mental Health Disorders

Table 5.3 provides information about the sociodemographic characteristics and an overview of life stressors experienced by older offenders in the sample. Individuals with mental health problems are significantly younger, are less likely to be married, and less likely to be Caucasian. Significantly more older offenders with a mental health problem had histories of physical and sexual abuse. Finally, among the disability and chronic health variables, those with mental health problems reported significantly greater rates of arthritis, while the use of a physical aid in daily activities approached significance.

Table 5.3 Socio-Demographic Variables and Stressors by Mental Health Status among Offenders 50 years and older, SILJ 2002

	No Mental		χ^2 / t test
	Health	Mental Health	(329)
	Disorder	Disorder	(52)
Variables	(N=113)	(N=217)	
Sociodemographic Characteristics	3	·	
Age (mean years)***	56	54	186.64
% male	76	74	.22
% >= high school			3.16
diploma/GED	67	70	
% Caucasian**	44	31	5.81
% Married**	31	19	6.44
Employment & Income			
% Income under poverty line	96	94	.35
% Full-time employed	63	56	1.06
Living Arrangements			
% Living with family	58	57	.06
% Homeless	11	15	1.28
History of Abuse			
% Sexual Abuse***	4	21	21.97
% Physical Abuse***	12	35	20.87
Disability & Chronic Health			
% High blood pressure	41	44	.21
% Asthma	15	15	.03
% Arthritis*	34	44	3.03
% Diabetes	14	17	.56
% Visual impairment	28	30	.08
% Hearing impairment	10	13	.61
% Use of physical aid in daily			
activities	6	12	2.9

^{*}p < .05. **p < .01. ***p < .001.

A factor analysis with varimax rotation of the stressor variables was conducted to determine if underlying relationships among the variables existed. The sample size for the factor analysis was 326, with 4 cases having been excluded because of missing information for at least one of the variables. The average of the communalities was .72, which is acceptable for the number of items and the sample size. Factor loadings less than

.35 were suppressed. The items loaded onto four discernable factors: disability and chronic health conditions, living arrangements and income, history of abuse, and marital status (see Table 5.4). Factor 1 (35.12%) and factor 2 (20.11%) explained the bulk of the variance, and the cumulative variance explained by all the factors was 71.70%.

Table 5.4 Summary of Factor Loadings with Varimax Rotation for Selected Stressor Variables

	Factor loading				
Item	1	2	3	4	Communality
Hearing impairment	.90				.85
Use of physical aid in daily activities	.90				.85
Visual impairment	.88				.82
History of asthma	.83				.74
History of diabetes	.76				.72
History of high blood pressure	.75				.66
History of arthritis	.75				.63
Employed		.94			.89
Living in family unit		.88			.79
Homeless		.86			.75
Income		.61			.41
History of physical abuse			.78		.66
History of sexual abuse			.70		.54
Marital Status				.86	.75
Eigenvalues	4.92	2.82	1.26	1.05	
% of Variance	35.12	20.11	8.98	7.49	

The factor scores were saved as variables, and z-scores of the factor variables were produced. The stressor predictors were coded as disability and chronic health conditions (higher values indicating no disability and/or chronic health problems), living arrangements and income (higher values meant no history of homelessness, living alone, higher monthly income, not currently employed), history of abuse (higher values equaling no history of abuse), and marital status (higher values indicating that a person is divorced, separated, or single).

Using the standardized four factors as independent variables, a logistic regression model was run to determine which predictors were significantly related to having a mental health disorder, with the presence(=1) or absence (=0) of a mental health disorder as the dependent variable. The predictor socio-demographic variables were recoded as follows: age (50-59 years old =1), gender (female =1), highest level of education (12th grade/GED or more= 1), and race (Caucasian= 1) along with the factor variables. Table 5.5 illustrates the results of the logistic regression.

Table 5.5 Logistic Regression Predicting Mental Health Status (n=326)

Predictor	<u>b</u>	Odds Ratio	CI 95%
Age	.84*	2.33	1.18-4.61
Gender	.12	1.13	.63-2.02
Education	.08	1.09	.65-1.82
Race	65**	.52	.3286
Disability/Chronic Health Conditions	17	.84	.65-1.10
Living Arrangements & Income	.12	1.13	.87-1.46
History of Abuse	32*	.73	.5597
Marital Status	.28*	1.05	1.03-1.69

^{*}p < .05. **p < .01.

The odds ratios revealed that being between 50-59 years of age significantly increased the odds of being in the group with mental health problems (OR= 2.33, CI 95% = 1.18-4.61, p<.05). Identifying as Caucasian (OR=.52, CI 95% = .32-.86, p<.01) significantly decreased the odds of having a mental health disorder. Of the stressor factors, history of abuse and marital status were significant predictors. Having fewer instances of abuse (OR=.73, CI 95% = .55-.97, p<.05) significantly decreased the odds of having a mental health disorder, whereas not being married significantly increased the odds (OR=1.05, CI 95%= 1.03-1.69, p<.05) of a mental disorder, controlling for all other variables in the model.

Discussion

Evidence from past studies on older offenders shows that they are a growing population within the U.S. criminal justice system (Aday, 2003; Southern Legislative Conference, 2006; Yates & Gillespie, 2000). Research has suggested a relatively high rate of mental health disorders, but this research has not looked specifically at older offenders in jails. The present study found that among a large sample of older offenders throughout U.S. jails a significant proportion had a mental health disorder. About 66% of the sample presented with one or more mental health disorders, including substance disorders, which is similar to the figure of 64% of all offenders in jail, regardless of age (James & Glaze 2006). The overall prevalence rate of 66% in this study is also similar to the prevalence range of 55-80% given by Brink (2005) for all types of offenders 55 years and older. This finding was compelling and provoked a comparison of prevalence rates for individual mental health disorders among older offenders in jails, older offenders in prisons, and older adults living in the community. The data for these latter two groups were shown above in Table 5.6, along with the rates for the jail sample.

Table 5.6 Prevalence Rates of Mental Disorders in Older Offenders in Jails, Older Offenders in Prison, and Community

Disorder	Older	Older	Community
	Offenders	Offenders	Dwelling
	in Jail	in Prison	Older
			Adults
% with 1 or more mental health disorder(s)	65.8%		
Substance dependency/abuse	50.9%	29-79%	3-9%
Depression	27.3%	3-42%	8-20%
Anxiety Disorder (including PTSD)	$22\%^{1}$	N.A.	11%
Bipolar Disorder	10.3%	N.A.	.015%
Personality Disorder	6.4%	3-43%	1-15%
Psychotic Disorder/Schizophrenia	7.3%	3-32%	4-6%
Cognitive Impairment	N.A.	7-30%	3-10%
Other Mental Health Problems	3.9%	N.A.	N.A.

Note. Percent do not add to 100 due to multiple disorders. N.A. = not available. ¹Prevalence rate for PTSD was 12% and other anxiety disorders were 10% in the jail sample, totaling 22%.

Sources. American Psychological Association, 1994; Anthony & Aboraya, 1992; Barak, et al., 1995; Canadian Study of Health and Aging Working Group, 1994; Coid, et al., 2002; Curtice, et al., 2003; Fazel & Grann, 2002; Fazel, et al., 2001; Heinik, et al., 1994; Himmelfarb & Murrrel, 1984; Kay, 1995; Kim, Jeong, Chun, & Lee, 2003; Lewis, et al., 2006; Liberto, Oslin, & Ruskin, 1992; Liu, H., Lin, K., Teng, E., Wang, S., Fuh, J., Guo, N., et al., 1995; Rosner, Wiederlight, Harmon, & Cahn, 1991; U.S. Department of Health and Human Services, 1999; Washington, 1989; Wimo, Winblad, Aguero-Torres, & von Strauss, 2003; Zarit & Zarit, 2007.

Most notable in the jailed older offenders was the high rate of substance abuse compared to community dwelling older adults, and the similarity to rates among older offenders in prisons. Alcohol abuse, in particular, and the use of alcohol and/or drugs at the time of the offense is a recurrent finding in the literature on older offenders (Arndt, Turvey, & Flaum, 2002; Coid, Fazel, & Kahtan, 2002; Curtice, Parker, Wismayer, & Tomison, 2003; Kratcoski, 1990, Lewis et al., 2006). The current study also found higher rates of schizophrenia, bipolar disorder, and anxiety disorders among the older jail inmates than among community dwelling older adults. The rate of schizophrenia

appeared similar to the lower range of estimates for older prison offenders. Comparisons for bipolar disorder and anxiety disorders cannot be made between the jail and prison populations, as the present study is the first to provide prevalence rates for bipolar disorder (10%), post- traumatic stress disorder (PTSD) (12%), and other anxiety disorders (10%) for any older offenders. Thus the results of the present study is consistent with other studies of older offender in suggesting that rates of many mental health disorders are higher among offenders than among community dwelling older adults.

The results of the present study suggest that many older offenders in jail have significant mental health disorders and will likely require care upon release as well as while they are in custody. The majority of jailed older offenders will be released into the community in a year or less. To the extent that mental health disorders contributed to the older offender's current arrest, the same problems may place the newly released offender at risk for reoffending. This may be especially true for substance abuse problems. Wider use of screening tools like the MAST-G (University of Michigan, 1991) and the CAGE (Mayfield, McLeod, & Hall, 1974) assessment may be warranted to determine who might have a problem with substance use and to educate them about the physiologic changes that make them less able to tolerate alcohol, illegal drugs, and over the counter medications as they age. The results of this study also suggests that efforts within the community to raise awareness and enrollment of older adults in age-specific substance treatment programs such as the BRITE program in Florida (Schonfeld, King-Kallimanis, Duchene, Etheridge, Herrera, Lawton, & Lynn, 2010) and the GET SMART program in California (Satre, Knight, Dickson-Furhmann, & Jarvick, 2003), may be an important

component of the mental health system for older adults. The hope is that addressing substance abuse even in late life will reduce the risk for incarceration and other related problems.

Aside from investigating prevalence rates of mental health disorders among the jailed older offenders, another objective of the study was to determine if sociodemographic characteristics (age, gender, educational achievement, and race) were predictive of being in the group of older offenders with a mental health disorder. Age and race were found to be significant predictors.

Older offenders aged 50-59 (i.e., younger 'older' offenders) had an increased risk of being in the group with mental health disorders. Although it is unclear exactly why this may be, we know that the prevalence of most mental health disorders decreases with older age. Dementia is the only mental health disorder where older age is a significant risk factor. It is also possible that many of the instruments used to assess mental health problems lack the sensitivity to identify these problems among older adults, especially when age-related physical changes can make the diagnosis of some mental health problems more difficult. Finally, the mortality rate for individuals with mental health disorders is higher than for individuals who do not have a disorder (Colton & Manderscheid, 2006). Therefore, given the population in this study, it is possible that older individuals, particularly those with mental health problems, may not have survived.

Different risks by race were also found. Caucasians were less likely to be in the group of older offenders with mental health disorders. This is supported by studies of mental health care in the U.S. that demonstrate racial and ethnic disparities throughout the system. Disparities can come in many forms: reduced access to care, lower quality of

care, provider bias, statistical discrimination, and affordability (Maguire & Miranda, 2008). Some of the disparities lead to over diagnosis of certain conditions, such as schizophrenia among African Americans (Maguire & Miranda, 2008). Responding to the diversity of the patient population by having culturally competent workers and providers of color are specific ways to improve access. It is also the case that focusing on the quality of mental health care in general will improve it for everyone and reach people who might not otherwise receive adequate care. A more circumspect approach to mental health care may reach more people before symptoms and behaviors reach a crisis point, reducing the potential of encountering the legal system at any age.

In addition to sociodemographic predictors, Chapter 5 also explored whether stressors throughout the lifespan were predictive of being a jailed older offender with a mental health disorder. Factor analysis of several variables identified four factors: history of abuse, marital status, disability/chronic health problems, and living arrangements/income. Two of those stressor factors, history of early abuse and marital status have been identified in the criminology literature, and, in this study, they were found to be significant predictors of mental health status. The relationship between early victimization and adult criminal behavior is established in the literature (English, Widom, & Brandford, 2002; Maxfield & Widom, 1996; Widom, 1989). Widom (2000) found that individuals who were victims of physical abuse, sexual abuse, and neglect in childhood were more likely to attempt suicide, have anti-social personality disorder, abuse or be dependent on alcohol, and had a 1.6 greater chance of being arrested as an adult when compared to a matched control group who were not known to be victims. While the majority of abused and neglected children do not go on to commit crimes

(Widom, 2000), findings from this study suggest that some individuals may experience long term effects of victimization in late life, including post traumatic stress (PTSD) a condition associated with substance abuse and depression (Kilpatrick et al., 2003). The present study suggests that these early stressors may also be related to criminal behavior in older adults as well.

