## Recidivism among Older Adults: Correlates of Prison Re-entry



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#### Abstract

This study aimed to examine odds and correlates of recidivism among discrete age groups (i.e., 45-54; 55-64; 65+) using a dataset of all prisoners age 45 and older released between 2004 and 2005 in North Carolina (*n*=6,522). This adds to extant literature which has examined recidivism among one older age group (45 and older) compared to younger adults. Descriptive and bivariate statistics and multiple binary logistic regression analyses were used to meet the aforementioned study aims. Odds of recidivism decreased significantly with age. Neither education nor prior violent crime accounted for model variation, though both are correlates of recidivism among older adults. Sentencing and parole reformations are recommended as unique factors are associated with recidivism among older adults.

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## Introduction

Older adults represent a large and growing population within United States correctional facilities (Chettiar, Bunting & Schotter, 2012; Fellner & Vinck, 2012). Some define older adults as those age 50 or older, or 55 or older, ages reflecting older adulthood in community settings, (Aday, 2003). Others have argued that older adulthood should extend into earlier phases of development for incarcerated persons due to accelerated aging. Despite contention regarding age cutoffs, there are an estimated 246,600 adults age 55 or older incarcerated in American prisons constituting approximately 16% of the total prison population in the United States. Considered the fastest growing age group in American prisons (Chettiar et al., 2012), the number of individuals age 55 and older is projected to reach 400,000 by 2030 (Fellner & Vinck, 2012).

## **Implications of an Aging Prison Population**

Efforts must be made to reduce the numbers of older adults behind bars for implications of an aging prison population are both numerous and far reaching. The imprisonment of older adults has numerous implications related to humanitarian and economic costs, as well as effects on families and communities. Fellner and Vinck (2012) note:

A burgeoning geriatric prisoner population has important financial, practical, and moral implications for all Americans, not just those incarcerated. The United States should consider whether such a population is something that the country wants or needs. Human Rights Watch believes it is neither (p.12).

Few prisons are able to accommodate age-related changes such as functional decline, mobility, and chronic medical conditions; many facilities struggle to provide adequate healthcare to this population (Aday, 2003; Fellner & Vinck, 2012). The physical environment of most prisons is not adequate for the needs of frail elderly prisoners, and few specialized facilities and programs exist for older adults (Aday, 2003). Further, staff at most prisons lack training to work with older adults (Aday, 2003; Snyder et al., 2009). Incarcerated older adults are also particularly vulnerable to victimization by their younger counterparts (Kerbs & Jolley, 2007). These issues result in hazardous conditions that violate the human rights of incarcerated older adults.

The incarceration of older adults comes at high economic costs while contributing little to a reduction in crime (Fellner & Vinck, 2012). Rates of crime decline dramatically after age 55 (Chettiar et al., 2012) while the costs of care for older adults greatly exceed care costs for younger adults (Chettiar et al., 2012). The vast majority of such costs relate to healthcare. Older adults often have multiple chronic health conditions and disabilities. Such infirmities may relate to limited access to preventative healthcare prior to incarceration or may reflect responses to conditions inherent to correctional facilities. Prison settings can increase individual levels of fear, stress, and cortisol production. These facilities are also veritable breeding grounds for acute and infectious conditions such as tuberculosis, Hepatitis C, and MRSA due to overcrowding and lack of appropriate health care (Fellner & Vinck, 2012).

Additionally, incarcerated persons tend to age at a rate faster than the general population, a phenomena referred to as accelerated aging (Aday, 2003). Accelerated aging reflects the biopsychological disparities endured by incarcerated persons resulting in characteristics more closely parallel to a community dwelling peers roughly ten to fifteen years older (Chettiar et al., 2012). Regardless of this contention, older adults in the criminal justice system are often examined as a single, homogenous group (viz., age 45 or 50 or older; Durose, Cooper & Snyder, 2014; Jhi & Joo, 2009; Langan & Levin, 2002). These factors contribute to three or more chronic medical conditions found in the average incarcerated older adult (Hayes, Burns, Turnbull & Shaw, 2012). The cost of incarceration doubles between ages 55 and 60 because of these complex and chronic healthcare needs. It is clear, then, why the cost of care for persons over the age of 80 is eight times higher than the average cost of care for incarcerated adults (Fellner & Vinck, 2012). Some scholars estimate that state agencies could save an average of \$66,294 annually for each older adult released (Chettiar et al., 2012).