The finding that being single, divorced, or widowed increases the risk of being jailed and having a mental health problem is consistent with previous research on older offenders. Marriage has generally been accepted as one contributor to individual well-being and a significant explanation for desistence from crime over the life course (Sampson, Laub, & Wimer, 2006). Kraaij and de Wilde (2001), Longino and Mittelmark (1996), and Zarit and Zarit (2007) all describe how troubled interpersonal relationships, death of a spouse, and other marital issues can contribute to behavioral problems and the onset of mental health problems. While these findings confirm previous research, it is an area where more research on older offenders specifically will be needed.

The results of this study prompted the question of whether stressors that have been linked to mental health disorders and criminal offending in younger populations will appear differentially for older offenders who have previous offense records versus those who offend for the first time later in life. Study Two was designed to explore the stressor history of those two distinctive groups of older offenders in jails.

CHAPTER 6

STUDY 2: LATE LIFE FIRST TIME OFFENDERS IN JAILS

Introduction

Previous research has identified a discrete category of older offender: those who commit a first offense in late life. Some studies place the number of late life first time offenders at up to 50% of the total population of older offenders as described in previous chapters (Anno, Graham, Lawrence, & Shansky, 2004). Nevertheless, relatively little is known about late life first time offenders and how they compare with older offenders who committed their first offense earlier in adulthood. Of particular interest in this study is the history of stressors for these two groups of older offenders. Are there differences in their lifetime experiences of stressors that may contribute to our understanding of why some people offend earlier in adulthood, whereas others offend only in later adulthood? Chapter 6 shifts the focus from mental health to the life experience of late life first time offenders to explore a life time stressor explanation as to why some older adults come to be older offenders.

A late life first time offense would by definition also be considered an adult onset offense. Adult onset offending is typically defined as a first crime that occurs after the age of 18 (age of legal consent) or 21 (age when most development is complete) (Eggleston & Laub, 2002). Most research on offending and delinquency operates on the assumption that adult onset offending is a relatively rare occurrence. Some research

suggests that the duration of adult onset criminal and antisocial behavior is short (Krohn, Thornberry, Rivera, & LeBlanc, 2001). Thus, more scholarly attention is focused on youthful crimes committed by individuals 18 years old and younger (Le Blanc, 1998; Moffitt, Caspi, Rutter, & Silva, 2001).

Despite the belief that adult onset offending occurs infrequently, data on criminal arrests over the last decade show evidence to the contrary. One example is that the number of people 18 years and older arrested for a crime rose 3.5% from 6,668,559 arrests to 6,897,262 arrests between 1999 and 2008, while during the same period of time, arrests of individuals under the age of 18 declined by almost 16% (U.S. Department of Justice, Federal Bureau of Investigation, 2009). Such information supports previous calls (Sampson & Laub, 1993) to look more closely at adult onset offending. Recently, scholars have begun to pursue the area with increased emphasis (Eggleston & Laub, 2002; Gomez-Smith & Piquero, 2005).

This study examines perhaps the most extreme case of adult onset offending, late life first time offenders. Late life first time offenders are a sub-group of older offenders who are arrested for their first criminal offense at 50 years of age or older. They may constitute up to half of the total population of older offenders throughout the U.S. criminal justice system (Aday, 1994; Anno, Graham, Lawrence, & Shansky, 2004; Goetting, 1984; Krajick, 1979; McShane & Williams, 1990; Wilson, 2003). A significant body of literature on older offenders exists, but little of that research focuses on late life first time offenders. In addition, what is known about both groups largely is the product of samples comprised of prison inmates. Offenders in prison are serving long sentences, usually for committing serious or violent crimes, while offenders in jail are sent there for

less serious offenses and will return to the community usually within a year of their arrest (Ross & Richards, 2002). By focusing on jailed late life first time offenders, this research offers a rare opportunity to begin filling gaps in the literature and to explore what factors, especially which potential stressors across the life course, might be associated with late life first time offending.

Stressors Associated with Adult Onset Offending

Compelling evidence shows that early life experiences can be powerful predictors of future criminal behavior over the life course. Low socio-economic status as demonstrated by low income and housing instability was shown to predict delinquency as a youth and as an adult (Farrington, 1992). Having delinquent friends is another predictor of adult onset offending (Keenan, Loeber, Zhang, Stouthamer-Loeber, & van Kammen, 1995). Zara and Farrington (2009) found that teacher-assessed anxieties from ages 12-14, and high neuroticism at age 16 were predictors of late onset crime committed after age 21 in their exclusively male sample. The authors concluded that the anxiety and nervousness displayed in early life contributed to a delay in criminal or antisocial behavior until adulthood.

Several studies on adult onset offending have found that certain family characteristics may be predictors of future offenses as well. Children from families that have experienced divorce or separations from parents under age 15 have generally shown greater rates of delinquency (Farrington, 2005; Fergusson, Horwood, & Lynskey, 1994; Morash & Rucker, 1999; Henry, Capsi, Moffitt, & Silva, 1996). Delinquency rates increased when a child was placed with a father, other relatives, or in some other living situation such as foster care compared to with their mother (Juby & Farrington, 2001).

Farrington, Joliffe, Loeber, Stouthamer-Loeber, and Kalb (2001) determined that familial relationships were predictive of future delinquent offenses in boys aged 8, 11, and 14. Farrington et al. found the most predictive relationship for future delinquency was the father and the father's arrests. The study identified having a young mother, living in a bad neighborhood, and lack of remorsefulness in the child as possible explanatory variables for a causal link between the arrest of the father and delinquency.

Other studies have found a distinct set of factors in adulthood that are related to adult onset offending. With a broad definition of criminal and antisocial behavior, Robins (1978) found that job problems, several divorces or martial separations, substance abuse (alcohol), numerous arrests, and financial difficulties were important in the emergence of adult offending. More recently, Eggleston and Laub (2002) found that race, gender, and socio-economic status, family size, being a high school dropout, seriousness of juvenile peers, and adolescent marijuana use were significant predictors of adult onset crime.

Late Life First Time Offenders

The literature on late life first time offenders is part of a larger body of research on older offenders, often in prison serving time for their crimes. Those studies reveal that in some cases the late life first time offenses were in response to a middle age or a late life crisis (Aday, 2004; Barak, Perry, & Elizur, 1995; Cromier, 1971). Other possible explanations for adult onset offending in late life may be related to a loss of identity and decreased self-worth upon retirement, which then could lead to the onset of anti-social behavior for some people (Brache & Banchand, 1989). In another scenario, older widowers may begin to drink in response to the death of a spouse, or the surviving spouse

may experience loneliness and isolation, which could lead to other emotional and behavioral problems (Zarit & Zarit, 2007). In addition to losses associated with widowhood, becoming disabled or functionally impaired may also represent a form of loss and cause conflict, which may explain why some victims of late life crimes were caregivers (Aday, 2004). Late life is frequently a time of tremendous transitions, which some older individuals may adapt to and cope with better than others.

Methods

Conceptual Framework

Because experiences across the life course have been shown to be important predictors of adult onset criminal behavior, this research grounds itself in the Life Course Framework. The role changes, called transitions, and the series of transitions, termed life trajectories, are governed by age norms and a social clock that orders the stages of the life course, informing the appropriateness and sequence of decisions, such as marriage or retirement (Elder, 1985; Rindfuss, Swicegood, & Roenfeld, 1987). Life trajectories are also influenced by historical events, individual choices, and the impact of early life experiences on late life decisions and outcomes (Elder, 2006). The Life Course Framework has been used to explain the onset, length, type, and end of criminal behavior (Farrington & Maughan, 1999; Gomez-Smith & Piquero, 2005; Piquero, Farrington, & Blumstein, 2003). Thus, the Life Course Framework guided decisions about variable selection and important periods in the lives of the offenders in this study.

Data and Sample

Data for this study are from the 1996 and 2002 Waves of the Survey of Inmates in Local Jails (SILJ) (U.S. Department of Justice, 2002, 1996). In both waves, SILJ

participants were randomly chosen from jails across the U.S. The participants were informed (verbally and in writing) that their involvement with the study was voluntary, all responses would be confidential, and all reports would use aggregate data to further insure their privacy. The data were collected via personal interviews that used computer assisted technology (CAPI) to gather self-reported information from each inmate. The 1996 Wave data were collected from October 1995- March 1996 in 431 jails, with 6133 participants in the final sample. In the 2002 wave of the SILJ, 417 jails generated a final sample of 6982 participants. Both waves of data are available for analysis from the University of Michigan's Inter-University Consortium (U.S. Department of Justice, Bureau of Justice Statistics, 1996; 2002).

Unlike the analysis of the prevalence of mental health disorders of older offenders in U.S. jails reported in Study 1, this study uses two waves of data to generate a larger sample of late life first time offenders. Only participants who were 50 years or older at the time of their interview were included in the total sample of older offenders. In the 1996 wave, 197 participants were 50 years or older at the time of their interview. The 2002 wave had 330 participants aged 50 years and older. Table 6.1 displays a comparison of the samples by older offender group for 1996 and 2002. Generally, the samples are relatively similar. Tests were conducted to determine if significant differences between the groups by wave existed. Those tests showed few differences, with the largest differences being a higher percentage of offenders between 50 and 55 years older in the 1996 sample than in the 2002 sample. Despite the differences, because the analysis in this study is comparative rather than predictive, the waves could still be combined. When

they were merged, the total number of older offenders included in the study sample was 527.

Table 6.1 Comparison of Survey of Inmates in Local Jail 1996 and 2002 Waves

	Late Life First Time Offenders			Older Repeat Offenders		
	1996	2002		1996	2002	
% 50-55 yrs old	63	46	4.09*	74	26	19.19***
% male	62	74	8.99**	84	79	.35
% married	44	47	5.35**	26	18	8.65**
% Caucasian	51	31	.36	56	39	.44

^{*}p < .05. **p < .01. ***p < .001.

Late life first time offenders were identified based on age at first arrest.

Participants who indicated during the interview that they were 50 years or older at the age of their first arrest were included in the sample of late life first time offenders. A significant number (107) of older offenders did not specify their age of their first arrest and were excluded from the study. Thus, the final sample size of late life first time offenders was 62 (n=19 from 2002; n= 43 from 1996) and the remaining 357 offenders of the sample formed a second group of older offenders with previous arrests before age 50.

Study Variables

For this study, items about childhood/ early family life characteristics (lived with mother only, lived with father or other relatives, lived in foster care, parental crime, extended family crimes, receipt of public assistance as a child, parental alcohol use, and parental drug use), adolescent variables (delinquent adolescent peers, highest level of education, alcohol use under age 18), adult and late life variables (employment status, receipt of public assistance as an adult, living arrangement, homelessness, having children, widowhood, and history of mental health problems), sociodemographic variables (age, race, gender, marital status, and income prior to arrest), and a brief

overview of the current offense (current controlling offense, collapsed category of controlling offense, and whether the offense was violent or not) were included. The choice to include participants from two datasets meant that only variables present in both surveys could be used.

Data Analysis

Two groups were created from the data on older offenders: individuals with a first time late life offense and offenders with previous arrests before age 50. Descriptive analyses (mean, standard deviation, and range or percent) were conducted on both groups. Chi square tests and t tests then were performed to determine if relationships between variables for each group existed and if those associations were of statistical significance. SPSS 17.0 was used for all analyses.

Results

As can be seen in Table 6.2, several variables distinguished the late life first time offenders from the older offenders with a prior arrest before age 50, including sociodemographic variables and stressor variables throughout the life span. Late life first time offenders were significantly older, more likely to be married, and more likely to be female than the older offenders with a previous arrest prior to age 50.

The two groups of offenders were also significantly different on several of the stressor variables, extending from childhood to late adulthood. For one of these stressor variables, lived with father only or other relative during childhood, the late life first time offenders were more likely to have experienced this stressor. In contrast, for six other stressor variables, the late life first time offenders were less likely to have experienced those stressors. As children, they were less likely to have received public assistance, less

like to have a history of crime within the extended family, and less like to have experienced parental alcohol or drug use. During adolescence, there were significantly less likely to have used alcohol or had peers with a history of delinquency. Finally, the late life first time offenders were 1/3 as likely to have been homeless as an adult. Thus, many of the risk factors for criminal behaviors, while apparent for the late life first time offenders, were significantly more likely to have been experienced by the older offenders with a history of previous offenses before age 50.

It is interesting to note some of the ways in which the late life first time offenders were similar to the older offenders with a history of an offense before age 50. For both groups, almost half were Caucasian and half had a low income. For both groups, 10% were widowed and a quarter of them had committed a violent crime as their current offense. Finally, it should be noted that although a smaller percentage of the late life first time offenders tended to have experienced several of the lifetime stressors, as compared with the older offenders with previous arrests, both groups had relatively high rates of many of the stressors. For both groups we see high rates of parental substance abuse and extended family history of crime, adolescent alcohol use, and mental health problems. Thus many of the stressors commonly associated with criminal behavior in younger adults were also evident in this group of older offenders.

Table 6.2 Descriptive and Comparative Analysis of Offenders 50 years and older, by age of arrest, 1996 and 2002 Waves of the Survey of Inmates in Local Jails

		LLFTO	Older Offenders	T test
		(n=62)	with previous	(419)/
		(II 0 2)	arrests	$\chi^2(1)$
			(n=357)	λ (1)
Sociodemographics			(H 337)	
bocioacinograpines	Mean age (yrs)	58.42	54.27	214.53***
	% male	66.1	81.2	7.26**
	% married	45.2	21.3	16.13**
	% Caucasian	45.2	45.7	.01
	% no income -\$999	45.2	47.9	.95
	% Current crime violent	25	24	.01
Childhood/Family	70 Current crime violent	23	21	.01
Characteristics				
	% Lived with mother only	8.1	16.2	2.77
	%Lived with father only/	50	37	3.77*
	other relatives			
	% Lived in foster care	3.2	5.6	.64
	% Parental crime	3.2	9.0	2.42
	% Extended family crime	21.0	34.2	4.49*
	% Received public	3.2	11.5	3.99*
	assistance			
	% Parental alcohol/drug	14.5	26.3	4.10*
	use			
Adolescent				
Variables				
	% 12 th grade or less	66.1	73.9	1.28
	% With delinquent peers	12.9	41.7	19.23***
	% Using alcohol under	45.2	79.3	32.13***
	age 18		7 9	02.10
Adult & Late Life Variables	450 10			
v arrables	0/ With job or business	51.6	61.1	2.61
	% With job or business			2.61 .74
	% Receiving public assistance	12.9	15.1	./4
		56.5	47.0	1.52
	% Living in a house % Homeless	56.5 4.8	47.9 14.6	1.52 4.76*
	% With children		14.6	
		56.7	66.7	1.18
	% Widowed	9.7	10.1	.01
	% With mental health	54.8	46.2	1.57
	problem			

*p < .05. **p < .01. ***p < .001.

Note. Reports of mental health problems do not include substance abuse or dependency.

Discussion

The purpose of this study was to more fully understand late life first time offenders among jailed offenders and to explore whether they differed from older offenders with a prior arrest before age 50. Of particular interest in this study were the demographic differences between the two groups of older offenders and any potential differences in stressors across the life span. Late life first time offenders were significantly older although both groups were, on average, under age 60.

The first sociodemographic characteristic that showed a statistically significant difference was age. Age-associated physical changes could be a contributing factor to this finding. It is possible that the aging body is less able to tolerate and process alcohol and other substances compared to the past, leading to a vehicular crime or public disorderly charge (Zarit & Zarit, 2007). In addition, the lower frequency of early life stressors for this group may have allowed them to maintain a lower risk lifestyle longer than chronic offenders. Further research is needed to elucidate how age-associated changes are potentially involved in adult onset offending and how they impact the risk of being arrested for a late life first time offense.

Fewer men were among late life first time offenders. Because this research focused on a jail sample, the offenders will have committed a less serious crime and been sentenced to a shorter incarceration than offenders sent to prison. It is possible that older women are charged with less serious offenses than older men, and hence women would have more contact with this arm of the criminal justice system than the prison system. In addition, because arrest is generally more common among adolescent and young adult males (See Laub & Sampson, 2001), older male offenders are more likely than older

female offenders to have a prior criminal history. It is also pertinent to note that women on average live longer than men (Quadagno, 2008), and men who might have been part of a sample of late life first time offenders are dead, explaining the number of women who were late life first time offenders.

Likewise, being married was more common in late life first time offenders.

Typically, marriage has been associated with lower crime rates and desistence from crime as a person transitions from adolescence into adulthood (Laub & Sampson, 2003; Laub, Nagin, & Sampson, 1998; Piquero, Brame, Mazerolle, & Haapeanen, 2002; Sampson & Laub, 1990, 1993). A recent study by Sampson, Laub, and Wimer (2006) confirmed previous findings, showing that married men were 35% less likely to commit a crime compared to unmarried men. The results of this study appear to suggest that late life first time offenders may have benefitted earlier in life by being married. This, of course, poses the association between marriage and decreased criminal activity as to why the protection did not extend into later life, and unfortunately the present study does not have data that allows us to answer this question. Understanding the relationship between late life, marriage, and crime is one area within adult onset criminal behavior that will need more investigation.

Stressors

Several life experiences statistically differentiated the late life first time offenders from the chronic offenders. All but one of these stressors was less likely in the lives of late life first time offenders. The only stressor that was more common among late life first time offenders was having lived with their father only or some other relative as a child. Farrington's (1992) work suggested that children living with someone other than

their mother increased the likelihood of criminality. It is unclear why this risk factor was more apparent for the older offenders who did not have a history of chronic offenders. This finding stands in contrast to the remaining significant stressor risk factors, for which the late life first time offenders were much less likely to have experienced the stressor. Future research will need to consider the impact of living arrangements and the life course when looking at desistence.

Late life first time offenders were less likely to have extended family that served time, to have received public assistance as a child, and to have had parents that used drugs or alcohol. Generally speaking, the results depict somewhat different childhood experiences and resources for late life first time offenders compared to older offenders with previous arrests. Literature on adverse childhood events (ACE) suggests a strong association between a number of aspects in early life (abuse, neglect, maltreatment, poverty, living in a bad neighborhood, changing schools, parental separation and divorce, having bad relationships with adults, death of a relative or friend, and other early life trauma) and negative adult outcomes including poorer physical health and higher rates of mental health problems (Anda, Felitti, Bremner, Walker, Whitfield, Perry, Dube, & Giles, 2006; Pearlin, Schieman, Fazio, & Meersman, 2005). Evidence also suggests that children who experience ACEs may be at a greater risk for committing crimes stemming from the strain and stress of their early home and social environment (Ostrowsky & Messner, 2005). Thus, the chronic offenders in this study, who had a history of arrest in adolescence or younger adulthood, were more likely to have experienced these stressors than the older adults who offended for the first time in later life.

Likewise, late life first time offenders were less likely to have had delinquent friends as an adolescent compared to other older offenders. For the purpose of this study, having delinquent friends meant having friends who damaged other people's property, used drugs, consumed alcohol, shoplifted, stole cars, broke into homes or buildings, sold/imported/ made drugs, stole directly from other people, engaged in other illegal activities, and whether the respondent also participated with their friends. Having delinquent friends is among the strongest predictors of criminal behavior across studies (Farrington, 1992; Keenan, et al., 1995; Sampson & Laub, 2005).

In addition to having fewer delinquent friends, late life first time offenders were significantly less likely to have used alcohol before the age of 18. This result would suggest that older offenders with previous arrests began using alcohol earlier in the life course than late life first time offenders. Decisions made under the influence may then contribute to greater rates of arrests, explaining some of the differences between late life first time offenders and habitual criminals. Unfortunately, complete information about alcohol use in adulthood and late life was not available for this study. It is important that future studies consider alcohol and substance abuse across the life course to see what, if any, relationship age of onset for alcohol use has with adult onset offending in late life. We know that substance abuse is related to crimes in all ages groups, including older offenders (Lewis et al., 2006), and the extent to which early use is associated with early and chronic criminal behavior is potentially important to know. Finally, in adulthood, older offenders with previous arrests were statistically more likely to be homeless than late life first time offenders.

The results of Study 2 suggest several differences between late life first time offenders and chronic older offenders. For the most part, chronic older offenders fit more closely to the pattern of characteristic risk factors generally associated with criminal behavior. Although late life first time offenders also had histories of experiencing many of these stressors, they were less likely to have experienced the stressors than were the chronic offenders. Thus, the late life first time offenders appear to fall between non-offenders and chronic offenders on many of these risk factors.

Conclusion

Diverting criminal behavior in juveniles and younger adults tends to be the focus of programs and awareness campaigns in the United States. While research suggests that risky and anti-social behavior appears to peak in an individual's mid-20s (Arnett, 2000), this study shows that certain aging adults are vulnerable for adult onset offending and at risk for incarceration even in late life, in agreement with Eggleston and Laub (2002) and Gomez- Smith and Piquero (2005). The late life first time offender may be a minority among the total offender population, but their numbers are increasing throughout every branch of the U.S. criminal justice system. Although many late life first time offenders led otherwise law-abiding lives in the years leading up to their crime (Feinberg, 1984; Flynn, 1992; Long, 1992), the present study suggests that many of the life time stressor risk factors for offending are present in these individuals histories. Hopefully, this study represents the beginning of more research into understanding what motivates and predicts adult onset offending so late in one's life, robbing the luster from the golden years.

CHAPTER 7

GENERAL DISCUSSION OF TARNISHED GOLDEN YEARS

The research in Studies 1 and 2 contribute to the literature in many important ways. The focus on jailed older offenders adds another dimension to the significant amount of research on older offenders in prison. Many discussions about older offenders are limited to their experience in custody and typically while imprisoned. The older offenders across both studies presented here are from local jails and most will be returned to the community in a year or less. In other words, these are not necessarily older offenders who will age in place or expect to die before release. With more learned about older offenders in jail, potentially, there is a greater chance of developing strategies to intervene.

Aging offenders in jails present new challenges. Many buildings are not ADA compliant or built to meet the needs of an aging inmate population (Aday, 2003; Yates & Gillespie, 2000). In addition to physical buildings being ill-equipped for older offenders, jail health care providers as well as other staff members may need to be educated about the needs of older offenders because their training may not have included relevant information about aging (Smyer, Gragert, & Martins, 2006). Increasing numbers of older offenders are women, and they may require different health care services, gender-specific programs, and housing. The results of Studies 1 and 2 are important initial steps in beginning to address the needs of older offenders in jails.

Study 1

Evidence from past studies on older offenders shows that they are a growing population within the U.S. criminal justice system (Aday, 2003; Southern Legislative Conference, 2006; Yates & Gillespie, 2001). Research has suggested a relatively high rate of mental health disorders, but this research has not looked specifically at older offenders in jails. The broad objectives of Study 1 were to study older offenders in U.S. jails, to learn more about mental health problems among them, and to explore the impact of stressors. The study was guided by two main lines of inquiry. Study 1 provided an opportunity to determine the prevalence of mental health problems in a sample of jailed older offenders. The results of Study 1 show that among older offenders throughout U.S. jails a significant proportion have at least one mental health problem and prevalence rates for all mental illnesses included in the study exist at greater rates compared to community dwelling older adults and at similar rates compared to older offenders in prisons.

Secondly, Study 1 sought to answer the following question: is a stressor or possibly a series of stressors potentially associated with whether a jailed older offender has a mental health disorder? The investigation of the role of stressors in the lives of older offenders with mental health disorders compared to those older offenders without a mental health problem found that race, marital status, and history of early abuse were significant predictors of having mental health disorders.

Study 2

Building on the idea of stressors from Study 1, Study 2 examined stressors across the life course among older offenders. With late life first time offenders as the focus, Study 2 had two major questions: who are late life first time offenders and how are they

different from older offenders with a prior arrest before age 50? Of particular interest in this study were the demographic differences between the two groups of older offenders and the presence of any potential differences in stressors across the life span.