The imprisonment of older adults also influences prisoner families and communities. Excessive prison sentencing separates families, ultimately destabilizing the family structure (Chettiar et al., 2012). Lengthy sentences also result in cumulative disadvantage over the life course, due to losses in educational and employment opportunities during pre-retirement years (Maschi, Morrisey & Leigey, 2012). By the time of release, many older adults no longer have family members able to provide support, and have difficulty securing housing or care to provide for their basic needs (Fellner & Vinck, 2012). Recent efforts to place older adults upon release in long-term care settings have also been met with controversy as many nursing and hospice facilities do not allow admission for persons with felony records (Rugg, 2017).

#### **Recidivism among Older Adults: Correlates and Consequences**

Recidivism has been conceptualized and operationalized to include new arrests, new convictions or return to incarceration following release (Langan & Levin, 2002). The current study defines recidivism as any return to prison. This definition, though narrow, serves as a nuanced measure of recidivism because only offences warranting lengthy sentences, with or without the possibility of parole, would result in prison readmission.

#### Age-Graded Trajectories of Recidivism

Previous studies have supported an inverse relationship between age and recidivism. In a three-year longitudinal study using a large sample from 15 states (n=272,111), Langan and Levin (2002) found that adults 45 and older had lower rates of rearrests, reconviction, and return to incarceration than their younger adult peers. Adults age 45 and older have also been found to have significantly lower recidivism rates than younger adults in a study of adults released on parole between 2001 and 2003 (Jhi & Joo, 2009). While evidence exists regarding the inverse relationship between age and recidivism, previous researchers have yet to examine prison readmission among distinct age groups of older adults (Fellner & Vinck, 2012). Researchers commonly examine incarcerated older adults as a homogenous group (e.g., 50 or 55 and older). Incarcerated older adults are thereby lumped into one category (<45 or 55) and compared to younger adults (Durose, Cooper, & Snyder, 2014; Jhi & Joo, 2009; Langan & Levin, 2002). Researchers may also use age as a continuous variable (Huebner & Berg, 2011). However, neither approach clearly delineates when recidivism begins to decline nor how much of a decline takes place at certain points during the life course; furthermore, these strategies do not account for accelerated aging among incarcerated persons.

Gerontological researchers commonly divide older adults into subcategories, such as young-old, old, and oldest-old (Baltes & Smith 2003; Chou & Chi, 2002; Garfein & Herzog, 1995; Neugarten, 1974; Secomme & Masako, 1991). These subcategories recognize stages of age-related changes including increased disability and decreased executive functioning and allow for nuanced comparisons among groups. This method of examining age has not been used in studies of older adult recidivism despite more adequately reflecting the life course perspective conceptualizing life events "in age-graded trajectories" (Elder, 1994, p. 5).

## Correlates of Older Adult Recidivism

Broadly speaking, correlates of recidivism fall into one of two domains: demographic characteristics or criminogenic factors. Demographic characteristics commonly cited as related to recidivism include education, employment, race, marital status, and gender. Previous research suggests that men, members of minority groups, and younger adults are more likely to return to prison (Langan & Levin, 2002). Importantly, some of these factors reflect systematic disparities in criminal justice system operations (Alexander, 2012). Other characteristics requiring consideration include criminogenic factors—or, those factors associated with an increased risk of criminal activity. Common criminogenic factors include the type of current and previous offence(s) committed (e.g., violent, non-violent), number of current and previous offences, time sentenced, and time served (Langan & Levin, 2002).

It is important that researchers examine correlates of recidivism among older adults for several reasons. First, programming within prisons may require revision based on unique needs of adults over age 45. It may not be essential to focus efforts related to vocational rehabilitation if an older adult is unable to work upon release. Similarly, if odds of older adult recidivism are low, punitive approaches to sentencing and parole require revision. Specifically, older adults should be provided greater access to geriatric parole or early release (Chiu, 2010). Practices prior to incarceration also warrant reconsideration including the use of shorter sentences for older adults with chronic medical needs or disabilities (Fellner & Vinck, 2012).

## **The Current Study**

This study sought to contribute to the literature in three ways. First, we aimed to elucidate differences among discrete subgroups of older adults regarding the odds of prison readmission upon release with subgroups including emerging older adults (45-54), older adults (55-64), and the elderly (65 and older). We anticipated that 1a) the odds of prison readmission will decrease with age and that 1b) the odds of prison readmission will emerge as significantly different among these distinct age groups of older adults. We also aimed to identify correlates of recidivism for these older adults. We expected that 2) correlates of older adult prison readmission.

#### Methods

The current study used secondary data drawn from a larger data set of all persons released from the North Carolina Department of Corrections (NCDOC) between 2004 and 2005 (N=44,812). Administrative staff collect data upon an individual's admission at every NCDOC institution. Data includes numerous demographic and criminogenic factors. Prison readmission was assessed for five years. Data were de-identified and this study was then reviewed and approved by the Florida State University Human Subjects Committee Institutional Review Board, as well as the NCODC.