The findings from Study 2 illustrate considerable differences between late life first time offenders and older offenders with previous arrests. For the most part, chronic older offenders fit much more closely to the pattern of characteristic risk factors generally associated with criminal behavior. Although late life first time offenders also had histories of experiencing many of these stressors, they were less likely to have experienced the stressors than were the chronic offenders. Thus, the late life first time offenders appear to fall between non-offenders and chronic offenders on many of these risk factors. Study 2 is among the few that have attempted to look exclusively at a group of late life first time offenders in jail. It will be important for researchers to next look at differences between late life first time offenders and older offenders with previous arrests in a prison population to see if differences by correctional setting exist.

Study 2 had many important findings that improved our understanding of late life first time offenders and provide a basis for further inquiry. One of the most important findings was that late life first time offenders tend to have a history of many of the same stressors as chronic offenders. Although the rate of some of these stressors was lower for the first time offenders, the rate of other stressors was similar. This finding leads to an important question of why some individuals exposed to these stressors engage in criminal activity at a younger age, whereas others do not commit crimes until later in life. For example, both groups had individuals who had friendships with juvenile delinquents, used alcohol during adolescence, etc., suggesting that delinquency and alcohol use during

adolescence are compelling forces that may have an impact even late in the life course. Numerous studies have shown the relationship between juvenile delinquency and criminal behavior. Although late life first time offenders reported significantly fewer delinquent friendships and less alcohol use as adolescents compared to repeat offenders in Study 2, these factors need to be more fully explored. Future studies of offenders might include items that explore delinquent friendships and negative social networks into adulthood to start building knowledge across the life course. Do these early relationships contribute to the problems and behaviors that lead to criminal activity, or are they simply early signs of tendencies toward risky behaviors that may last a life time? Studies of offenders across the lifespan would provide insights into how youthful behaviors have an impact both during adolescence and during adulthood, including later life.

Limitations

Studies 1 and 2 share some common limitations. First and foremost, both studies used existing Survey of Inmates in Local Jail data that were collected for the U.S. Bureau of Justice. They are administrative data and do not include age-specific information, such as certain health conditions or more information about late life problems such as widowhood, elder abuse, or functional limitations. The data were collected via self-report, so issues with accuracy could affect the quality of the data. Finally, from the data publically accessible for use, geographic variables are unavailable for study.

Also, the literature has no consensus as to what age an offender becomes "older". In some studies, 55 years and older constitute being an older offender. Other research uses 60 years of age. Studies have shown older offenders to have an older functional age than older adults who are not incarcerated, although there is no agreement on exactly how

many years older offenders are functionally different than community dwelling adults of similar ages (Aday, 2003; Colsher, Wallace, Loeffelholz, & Sales, 1992). The tendency is to operationalize 'older' for aging offenders at younger ages than for community dwellers, thus using a lower age criterion of 50 for what constituted "older" for these studies is consistent with the literature.

Specific to Study 1, the items emphasize criminal and current offense history and less information directly relevant to a study on mental health and aging. Thus, important aging-related items are missing, most importantly variables on cognitive impairment. Though limitations with the data do exist, it is critical to be mindful that the data are from a national sample of jails. The sheer number and kinds of items within the survey allow for a variety of research questions to be explored, and the SILJ offers a rather large sample of jailed older offenders for study.

Study 2 offered a unique opportunity to examine the life experiences of late life first time offenders and adult onset offending, despite limitations. Merging two waves of the data created the sample for Study 2, and some differences between late life first time offenders and repeat older offenders existed that would be very critical if more sophisticated analysis were attempted. Ideally, one would want samples that were a bit more similar, though the differences don't detract from or complicate the results. Also, across both waves, there were differences in the questions asked in 1996 and 2002. Only items that were exactly the same in terms of wording and answer choices were used in this study. For instance, the 2002 questionnaire has more items on physical and mental health, which could not be used because their equivalent did not exist in the 1996 wave. Unfortunately, the items on history of childhood physical and sexual abuse that played a

significant role in predicting mental health status in Study 1 could not be included in Study 2 as these questions were not asked in 2002. The sample size of late life first time offenders with complete information precluded more sophisticated analysis, largely due to missing information about the age of first arrest. Finally, the classification of offenders as late life first time offenders is based on having no arrests before age 50. The assumption is that these individuals were not committing crimes before age 50, but it is impossible to know this for sure.

Although some limitations were present, using the SILJ data for both studies did provide information about a wealth of life experiences. That is the true strength of these datasets, the range and depth of items available for use. The results of Study 1 and 2 are important initial contributions to the existing literature on older offenders and mental health as well as adult onset criminal behavior and the experiences of late life first time offenders.

Implications

Individually, the studies provide approaches to the same basic question: why are there so many older offenders? Both studies indicate that within the larger group of older offenders there are smaller subgroups of aging inmates, superficially older offenders with a mental health problem and late life first time offenders, who face serious issues while incarcerated and upon release. Among the most pressing and immediate impacts of the growing numbers of these incarcerated older offenders is the cost of caring for them while they are in custody. Typically, research suggests that the cost of caring for an older offender in general over the course of their sentence is triple the expense of a younger offender (Kinsella, 2004). Access to health care, facilities that are built to handle the

challenges an older offender might have, and correctional staff that understand the needs of older offenders, specifically the more than 50% with mental health disorders, are some of the most basic things local jails and state prisons lack. It is important to remember that the issue of caring and maintaining older offenders will continue to be a problem as the populations in the community and correctional setting age.

The results of these studies provide information about not only who went to jail, but a great deal of background information about the person who will return to the community. The findings suggest that a majority of older offenders in jail have mental health disorders and they likely will be back in the community within a year where appropriate and necessary care may or may not be continued. Late life first time offenders face the prospect of returning to the community with a distinctly different and more difficult situation than an adult with a criminal record had previously experienced. Like any newly released inmate, they might experience lack of employment, lack of social support, lack of stable housing, and the inability to gain admission to nursing home care if needed. For an older offender, these problems are magnified by having less time to reinvent one's self, potentially more health-related and functional problems in daily living, and fewer options for living arrangements. Homelessness is a serious issue for individuals with a criminal record. An Urban Institute report (2004) showed increases in the number of homeless people of all ages with a criminal record through the 1980s and 1990s, and the report identified housing as a major need for offender reentry planning.

With those thoughts in mind, the most important contribution of these studies is to potentially derive meaningful solutions and to consider how policy changes might be one avenue for change. Although this dissertation was designed to understand older

offenders in jails, the increasing percent of older offenders both in jails and in prisons suggest that our criminal justice system faces important challenges in dealing with these offenders. Chapter 8 presents thoughts on the implications of our aging offender population for criminal justice policy.

CHAPTER 8

POLICY IMPLICATIONS

As a society, we may prefer to imagine an offender to be someone other than an aging adult and for those aging behind bars to be invisible. Nonetheless, older offenders will continue to increase in numbers, especially as younger offenders who are currently serving longer or life sentences age in the criminal justice system. At their current numbers, older offenders are not the modal criminal. However, with their considerable health and mental health needs and sometimes long criminal histories, older offenders raise significant policy questions. Practical issues such as funding, prison overcrowding, availability of properly trained health care providers and other correctional personnel, the offender's wishes, and public opinion are some of the existing issues to address (Aday, 2003). While the studies and discussion in Chapters 5, 6 and 7 focused on jailed older offenders, this chapter takes a broader approach, considering the impact that older offenders have across correctional settings and the policy implications.

Regardless of serving time in prison or jail, older offenders need and use many health care resources during their incarceration. In addition to visits to prison and community health care providers, a 1998 survey of 49 states showed departments of corrections providing inmates with MRIs (47 states), pacemakers (44 states), dental services (42 states), and organ transplants (25 states, with some variation according to death row status of the offender) (Lamb-Mechanik & Nelson, 2000). Yates and Gillespie

(2001) describe the spectrum of medical interventions older offenders might need, from hearing aids to prescription drugs to dementia care. The current correctional health care system is designed to treat acute physical illnesses and provide some preventive care for a few older offenders, not the chronic illness management, end of life care, and mental health care needed by a larger group of older offenders in today's jails and prisons (Smyer & Gragert, 2006).

About 2/3 of older offenders in jails had at least one chronic mental health disorder, many had multiple disorders. In addition, chronic health problems were quite prevalent, including 40% with hypertension or arthritis and 15% with asthma or diabetes. The findings from jail inmates are consistent with previous literature on older offenders in prison. Thus, costs are a valid concern not just for prisons but for jails as well.

The delivery of correctional health care is one area of emphasis for policy development, and costs are a dominant theme. The research on costs of health care for older offenders consistently finds that it is much more expensive to maintain an older offender compared to a younger prisoner (Anno, et al., 2004, Camp & Camp, 1992-2001, FCC, 2001). Driving costs higher are expenses for providing care in a correctional setting, including housing, security, importing goods to the prison, and employing medical personnel (Yates & Gillespie, 2001). According to the FCC (2001), the cost of housing an older offender is about \$70,000 per year, about 3 times as much as a younger person (Kinsella, 2004). There are also significant costs for all care provided outside of the prison setting, including transportation and supervision during treatment. Whether in a correctional or community health care setting, meeting the daily maintenance and health care needs of older offenders is expensive.

In addition to funding physical health care services, significant money is spent on mental health care in correctional institutions. A study of correctional mental health programs found 70% of facilities housing offenders conducted mental health screenings at intake, about half provided 24-hour mental health care, 65% provided assessments, and most of the care was provided by properly trained mental health care providers (Beck, 2000). If an older offender is diagnosed with dementia, the annual cost to receive the long-term care while incarcerated is double what it would cost in a community setting (Corwin, 2001). The same study found that the cost of treating serious mental illness also doubles in prison compared to a community setting (Beck, 2000; Treatment Advocacy Center, 2007). Although exact figures for jails are unavailable, it is reasonable to think that providing mental health care in that setting would be similarly expensive.

Combining the costs of security, other physical health care for comorbidities, housing, and food expenditures with the expense of providing mental health care makes managing older offenders a serious issue for states and local communities.

Legal and Ethical Considerations

Before offering specific suggestions for policy changes, legal and ethical concerns about older offenders and their health care require consideration as well. In particular, it is important to ascertain the legal climate surrounding the issue of delivering correctional health care. The ethical questions that arise when thinking about correctional health care and older offenders reflect the depth of the dilemmas created by older offenders.

Legal Issues

Litigation has led to greater access to health care in the U.S. criminal justice system. In the 1970s, a series of court decisions applied provisions of the 8th and 14th

Amendments of the U.S. Constitution to correctional health care. Estelle v. Gamble (1975) outlined the most basic requirements of correctional health care because the court found that 'deliberate indifference' to serious medical needs of inmates was cruel and unusual punishment and in violation of the Civil Rights Act. The phrase 'deliberate indifference' from Justice Thurgood Marshall's opinion on Estelle v. Gamble has governed prison health care since. Inmates now have better access to routine and emergency health care, timely health care delivery, and assurances of ethical decision making by health care providers. The decision forced states to re-evaluate the delivery of correctional health care. In the years since Estelle v. Gamble, a majority of correctional health care systems now offer more health care than an offender might otherwise receive outside the prison setting (See Texas Medical Foundation, 2005).

Given their health care needs, older offenders significantly benefited from litigation and court-mandated changes in correctional medical care. More access and service usage, however, has increased the costs of delivering care. Anno, Graham, Lawrence, and Shanksy (2004) reported an increase of 27% in prison health care spending from 1997-2001, and a 31.5% increase in the daily average cost per inmate for health care from 1992-2000. Most states have experienced an increase in correctional health care spending from 1998-1999 through 2000-2001 (Kinsella, 2004). The number of older offenders has grown. Although greater expenses have not been specifically connected to aging prison populations in the literature as one of the causes for rising correctional health care costs, other data suggest the number of older offenders has grown during this same time period (U.S. Department of Justice, Bureau of Justice Statistics, 2008).

Ethical Questions

While the law stipulates the provision of a certain level of health care for offenders, ethical questions abound and nearly all are associated with the larger issue of access. Should offenders have access to and receive care, paid for by state and local governments, which might be unavailable to law-abiding individuals in the community? While incarcerated, should access to medical care be a privilege like watching television or other earned incentives? Should older offenders still have access to health care services for chronic conditions upon release? The issue of access becomes very complicated when considering the situation of offenders, whether they have aged in the correctional system or are late life first time offenders.

Estelle v. Gamble stipulated that offenders not only have access to correctional health care, but that they also receive the benefits of ethical decision making by correctional health care providers. In the most basic application of the decision, inmates now receive a significant amount of correctional health care, suggesting that the access has improved. What has not changed is the correctional culture within which health care is delivered. As described by Stevens (1993), the main goals of health care providers in correctional settings are being caring, touching, believing patients, being alone with patients, providing trust and respect, being soft and accepting, and expecting kindness. Those characteristics are opposed to prison administrations that might be characterized as distant, untrusting, intolerant, and concerned with security (Stevens, 1993). Is it really in the spirit of Estelle v. Gamble if correctional administrative procedures demonstrate institutional indifference towards offenders?

Current Practices

The correctional health care system, buoyed by court decisions yet encumbered by ethical challenges, has made strides in the provision of health care. The current best practice is the creation of a correctional health care system that is separate yet equal to what an inmate otherwise should receive in the community (Kinsella, 2004). Achieving some form of parity between correctional health care and health provided in the community is difficult, however.

Examining Sentencing, Release, and Individuals At-Risk of Offending

To improve the delivery of correctional health care, state and local governments would need to invest a considerable amount of money and devote other resources to correctional health care until all appropriate services, personnel, and facilities in the community are available in a prison setting. Sentencing is one area where some cost savings might be made either by looking at lengths of time served or alternatives to traditional sentencing. Release offers another avenue for lowering costs associated with correctional health care. Some improvements are occurring throughout the U.S. criminal justice system, and jurisdictions are also considering alternatives to traditional incarceration as another way to uphold sentences while alleviating some of the expense of older offenders. Considering sentencing, release, and identification of older adults at risk of re-offending are important means that could potentially help reduce the burdens and costs of older offenders. Of course, as an ethical issue, we have to understand that mechanisms of reducing health care costs in jails and prisons that utilize shorter sentences will generally place the older adult in the community where health care may not be as accessible as when incarcerated.

Sentencing

Many older offenders are aging in place while in custody. Some will be released having served their time; others will die during their incarceration. Finding alternatives to conventional sentencing may be critical in reducing costs and it would also address the problems of facility overcrowding.

Lengths of Sentences. Yates and Gillespie (2001) explain that sentencing practices since the 1970s have increased incarceration rates and created a larger population of adults growing old in prison while serving long sentences. A Pew Center on the States (2008) report on incarceration in America highlights the concept of "earned time".

Earned time are credits an inmate can accumulate from attending programs, good behavior, or meeting other court specified goals which in turn reduce their sentence.

Earned time can benefit correctional institutions by reducing behavioral issues for staffs and by opening cell space for other prisoners. The concept of earned time may be particularly instrumental for older offenders aging in prison on long sentences, although it may also help with jail overcrowding.

Therapeutic Jurisprudence. Therapeutic jurisprudence offers an alternative to traditional incarceration. The concept of therapeutic jurisprudence is broadly defined by Slobogin (1995) as "the use of the social science to study the extent to which a legal rule or practice promotes the psychological and physical well-being of the people it affects." During the late 1980s, therapeutic jurisprudence gained popularity among those in the legal community concerned about mental health because it tries to find the right guiding legal principle and apply it, yet providing some ongoing treatment (Hora, Schuma, & Rosenthal, 1999). Examples of therapeutic jurisprudence are specialty courts (drug

courts, elder courts, family courts, and mental health courts) and diversion programs for substance abuse and mental health problems. Studies that have evaluated the effectiveness of mental health courts find participants re-offend less and cost states less money (Fomby & Rangaprasad, 2002; RAND, 2007; Petrila, 2002). While programs rooted in therapeutic jurisprudence have proven effective for adults, little is known about effectiveness of such programs for older offenders.

Release

For some offenders, release is the most problematic portion of the offender experience. A significant portion of habitual offenders are re-incarcerated not for a new offense, but because they violate the terms of their release. Expanding how former offenders are monitored while parolees, using community corrections, and the wider implementation of early release programs for older offenders are a few ways in which offenders can serve their sentence and reduce the cost of maintaining them in custody.

Terms of Parole. Violating terms of parole is one of the main reasons why a former convict returns to custody. Some parole violations are for new crimes, whereas another group of parole violators head back to prison for 'technical violations' of their parole guidelines. Technical violations are not the same as committing another crime and impact public safety to a lesser degree. There may be opportunities to use a mix of daily reporting centers, electronic monitoring systems, and community services instead of returning parole violators to more costly methods of supervision for non-violent parole violations (The Pew Center of the States, 2008).

Community Corrections. The concept of community corrections aimed at offenders with technical violations of their parole may be a viable alternative to re-

incarceration. Community corrections are "non-prison sanctions that are imposed on convicted adults or adjudicated juveniles by a court" in lieu of incarceration or other guidelines offered by parole boards (The Pew Center of the States, 2007: 1). The type of prison alternatives offered by community corrections include regular community supervision, day reporting centers, work release, residential programs, and other community programs, monitored by probation and parole services in the community (The Pew Center of the States, 2007). Opting for community corrections, rather than traditional corrections, requires a thorough assessment of what the risks of placing an individual in the community are and what the particular needs of a certain person are.

Most community programs have not been evaluated, although ongoing studies are looking at recidivism, employment, results of drug tests, meeting financial obligations, and the completion of court mandated tasks as measures of the effectiveness of community corrections and how it may compliment conventional means of punishment (The Pew Center of the States, 2007).

Early Release Programs. Few programs target older offenders as a separate, unique group with different needs and challenges than other adjudicated adults. One such program is the Project for Older Prisoners (POPS) created by legal scholar, Jonathan Turley. POPS uses advanced law students to review the cases of older offenders to find individuals with criminal histories that suggest a low risk of recidivism (Aday, 2003; Turley, 2006; Yates & Gillespie, 2001). The basic assumption of the POPS program is that recidivism declines with age and that alternative programs for certain older offenders at a low risk for recidivism would save states money for maintaining and providing the health care for these older offenders. The effectiveness of the POPS program has not

been formally evaluated, but it could be a promising alternative to long sentences and huge expenditures for maintaining older offenders.

The risk of homelessness and potentially re-arrests are concerns for all the offenders in Study 1 and Study 2. Late life first time offenders will re-enter the community with a blemished criminal record; older offenders with previous arrests will have another charge added to their record. In either case, their housing options may be limited. Additionally, several of the late life first time offenders charged with sexual crimes will return to the community as registered sex offenders, which will tightly restrict their housing options in most areas. There is little research that looks at released older offenders and homelessness. Following older offenders post-release is important for understanding the problem and for developing appropriate post-release housing options. It also may be useful to determine if late life first time offenders have more or less of a risk for post-release homelessness compared to habitual offenders, again to help tailor community reintegration plans by the type of older offender.

Mental Health Disorders and Older Offenders

The prevalence rates of mental health disorders among older offenders in jail compared to older adults in the community suggest that mental health care needs to be addressed. One approach would be to utilize primary care physicians as critical players in the identification of older adults in distress and those who may have substance abuse problems.

Role of Primary Care Providers. Primary care providers may be critical in identifying older adults who are suffering from undiagnosed mental health problems, substance abuse problems, or having difficulties in their personal relationships. Given

that older adults are typically less likely to seek mental health care or other forms of counseling, training and encouraging physicians to screen for a variety of late life problems is likely a first step to addressing problems before they escalate.

Substance Abuse Programs. Screening instruments such as the MAST-G (University of Michigan, 1991) and the CAGE (Mayfield, McLeod, & Hall, 1974) to diagnose older adults with substance use problems and to educate older adults about their decreased ability to tolerate alcohol, illegal drugs, and over the counter medications as they age may help to reduce the levels of substance abuse. Programs like the BRITE program in Florida, which conducts screening and treatment of substance abuse and dependence (Schonfeld, King-Kallimanis, Duchene, Etheridge, Herrera, Lawton, & Lynn, In Press), and the GET SMART program in California (Satre, Knight, Dickson-Furhmann, & Jarvick, 2003) would provide age appropriate options for older adults with substance abuse problems. The goal of wider implementation of these programs is for older adults struggling with substance problems to be routed towards a therapeutic intervention.

Conclusion

States and local municipalities will need to develop meaningful strategies that address sentencing, release, and early intervention for older offenders. Older offenders are a group that frequently have a variety of needs while they are incarcerated that may persist for those individuals who are eventually released. As identified and discussed throughout this dissertation, mental health disorders are one significant problem for this group. Addressing mental health disorders, especially those associated with stressors

across the lifespan, may be a critical way to promote successful aging among older offenders.

LIST OF REFERENCES

- Aday, R. (2004). Aging Prisoners. In B. Berkman & S. D'Ambruoso (Eds.), *Handbook of Social Work and Aging* (pp. 231 241). Place: Oxford University Press, USA.
- Aday, R. (2003). *Aging prisoners: Crisis in American corrections*. Westport, CT: Praeger.
- Aday, R. (2001). A comprehensive health assessment of aged and infirm inmates.

 Nashville, TN: Tennessee Department of Corrections.
- Aday, R. (1994). Aging in prison: A case study of the new elderly offenders.

 International Journal of Offender Therapy and Comparative Criminology, 38,
 79-91.
- Agbayewa, M. (1996). Occurrence and effects of personality disorders in depression: Are they the same in the old and young? *Canadian Journal of Psychiatry*, 41 4, 223-226.
- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminnology*, 30, 47-87.
- Agnew, R. & White, H. (1992). An empirical test of general strain theory. *Criminology*, 30, 475-499.
- Alston, L. (1986). Crime and older Americans. Springfield, IL: Charles C. Thomas.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC.: Author.

- Anda, R., Felitti, V., Bremner, J., Walker, J., Whitfield, C., Perry, B., Dube, S., & Giles,
 W. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry and Clinical Neurosciences*, 256, 174-186.
- Anno, B. J., Graham, C., Lawrence, J., & Shansky, R. (February, 2004). *Correctional health care: Addressing the needs of elderly, chronically ill, and terminally ill inmates*. Middletown, CT: Criminal Justice Institute, Inc.
- Anthony, J. C. & Aboraya, A. (1992). The epidemiology of selected mental disorders in later life. In J. E. Birren, R. B. Sloane, & G. D. Cohen (Eds.), *Handbook of mental health and aging* (2nd ed., pp. 27–72). San Diego, CA: Academic Press.
- Arndt, S., Turvey, C., & Flaum, M. (2002). Older offenders, substance abuse, and treatment. *The American Journal of Geriatric Psychiatry*, 10, 733-739.
- Arnett, J. (2001). Conceptions of the transition to adulthood: Perspectives from adolescence through midlife. *Journal of Adult Development*, 8, 133-143.
- Arnett, J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469-480.
- Atkinson, R., Tolson, R., & Turner, J. (1990). Late versus early onset problem drinking in older men. *Alcoholism: Clinical and Experimental Research*, 14 4, 574-579.
- Atkinson, R. & Kofoed, L. (1982). Alcohol and drug abuse in old age: A clinical perspective. *Substance and Alcohol Actions/Misuse, 3,* 353–368.
- Atkinson, R., Ganzini, L., & Bernstein, M. J. (1992). Alcohol and substance-use disorders in the elderly. In J. E. Birren, R. B. Sloane, & G. D. Cohen (Eds.),

- Handbook of mental health and aging (2nd ed., pp. 516–556). San Diego, CA: Academic Press.
- Atkinson, R., Turner, J., Kofoed, L., & Tolson, R. (1985). Early versus late onset alcoholism in older persons: Preliminary findings. *Alcoholism: Clinical and Experimental Research*, *9*, 513–515.
- Barak, Y., Perry, T., & Elizur, A. (1995). Elderly criminals: A study of first criminal offense in old age. *International Journal of Geriatric Psychiatry*, 10, 511-516.
- Bartels, S., Miles, K., Dums, A., & Pratt, S. (2003). Factors associated with community mental health service use by older adults with severe mental illness. *Journal of Mental Health and Aging*, 9(2), 123-135.
- Beaver, K., Wright, J., DeLisi, M., & Vaughn, M. (2008). Desistance from delinquency:

 The marriage effect revisited and extended. *Social Science Research*, *37*, 736-752.
- Beck, A. (2000). *Mental health treatment in state prisons, 2000*. Washington, DC: Bureau of Justice Statistics, U.S. Department of Justice.
- Blazer, D. (2003). Depression in late life: Review and commentary. *Journal of Gerontology: Medical Sciences*, 58A 3, 249-265.
- Bok, M. (1992). The Community Mental Health Act, 1963. In Marcia Bok (ed), *Civil Rights and the Social Programs of the 1960s* (pp125-141). Westport, CT: Praeger.
- Brache, C. & Bachand, D. (1989). A comparison of retiree criminal characteristics with habitual and non-habitual older offenders from an urban population. *Journal of Offender Counseling, Services, and Rehabilitation*, 13, 45-59.