#### Measures

Demographic characteristics included gender, race, marital and minority status, education, and employment at time of arrest. Gender, minority status, marital status, and employment at time of arrest were dichotomized (female/male, minority/non-minority, married/unmarried, no, unemployed/ yes, employed, respectively). Education was measured in years. The primary independent variable of interest, age, was recoded from its continuous form (i.e., age in years) into a categorical variable with three groups: emerging older adult (45-54), older adult (55-64), and elderly (65 and older). Criminogenic covariates include time served (number of days), total offences (count), and type of crime (non-violent/violent). The dependent variable, recidivism as measured by prison readmission, was also dichotomized (no/yes).

#### Data Analysis

Descriptive and bivariate statistics were calculated for all variables. Chi-square was used to examine differences in presence/absence prison readmission among groups. Hierarchical multiple binary logistic regression analysis was to test the hypothesis that the odds of recidivism would decrease as age increased across groups, with the oldest age group having the lowest odds of recidivism compared to the two younger groups. The primary independent variable of investigation was categorical age operationalized as group assignment to one of the following based on self-reported age: emerging older adult, older adult, or elderly. Control variables included gender, race, marital status, education, and employment at time of arrest. Criminogenic covariates include number of days served, total offences, and type of crime. The dependent variable, recidivism, reflects the presence or absence of prison readmission during the five-year follow-up period.

#### Results

#### Descriptive Statistics

There were a total of 6,432 adults age 45 and older in the sample. Emerging older adults constituted the vast majority of the older adults released between 2004 and 2005 from NCDOC (n=4,923, 76.5%). The majority of the sample was male (87.1%) and unmarried (80.8%). Nearly 65% of the sample was employed at the time of arrest and roughly 60% of older adults were minorities. Nearly 81% of imprisoned older adults were incarcerated for non-violent offences. Average total offences among older adults was 3.43 (SD=5.07) and average time served was 618 days, though wide variability existed (SD=14,808).

Results of cross-tabulation revealed several salient findings, namely that 66% of older adults released between 2004 and 2005 from the NCDOC did not return to prison. In the emerging older adult age group, 63% did not return to prison (n=3,100). Greater proportions of non-recidivists were found for the older adult (73.3%; *n*=933) and elderly (88.2%; *n*=209) subgroups. Results of the chi-square analysis further indicated the likelihood of prison readmission was statistically significantly different among older adult subgroups.

	Ν	%	М	SD
Demographics				
Age			51.43	5.85
Emerging older adult 45-54	4,923	76.5		
Older adult 55-64	1,272	19.8		
Elderly 65+	237	3.7		
Minority status				
No	2,600	40.4		
Yes	3,832	59.6		
Gender				
Female	827	12.9		
Male	5,605	87.1		
Marital status				
Married	1,292	20.1		
Unmarried	5,131	79.9		
Employed at time of arrest				
No	2,235	34.9		
Yes	4,161	65.1		
Education (years)			10.99	2.22

#### Table 1: Frequencies and descriptive statistics of demographic and criminogenic characteristics among incarcerated older adults

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<i>Criminogenics</i> Time served (days) Type of crime			618	14,808
Non-violer	nt 5,196	80.8		
Violer	nt 1,229	19.1		
Total offences			3.43	5.07
Recidivism				
Ν	o 4,242	66.0		
Ye	es 2,190	34.0		
Prison readmission (count)			.46	.74

#### **Bivariate Statistics**

Bivariate statistics for continuous variables and recidivism were calculated with point-biserial correlation coefficient, bivariate statistics for categorical variables were calculated with phi coefficient. All variables had a significant correlation with return to incarceration, except for years of education (r=.02, p=.21). Total number of offences was positively correlated with recidivism (r=.21, p<.001), while time served was negatively correlated with recidivism (r=.06, p<.001). Gender (r=.07, p<.001), marital status (r=-.04, p=.003), race (r=.06, p<.001) and employment at time of arrest (r=-.03, p=.04) had statistically significant associations with recidivism. Violent offences were also associated with recidivism (r=.04, p=.001).