- Brink, J. (2005). Epidemiology of mental illness in a correctional system. *Current Opinion in Psychiatry*, 18, 536-541.
- Brostedt, E. & Pederson, N. (2003). Stressful life events and affective illness. *ACTA Psychiatrica Scandinavica*, 107, 208-215.
- Camp, G., & Camp, C. (1992-2001). The 1992-2001 Corrections Yearbook. Middletown,
 CT: Criminal Justice Institute.
- Canadian Study of Health and Aging Working Group. (1994). Canadian Study of Health and Aging: Study methods and prevalence of dementia. *Canadian Medical Association Journal*, *150*, 899–913.
- Castle, D. & Murray, R. (1993). The epidemiology of late-onset schizophrenia. Schizophrenia Bulletin, 19, 691-700.
- Cervantes, N., Kaulukukui, M., Poulson, J, & Kaufman, H. (1987). Diverting the mentally ill from a county jail. *American Journal of Public Health*, 77, 367-368.
- Chan, K., Wenzel, S., Mandell, W., Orlando, M., & Ebener, P. (2007). Are prisoner characteristics associated with therapeutic community treatment process? *The American Journal of Drug and Alcohol Abuse*, *33*, 267-279.
- Christy, A., Poythress, N., Boothyard, R., Petrila, J., & Mehra, S. (2005). Evaluating the efficiency and community safety goals of the Broward County Mental Health Court. *Behavioral Sciences and the Law*, 23, 227-243.
- Choices Unlimited. (1996). *Clark County Drug Court: 42-month summary*. Las Vegas, NV: Choices Unlimited.

- Clark, C. & Mezey, G. (1997). Elderly sex offenders against children: A descriptive study of child sex abusers over the age of 65. *Journal of Forensic Psychiatry*, 8, 357-369.
- Cohen, S., Janicki-Deverts, D., & Miller, G. (2007). Psychological distress and disease. *Journal of the American Medical Association*, 298, 1685-1687.
- Cohen, S. & Williamson, G. (1991). Stress and infectious disease in humans. *Psychological Bulletin*, 109, 5-24.
- Coid, J., Fazel, S., & Kahtan, N. (2002). Elderly patients admitted to secure forensic psychiatry services. *The Journal of Forensic Psychiatry*, *13*, 416-427.
- Cole, S., Kemeny, M., Fahey, J., Zack, J., & Naliboff, B. (2003). Psychological risk factors for HIV pathogenesis: Mediation by the automatic nervous system.

 *Biological Psychiatry, 54, 1444-1456.
- Colsher, P., Wallace, R., Loeffelholz, P., & Sales, M. (1992). Health status of older male inmates: A comprehensive survey. *American Journal of Public Health*, 82(6), 881-884.
- Colton, C. & Manderscheid, R. (2006). Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. *Preventing Chronic Disease Public Health Research*, *Practice*, and *Policy*, 3, 1-14.
- Correctional Medical Authority. (2007). Report on older and aging inmates in the Florida Department of Corrections, 2006-2007. Retrieved on June 10, 2008, from http://www.doh.state.fl.us/Cma/reports/index.html

- Correctional Medical Authority. (2005). Report on elderly and aging inmates in Florida

 Department of Corrections, fiscal year 2003-2004. Retrieved on June 10, 2008,

 from http://www.doh.state.fl.us/Cma/reports/agingreport03-04.pdf
- Corwin, P. (2001). Senioritis: Why elderly federal inmates are literally dying to get out of prison. *Journal of Contemporary Health and Law Policy*, *17*, 687-693.
- Cosden. M., Ellens, J., Schnell, J., Yamini-Diouf, Y., & Wolfe, M. (2001). Evaluation of a mental health treatment court with assertive community treatment.

 *Behavioral Sciences and the Law, 21, 415-427.
- Cromier, B. (1971). Behavior and aging: Offenders 40 and over. *Laval Medical Journal*, 42, 15-21.
- Cuffel, B., Jeste, D., Halpain, M., Pratt, C., Tarke, H., & Patterson, T. (1996). Treatment costs and use of community mental health services for schizophrenia by age cohorts. *American Journal of Psychiatry*, 153, 870-876.
- Curtice, M., Parker, J., Wismayer, F., & Tomison, A. (2003). The elderly offender: An 11-year survey of referrals to a regional forensic psychiatric service. *The Journal of Forensic Psychiatry and Psychology*, *14*, 253-265.
- Danese, A., Pariante, C., Caspi, A., Taylor, A., & Poulton, R. (2008). Childhood maltreatment predicts adult inflammation in a life-course study. *Proceedings of the National Academy of Sciences of the United States of America*, 108, 1319-1324.
- DeLisi, M., Beaver, K., Wright, J., & Vaughn, M. (2008). The etiology of criminal onset:

 The enduring salience of nature and nurture. *Journal of Criminal Justice*, *36*,

 217-223.

- Dong, M., Dube, S., Felitte, V., Giles, W., & Anda, R. (2003). Adverse childhood experience and self-reported live disease. *Archives of Internal Medicine*, *163*, 1949-1956.
- Dong, M., Giles, W., Felitti, V., Dube, S., Williams, J., Chapman, D., & Anda, R. (2004).

 Insights into causal pathways for ischemic heart disease. *Circulation*, 110, 1761

 -1766.
- Douglass, R. (1991). *Oldtimers: Michigan's elderly prisoners*. Lansing: Michigan Department of Corrections.
- Draine, J. & Solomon, P. (1999). Describing and evaluating jail diversion services for persons with serious mental illness. *Psychiatric Services*, *50*, 56-61.
- Eggleston, E. & Laub, J. (2002). The onset of adult offending: A neglected dimension of the criminal career. *Journal of Criminal Justice*, *30*, 603-622.
- Elder, G. (1985). Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*, *57*, 4-15.
- Elder, G. (2006). Life course. In G. Ritzer (Ed.), *Blackwell Encyclopedia of Sociology* (pp. 109-131). Massachusetts: Blackwell.
- English, D., Widom, C., & Brandford, C. (2002, February). *Childhood victimization and delinquency, adult criminality, and violent criminal behavior: A replication and extension*. Washington, D.C.
- Faiver, K. (1998). Special issues of aging. In K. Faiver (Ed.), *Health care management issues in corrections* (pp. 123-132). Lanham, MD: American Correctional Association.

- Farrangher, B. & O'Connor, A. (1995). Forensic psychiatry and elderly people- A retrospective review. *Medicine, Science, and the Law, 35* 3, 269-273.
- Farrington, D. (2005). Childhood origins of antisocial behavior. *Clinical Psychology and Psychotherapy*, *12*, 177-190.
- Farrington, D. (2000). Psychosocial predictors of adult antisocial personality and adult convictions. *Behavioral Sciences and the Law*, 18, 605-622.
- Farrington, D. (1992). Juvenile delinquency. In J. Coleman (Ed.), *The school years* (2nd ed., pp. 123-163). London, UK: Routledge.
- Farrington, D., Jolliffe, D., Loeber, R., Southamer-Loeber, M., & Kalb, L. (2001). The concentration of offenders in families, and family criminality in the prediction of boys' delinquency. *Journal of Adolescence*, *24*, 579-596.
- Farrington, D. & Maughan, B. (1999). Criminal careers of two London cohorts. *Criminal Behavior and Mental Health*, *9*, 91-106.
- Fazel, S., Bond, M., Gulati, G., & O'Donnell, I. (2007). Elderly homicide in Chicago: A research note. *Behavioral Sciences and the Law*, *25*, 629-639.
- Fazel, S. & Grann, M. (2002). Older criminals: A descriptive study of psychiatrically examined older offenders in Sweden. *International Journal of Geriatric Psychiatry*, 17, 907-913.
- Fazel, S., Hope, T., O'Donnell, I., & Jacoby, R. (2002). Psychiatric, demographic, and personality characteristics of elderly sex offenders. *Psychological Medicine*, *32*, 219-226.
- Fazel, S., Hope, T., O'Donnell, I., & Jacoby, R. (2001). Hidden psychiatric morbidity in elderly prisoners. *British Journal of Psychiatry*, *179*, 535-539.

- Fazel, S. Hope, T., O'Donnell, I., Piper, M., & Jacoby, R. (2001). Health of elderly male prisoners: Worse than the general population, worse than younger prisoners. *Age and Ageing*, *30*, 403-407.
- Feinberg, G. (1984). White haired offenders: An emergent social problem. In W. Wilbanks & P. Kim (Eds.), *Elderly Criminals* (pp.83-188). Lanham, MD: University Press of America.
- Fergusson, D., Horwood, J., & Lynskey, S. (1994). Parental separation, adolescent psychopathology, and problem behaviors. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 1122-1131.
- Ferrini, A. & Ferrini, R. (2008). *Health in the Later Years* (4th ed.). New York, New York: McGraw-Hill.
- Ferri, C., Prince, M., Brayne, C., Brodaty, H., Fratiglioni, L, et al. (2005). Global prevalence of dementia: A Delphi consensus study. *The Lancet*, *366*, 2112-2117.
- Florida Corrections Commission. (2001). Florida Corrections Commission 2001 annual report, section 4: Status report on Elderly Inmates. Retrieved June 25, 2007, from http://www.fcc.state.fl.us/ fcc/reports /final01/4.pdf
- Flynn, E. (1992). The graying of America's prison population. *The Prison Journal*, 72, 81-98.
- Fomby, T. & Rangaprasad, V. (August, 2002). Divert Court of Dallas County: Costbenefit analysis. Southern Methodist University, Department of Economics.
- Frank, R., & Giled, S. (2006). Changes in mental health financing since 1971:

 Implications for policymakers and patients. *Health Affairs*, 25(3), 601-613.

- Gallagher, E.M. (2001). Elders in prisons: Health and well-being of older inmates. *International Journal of Law and Psychiatry*, 24, 325-333.
- Goetting, A. (1984). The elderly in prison: A profile. *Criminal Justice Review*, 9 2, 14-24.
- Gomez-Smith, Z. & Piquero, A. (2005). An examination of adult onset offending. *Journal of Criminal Justice*, 33, 515-525.
- Gunstad, J., Paul, R., Spitznagel, M., Cohen, R., Williams, L., Kohn, M., & Gordon, E. (2006). Exposure to early life trauma is associated with adult obesity. *Psychiatry Research*, *142*, 31-37.
- Gurland, B. (1996). Epidemiology of psychiatric disorders. In J. Sadavoy, L. Lazarus, L. Jarvik, & G. Grossberg (Eds.), *Comprehensive review of geriatric psychiatry-II* (2nd ed., pp. 3-42). Washington, DC: American Psychiatric Press.
- Ham, J. (1976). Forgotten minority: An exploration of long-term institutionalized aged and aging male prison inmates. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.
- Harding, C. (2003). Changes in schizophrenia across time: Paradoxes, patterns, and predictors. In C. Cohen (Ed.), *Schizophrenia into later life: Treatment, research, and policy* (pp. 19-41). Arlington, VA: American Psychiatric Publishing.
- Harris, M. & Jeste, D. (1988). Late-onset schizophrenia: An overview. *Schizophrenia Bulletin*, 14, 39-55.
- Hebert, L., Scherr, P., Bienias, J., Bennett, D., & Evans, D. (2003). Alzheimer disease in the US population: prevalence estimates using the 2000 census. *Archives of Neurology*, 60(8), 1119-1122.

- Heffner, K., Loving, T., Robles, T., & Kiecolt-Glaser, J. (2003). Examining psychosocial factors related to cancer incidence and progression: In search of the silver lining.

 *Brain, Behavior, and Immunology, 17, S109-S111.
- Heinik, J., Kimhi, R., & Hes, J. (1994). Dementia and crime: A forensic psychiatry unit study in Israel. *International Journal of Geriatric Psychiatry*, *9*, 491-494.
- Hebert, L., Scherr, P., Bienias, J., Bennett, D., & Evans, D. (2003). Alzheimer disease in the US population: prevalence estimates using the 2000 census. *Archives of Neurology*, 60(8), 1119-1122.
- Henry, B., Capsi, A., Moffitt, T., & Silva, P. (1996). Temperamental and family predictors of violent and non-violent children: Age 3 to age 18. *Developmental Psychology*, 32, 614-623.
- Himmelfarb, S., & Murrell, S. (1984). The prevalence and correlates of anxiety symptoms in older adults. *Journal of Psychology*, *116*, 156-167.
- Hinrichson, G. (1999). Treating older adults with interpersonal psychotherapy for depression. *Journal of Clinical Psychology/In Session*, *55*(8), 949-960.
- Hoff, R., Baranosky, M., Buchanan, J., Zonana, H., & Rosenheck, R. (1999). The effects of a jail diversion program on incarceration: A retrospective cohort study. *Journal of the American Academy of Psychiatry and the Law, 27,* 377–386.
- Hora, P., Schuma, W., & Rosenthal, J. (1999). Therapeutic jurisprudence and the drug treatment court movement: Revolutionizing the criminal justice system's response to drug abuse and crime in America. *Notre Dame Law Review*, 74, 439-555.

- Hucker, S. J. and Ben-Aron, M. H. (1984) Violent elderly offenders-a comparative study.

 In W. Wilbanks and P. K. H. Kim (Eds), *Elderly Criminals* (pp.69-81). Langham:

 University Press of America.
- James, D., & Glaze, L. (September 2006). Mental health problems of prison and jail inmates. Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- James, D., & Glaze, L. (September 2006). Mental health problems of prison and jail inmates. Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- Jamison, K. (1999). Darkness fall fast: Understanding suicide. New York, NY: Vintage.
- Juby, H. & Farrington, D. (2001). Disentangling the link between disrupted families and delinquency. *British Journal of Criminology*, 41, 22-40.
- Katzman, R. (2004). A neurologist's view of Alzheimer's disease and dementia. *International Psychogeriatrics*, 16, 259-273.
- Kay, D. (1995). The epidemiology of age-related neurological disease and dementia. *Reviews of Clinical Gerontology*, 5, 39–56.
- Keenan, K., Loeber, R., Zhang, Q., Stouthamer-Loeber, M., & van Kammen, W. (1995).

 The influence of deviant peers on the development of boys' disruptive and delinquent: A temporal analysis. *Development and Psychopathology*, 7, 715-726.
- Kercher, K. (1987). The causes and correlates of crime committed by the elderly. *Research on Aging*, 9, 256-280.
- Kessler, R. (1997). The effects of stressful life events on depression. *Annual Review of Psychology*, 48, 191-214.

- Kessler, R., Berglund, P., Demler, O., Jin, R., & Walters, E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry*, 62(6), 593-602.
- Kessler, R., Chu, W., Demler, O., & Walter, E. (2005). Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry*, *62*(6), 617-627.
- Kilpatrick, D., Ruggiero, K., Acierno, R., Saunders, B., Resnick, H., & Best, C. (2003).
 Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the national survey of adolescents. Journal of Consulting and Clinical Psychology, 71(4), 692-700.
- Kim, J., Jeong, I., Chun, J., & Lee, S. (2003). The prevalence of dementia in a metropolitan city of South Korea. *International Journal of Geriatric Psychiatry*, 18, 617–622.
- Kinsella, C. (January, 2004). *Correction health care costs*. Lexington, KY: The Council of State Governments.
- Knight, B. (1983). Geriatric homicide or the Darby and Joan syndrome. *Geriatric Medicine*, 13, 297-300.
- Kraaij, V., Arensman, E., & Spinhoven, H. (2002). Negative life events and depression in elderly persons. *Journal of Gerontology: Psychological Sciences*, *57B*, P87-P94.
- Kraaij, V. & de Wilde E. (2001). Negative life events and depressive symptoms in the elderly: Alife span perspective. *Aging & Mental Health*, 5, 84-91
- Krajick, K. (1979). Growing old in prison. Corrections Magazine, 5, 32-46.

- Kratcoski, P. (1990). Circumstances surrounding homicides by older offenders. *Criminal Justice and Behavior*, 17, 420-430.
- Krohn, M., Thornberry, T., Rivera, C., & Le Blanc, M. (2001). Later delinquency careers.

 In R. Loeber & D. Farrington (Eds.), *Child Delinquents* (pp. 67-94). Thousand
 Oaks, CA: Sage.
- Lamb, H. & Weinberger, L. (2005). The shift of psychiatric impatient care from hospitals to jail and prisons. *Journal of the American Academy of Psychiatry and Law*, 33, 529-34.
- Lamb, H. & Weinberger, L. (1998). Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services*, 49, 483-492.
- Lamb, H., Weinberger, L., & Gross, B. (1999). Community treatment of severely mentally ill offenders under the jurisdiction of the criminal justice system: A review. *Psychiatric Services*, *50*, 907–913.
- Lamb, H., Weinberger, L., & Reston-Parham, C. (1996). Court intervention to address the mental health needs of mentally ill offenders. *Psychiatric Services*, *47*, 275–281.
- Lamb-Mechanik, D., & Nelson, J. (2000). *Prison health care survey: An analysis of factors influencing per capita costs*. Washington, DC: National Institute of Corrections.
- Lamberti, S., Weisman, R., Schwarzkopf, S., Price, N., Ashton, R., & Trompeter, J. (2001). The mentally ill in jails and prisons: Towards an integrated model of prevention. *Psychiatric Quarterly*, 72, 63-77.

- Laub, J., Nagin, D., & Sampson, R. (1998). Trajectories of change in criminal offending:

 Good marriages and the desistance process. *American Sociological Review*, 63,

 225-238.
- Le Blanc, M. (1998). Screening of serious and violent juvenile offenders: Identification, classification, and prediction. In R. Loeber & D. Farrington (Eds.), *Serious and violent juvenile offenders: Risk factors and successful interventions* (pp. 67-196). Newbury Park, CA: Sage.
- Lewis, C., Fields, C., & Rainey, E. (2006). A study of geriatric forensic evaluees: Who are the violent elderly? *The Journal of the American Academy of Psychiatry and the Law*, 34 3, 324-32.
- Liberto, J., Oslin, D., & Ruskin, E. (1992). Alcoholism in older persons: A review of the literature. *Hospital and Community Psychiatry*, *43*, 975-984.
- Liu, H., Lin, K., Teng, E., Wang, S., Fuh, J., Guo, N., et al. (1995). Prevalence and subtypes of dementia in Taiwan: A community survey of 5,297 individuals. *Journal of the American Geriatrics Society*, 43, 144–149.
- Long, L. (1992). A study of arrests of older offenders: Trends and patterns. *Journal of Crime and Justice*, 15, 157-175.
- Longino, C. & Mittelmark, M. (1996). Sociodemographic aspects. In J. Sadavoy, L. Lazarus, L. Jarvik, & G. Grossberg (Eds.), *Comprehensive review of geriatric psychiatry-II* (2nd ed., pp. 135-152). Washington, DC: American Psychiatric Press.
- Los Angeles County Municipal Courts Planning and Research Unit. (1996). Los Angeles County (CA) Drug Court. Washington, DC: U.S. Government Accounting Office.

- McGuire, T. & Miranda, J. (2008). New evidence regarding racial and ethnic disparities in mental health: Policy implications. *Health Affairs*, 27 2, 393-403.
- Mayfield, D. McLeod, G., & Hall, P. (1974). The CAGE Questionnaire: Validation of a new alcoholism screening instrument. *American Journal of Psychiatry*, 131, 1121-23.
- Maxfield, M. G., & Widom, C. S. (1996). The cycle of violence: Revisited six years later.

 *Archives of Pediatrics and Adolescent Medicine, 150, 390–395.
- Mazerolle, P. (1998). Gender, general strain, and delinquency: Empirical explanation. *Justice Quarterly*, 15, 65-91.
- Mazure, C. (1998). Life stressors as risk factors in depression. *Clinical Psychology*Science and Practice, 5, 1468-2850.
- McShane, M., & Williams, F. (1990). Old and ornery: The distinctive experiences of elderly prisoners. *International Journal of Offender Therapy and Comparative Criminology*, 34, 197-212.
- Mechanic, D. (1999). *Mental health and social policy: The emergence of managed care.*Boston: Allyn & Bacon.
- Mechanic, D. (2000). Mental Health Policy at the Millennium: Challenges and Opportunities. In *Status of Mental Health Services at the Millennium*. Washington, DC: U.S. Department of Health and Human Services.
- Mechanic, D. & Tanner, J. (2007) Vulnerable people, groups, and populations: Societal View. *Health Affairs*, *26* 5, 1220-1230.
- Merton, R. (1938). Social structure ad anomie. *American Sociological Review*, *3*, 672-682.

- Moffitt, T., Caspi, A., Rutter, M., & Silva, P. (2001). Sex differences in antisocial behavior: Conduct disorder, delinquency, and violence in the Dunedin Longitudinal Study. Cambridge, UK: Cambridge University Press.
- Morash, M. & Rucker, L. (1989). An explanatory study of the connection of mother's age at childbearing to her children's delinquency in four data sets. *Crime and Delinquency*, 35, 45-93.
- Morton, J., & Jacobs, N. (1992). *An administrative overview of the older inmate*.

 Washington, DC: National Institute of Corrections.
- Nagin, D., Farrrington, D., & Moffitt, T. (1995). Life-course trajectories of different types of offenders. *Criminology*, *33* 1, 111-139.
- Neely, C., Addison, L., & Craig-Moreland, D. (1997). Addressing the needs of elderly offenders. *Corrections Today*, *59*(5), 120-123.
- New York Times. (3/3/2007). A profile of civil commitment around the country.

 Retrieved on September 3, 2008, from

 http://www.nytimes.com/imagepages/2007/03/03/us/

 20070304 CIVIL GRAPHIC.html
- O'Rand, A. (1996). The precious and the precocious: Understanding cumulative disadvantage and cumulative advantage over the life course. *The Gerontologist*, *36*, 230-238.
- Oberg, J. (1996, April) An Initial Evaluation and Analysis of the Ventura County Drug

 Court Program. Ventura, CA: Ventura County Government.
- Ostrowsky, M. & Messner, S. (2005). Explaining crime for a young population: An application of general strain theory. *Journal of Criminal Justice*, *33*, 463-476.

- Owens, B. & Phillips, N. (2003). Georgia aging inmate population: An analysis of historic trends and projection of the future population. Atlanta, GA: Office of Planning and Analysis, Georgia Department of Corrections.
- Pardon, M. & Ratthray, I. (2008). What do we know about the long-term consequences of stress on ageing and the progression of age-related neurodegenerative disorders?

 Neuroscience & Biobehavioral Reviews, 32, 1103-1120.
- Paternoster, R. & Mazerolle, P. (1994). General strain theory and delinquency: A replication and extension. *Journal of Research in Crime and Delinquency*, 31, 235-263.
- Pearlin, L. (1999). Stress and mental health: A conceptual overview. In A. Horowitz & T. Schneid (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (pp. 161-175). London: Cambridge University Press.
- Pearlin, L. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 30, 241-256.
- Pearlin, L., Menaghan, E., Lieberman, M., & Mullan, J. (1981). *The stress process*. *Journal of Health and Social Behavior*, 22, 337-356.
- Pearlin, L. & Radabaugh, C. (1985). Age and stress: processes and problems. In B. Hess. and E. Markson (Eds.), *Growing old in America: New perspectives on old age* (pp. 293–308). Brunswick, N.J.: Transaction.
- Pearlin, L. & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 19 1, 2-21.

- Pearlin, L., Schieman, S., Fazio, E., & Meersman, S. (2005). Stress, health, and the life course: Some conceptual perspectives. *Journal of Health and Social Behavior*, 46 2, 205-219.
- Petrila, J. (November, 2002). *The effectiveness of the Broward Mental health Court: An evaluation (Policy Brief #16*). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute.
- The Pew Center for the States. (2008, February). *One in 100: Behind bars in America 2008*. Washington, D.C.: J. Warren.
- The Pew Center for the States. (2007, July). You get what you measure: COMPSTAT for community corrections. Washington, D.C.: W. Burrell & A. Gelb.
- Piquero, A., Brame, R., Mazerolle, P, & Haapeanen, R. (2002). Crime in emerging adulthood. *Criminology*, 40, 137-69.
- Pinquart, M. & Duberstein, P. (2007). Treatment of anxiety disorders in older adults: A meta-analytic comparison of behavioral and pharmacological interventions.

 *American Journal of Geriatric Psychiatry, 15 8, 639-651.
- Piquero, A., Farrington, D., & Blumstein, A. (2003). The criminal career paradigm: Background and recent developments. In M. Toury (Ed.), *Crime and justice: A review of research* (Vol. 27, pp. 137-283). Chicago: University of Chicago Press.
- Piquero, A. & Sealock, M. (2004). Gender and general strain theory: A preliminary test of Broidy an Agnew's gender/GST hypotheses. *Justice Quarterly*, *21*, 125-158.
- Piquero, A. & Sealock, M. (2000). Generalizing general strain theory: An examination of an offending population. *Justice Quarterly*, 17, 449-484.

- Quadagno, J. (2008). Aging and the life course: An introduction to social gerontology (4th ed.). New York, New York: McGraw-Hill.
- RAND Corporation. (2007). Justice, Treatment, and Cost: An Evaluation of the Fiscal Impact of Allegheny County Mental Health Court. Santa Monica, CA: M. Susan Ridgely, John Engberg, Michael D. Greenberg, Susan Turner, Christine DeMartini, and Jacob W. Dembosky.
- Reagan, J., Alderson, A., & Reagan, M. (2002). Psychiatric disorders in aging prisoners. *Clinical Gerontologist*, 26, 117-124.
- Reed, E. (1995, April). *Drug Court Division Program Annual Report*. Wilmington, DE: SODAT-DELAWARE, Inc.
- Reiger, D., Narrow, W., Rae, D., Manderscheid, R., Locke, B., & Goodwin, F. (1993).

 The de facto mental and addictive disorders service system. Epidemiologic

 Catchment Area prospective 1-year prevalence rates of disorders and services.

 Archives of General Psychiatry, 50(2), 85-94.
- The Regents of the University of Michigan. (1991). Michigan Alcohol Screening Test (MAST-G). University of Michigan Alcohol Research Center.
- Rindfuss, R., Swicegood, G., & Rosenfeld, R. (1987). Disorder in the life course: How common and does it matter? *American Sociological Review*, *52*, 785-801.
- Robins, L. (1978). Sturdy childhood predictors of adult antisocial behaviour: Replications from longitudinal studies. *Psychological Medicine*, *8*, 611-622.
- Robins, L., & Regier, D. (Eds.). (1991). Psychiatric disorders in America: the Epidemiologic Catchment Area Study. New York: The Free Press.

- Rosner, R., Wiederlight, M., Harmon, R., & Cahn, D. (1991). Geriatric offenders examined at a forensic psychiatry clinic. *Journal of Forensic Science*, *36*, 1722-1731.
- Ross, J. & Richards, S. (2002). *Behind bars: Surviving prison*. Indianapolis, IN: Alpha Books.
- Rothman, M. (2004). Judicial Responses to the Growing Incidence of Crime among Elders with Dementia and Mental Illness.
- Sabol, W. & Minton, T. (June 2008). *Jail Inmates at Midyear 2007*. Washington, DC:U.S. Department of Justice, Office of Justice Programs.
- Sadavoy, J, and Fogel, B. (1992). Personality disorders in old age. In J.E. Birren, R. B.,
 R.B. Sloane, D.H. Cohen, N.R. Hooyman, B.D. Lebowitz, M. Wykle, and D.E.
 Deutchman (Eds.), *Handbook of mental health and aging* (2nd ed., pp. 433-463).
 New York: Academic Press.
- Sakauye, K. (1996). Ethnocultural aspects. In J. Sadavoy, L. Lazarus, L. Jarvik, & G. Grossberg (Eds.), *Comprehensive review of geriatric psychiatry-II* (2nd ed., pp. 197-222). Washington, DC: American Psychiatric Press.
- Sampson, R.J. & Laub, J.H. (2005). A general age-graded theory of crime: Lessons learned and the future of life-course criminology. In D.P. Farrington (Ed.), *Integrated developmental &life-course theories of offending: Vol. 14. Advances in Criminological theory* (pp. 165-181). New Brunswick, NJ: Transaction.
- Sampson, R. & Laub, J. (2003). Life course desisters?: Trajectories of crime among delinquent boys followed to age 70. *Criminology*, 41, 319-339.
- Sampson, R. & Laub, J. (1993). Crime in the making: Pathways and turning points

- through life. Cambridge, MA: Harvard University Press.
- Sampson, R. & Laub, J. (1990). Crime and deviance over the life course: The salience of adult social bonds. *American Sociological Review*, *55*, 608-27.
- Sampson, R., Laub, J., & Wimer, C. (2006). Does marriage reduce crime?: A counterfactual approach to within-individual causal effects. *Criminology*, 44, 465-508.
- Satre, D., Knight, B., Dickson-Furhmann, E., & Jarvik, L. (2003). Predictors of alcohol treatment seeking in a sample of older veterans in the GET SMART program. *Journal of the American Geriatric Society*, *51*, 380-6.
- Schoenfeld, L., King-Kallimanis, B., Duchene, D., Etheridge, R., Herrera, J., Lawton Barry, K., & Lynn, N. (2010). The Florida BRITE Project: Screening and Brief Intervention for Substance Misuse in Older Adults. *American Journal of Public Health*, 100 1, 108-114.
- Schiff, M. & Terry, W. (1997). Predicting graduation from Broward County's dedicated drug treatment court based upon individual participant characteristics. *The Justice System Journal*, 19, 291-310.
- Senjo, S. & Leip, L. (2001). Testing therapeutic jurisprudence theory: An empirical assessment of the drug court process. *Western Criminology Review*, 3 1.

 [Online]. Available: http://wcr.sonoma.edu/v3n1/snejo.html.
- The Sentencing Project. (2009, July). No exit: The expanding use of life sentences in America. Washington, D.C.: Ashley Nellis & Ryan King.
- Slobogin, C. (1995). Therapeutic jurisprudence: Five dilemmas to ponder. *Psychology, Public Policy, and Law, 1,* 193-219Slobogin, C. (1995). Therapeutic

- jurisprudence: Five dilemmas to ponder. *Psychology, Public Policy, and Law, 1*, 193-219.
- Smyer, M. & Qualls, S. (1999). *Aging and Mental Health*. Oxford, UK: Blackwell Publishing.
- Smyer, T. & Gragert, M. (2006). Health Issues of Aging Prisoners. In P. Burbank (Ed.), Vulnerable older adults: Health care need and interventions (pp.57-74). New York, NY: Springer.
- Smyer, T. & Gragert, M. & Martins, D. (2006). Aging Prisoners: Strategies for Health Care. In P. Burbank (Ed.), Vulnerable older adults: Health care need and interventions (pp.75-97). New York, NY: Springer.
- Southern Legislative Conference (2006, December). *The aging inmate population:*Southern states outlook. Atlanta, GA: Jeremy Williams.
- Steadman, H., Barbera, S., & Dennis, D. (1994). A national survey of jail diversion programs for mentally ill detainees. *Hospital and Community Psychiatry*, *45*, 1109-1113.
- Steadman, H., Morris, S., & Dennis, D. (1995). The diversion of mentally ill persons from jails to community-based services: A profile of programs. *American Journal of Public Health*, 85, 1630-1635.
- Steadman, H. & Naples, M. (2005). Assessing the effectiveness of jail diversion programs for persons with serious mental illness and co-occurring substance use disorders. *Behavioral Sciences and the Law*, *23*, 163-170.
- Stevens, R. (1993). When your clients are in jail. *Nursing Forum*, 28, 5-8.

- Tabachnick, B. & Fidell, L. (2001). Using multivariate statistics (4th ed.). Boston: Allyn and Bacon.
- Teller, F. & Howell, P. (1981). The older prisoner: Criminal and psychological characteristics. *Criminology*, *18*, 549-55.
- Texas Department of Criminal Justice. (2006). Fiscal Year 2007 Operating Budget and

 Fiscal Years 2008-2009 Legislative Appropriations Request. Austin, TX:

 Legislative Budget Board. Accessed on September 7, 2007, from

 http://www.tdcj.state.tx.us/publications/finance/publications-financeoperating-budget-2007-lar-2008.htm
- Texas Medical Foundation. (2005). An evaluation of correctional health care services.

 Austin, TX: Texas Medical Foundation.
- Thoits, P. (1999). Sociological approaches to mental illness. In A. Horowitz & T. Schneid (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (pp. 121-138). London: Cambridge University Press.
- Thornberry, T. (2005). Explaining multiple patterns of offending across the life course and across generations. *The ANNALS of the American Academy of Political and Social Science*, 602, 156-195.
- Treatment Advocacy Center. (2007). Criminalization of individuals with severe psychiatric disorders. Arlington, VA.
- Turley, J. (2007, October 7). Release elderly inmates: Older, lower-risk prisoners should be removed from the state's perilously overcrowded jails. Retrieved on September 3, 2008, from http://www.latimes.com/news/opinion/la-oe turley7oct07,0,7788538.story?track=tothtml

- U.S. Department of Health and Human Services. (1999). Mental health: A report of the Surgeon General. Rockville, MD: U.S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.
- U.S. Department of Justice, Bureau of Justice Statistics. (2008). *Prison inmates at mid-year 2007* (NCJ 221944). Washington, D.C.: William Sabol and Heather Couture.
- U.S. Department of Justice, Bureau of Justice Statistics. Survey of Inmates in Local Jails, 2002: [United States] [Computer file]. Conducted by the U.S. Dept. of Commerce, Bureau of the Census. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [producer and distributor], 2006.
- U.S. Department of Justice, Bureau of Justice Statistics. Survey of Inmates of Local Jails, 1996: [UNITED STATES] {Computer file]. Conducted by the U.S. Department of Commerce, Bureau of the Census. ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [producer and distributor], 1999.

The Urban Institute. (2004, March) Taking Stock: Housing, Homelessness, and Prisoner

Reentry. Authors: Roman, C. & Travis, J.

Vega, M. & Silverman, M. (1988). Stress and the elderly convict. *Journal of Counseling* and Clinical Psychology, 58, 153-162.

- Washington, P. (1989). Mature mentally ill offenders in California jails. *Journal of Offender Counseling, Services, and Rehabilitation*, 13, 161-173.
- Watson, A., Hanrahan, P., Luchins, D., & Lurigio, A. (2001). Mental health courts and the complex issues of mentally ill offenders. *Psychiatric Services*, *52* 4, 477-481.
- West, H. & Sabol, W. (December 2008). *Prisoners in 2007*. Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- Wexler, D. & Winick, B. (1991). Therapeutic jurisprudence as a new approach to mental health law policy analysis and research. *University of Miami Law Review*, 45, 979-1004.
- Widom, C. (2000). Understanding the consequences for childhood victimization. In M.
 D. Robert & M. Reese (Eds.), *Treatment of child abuse* (pp. 339–361).
 Baltimore, MD: Johns Hopkins University Press.
- Widom, C. (1989). The cycle of violence. Science, 244, 160–166.
- Wilson, R. (October 2003). *Correctional health: The missing key to improving the public's health and safety*: Massachusetts Public Health Association.
- Wilson, R., Krueger, K., Arnold, S., Barnes, L., Mendes de Leon, C., Bienias, J., & Bennetter, D. (2006). Childhood adversity and psychosocial adjustment in old age. *American Journal of Geriatric Psychiatry*, 14, 307-315.
- Yates, J. & Gillespie, W. (2000). The elderly and prison policy. *Journal of Aging and Social Policy*, 11 (2/3), 167-175.
- Zara, G. & Farrington, D. (2009). Childhood and adolescent predictors of late onset criminal careers. *Journal of Youth and Adolescence*, *38*, 287-300.

Zarit, S.H. & Zarit, J.M. (2007). Mental disorders in older adults: Fundamentals of assessments and treatment (2nd ed.). New York, NY: Guilford Press.