<b>Table 2: Bivariate Relationshi</b>	ps among Older Adult Re	ecidivism Correlates
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	iender	ducation	larital tatus	ace	mployme	ime Serv	ype of rime	otal Offences	ge
Gender	0	ш	2 0	æ	ш	F	μŪ	μŪ	4
Education	05**								
Marital Status	07**	.02							
Race	.08**	.04**	02						
Employment	.24**	.05**	.05**	.02					
Time Served	.08**	07**	07**	.02*	.13**				
Type of Crime	.09**	07**	.04**	.01	.08**	.37**			
Total Offences	04**	.07**	.02*	07**	.02	.09**	.05**		
Age	.07**	07**	.06**	.05**	.08**	.16**	.08**	.09	
Any Return	.07**	.02	.06**	.06**	.03*	06**	.04**	.15**	.13**

*Note. n*= 6,522; Pearson's product moment correlation coefficient; †Point-biserial correlation coefficient for dichotomous variable relationships; \*p<.05; \*\*p<.01

### Hierarchical Multiple Binary Logistic Regression

Variables included in the hierarchical multiple binary logistic regression proved a better fit to the data than the null model ( $\chi^2(4)=102.77$ , p<.001). The odds of recidivism increased by a factor of 4.13 (p<.001, CI:2.75-6.21) for the emerging aging category (45-54) when compared to the elderly (65+) group, and by a factor of 2.51 for the older adults (ages 55-64) compared to the elderly group (p<.001, CI:1.65-3.83).

Regarding the demographic covariates, the odds of recidivism increased by a factor of 1.2 (p<.001, CI:1.13-1.41) for individuals of minority status when compared to non-minorities. The likelihood of prison readmission decreased by a factor of .84 (p=.01, CI:.24-.96) for those who were married compared to those who were unmarried, and by a factor of .8 (p<.001, CI:.71-.89) for those who were employed at the time of arrest when compared to their unemployed counterparts. Education was not a statistically significant predictor of recidivism. For each additional offence, the odds of recidivism increased by only .04 (p<.001, CI:.03-.05). Type of offence did not emerge as a statistically significant predictor in this model.

#### Discussion

Overall, our hypotheses were supported. This study aimed to support extant literature by examining differences among distinct subgroups of older adults in prison readmission, while accounting for the effects of accelerated aging, and by exploring correlates of recidivism for this population. Previous age based recidivism research has accounted for older adults as one age group, typically age 45 and older, this study adds to that literature by elucidating within group differences (Jhi & Joo, 2009; Langan & Levin, 2002). As hypothesized, the odds of recidivism decreased with age, and the differences between age groups were statistically significant. It is important to note that all older adults (45 and older) were less likely to recidivate than their younger peers in the NDOC. At the end of the five-year observation period, only 34% (n=2,190) of those 45 and older were readmitted to prison, while 50.6% (n=15,854) of the younger adult population released from NCDOC had returned to prison during the same time.

Upon examining correlates of prison readmission in older adults, age accounted for more variation in recidivism than any other demographic or criminogenic variable included in the model. Of the common correlates of recidivism, gender and minority status emerged as somewhat meaningful for older adults: males and individuals of minority status were more likely to return—findings consistent with earlier research (Langan & Levin, 2002). Those who were married and employed at time of arrest were less likely to return to prison, results not unlike those discussed by Langan and Levin (2002). And while total number of offences and time served emerged as statistically significant, resulting effect sizes were small. However, education failed to account for variation in older adult recidivism, despite regular citation as related to reduced risk of recidivism in younger adults. These results are consistent with previous research that found 'education and training in prison' did not have a statistically significant relationship with recidivism for adults 45 and older (Jhi & Joo, 2009). Upon examining the criminogenic factors included in the model, type of crime did not emerge as related to the prison readmission for the current sample. This, too, stands in stark contrast to a large body of literature (Bonta, Law & Hansen, 1998; Langan & Levin, 2002; Jhi & Joo, 2009). However, this finding reflects the primary tenants of life course criminological theory, as desistance from crime—most notably violent crime— increases with age (Sampson & Laub, 2005). Further, of those older adults who do reoffend, non-violent crimes such as financial crimes are more common (Steffensmeir et al., 1989).

							95%	6 CI
	В	SE <sub>B</sub>	Wald	Sig	Df	Exp(B)	Low	High
Age Categories								
Emerging Older Adult	1.42	.21	46.67	<.001	1	4.13	2.75	6.21
Older Adult	.92	.22	18.43	<.001	1	2.51	1.65	3.83
Minority status	.24	.06	17.59	<.001	1	1.26	1.13	1.41
Gender	.66	.09	54.85	<.001	1	1.94	1.63	2.31
Marital status	17	.07	6.27	.01	1	.84	.74	.96
Employed at time of arrest	23	.06	14.75	<.001	1	.79	.71	.89
Education	01	.01	.11	.74	1	.99	.97	1.02
Time served	.00	.00	14.58	<.001	1	1.00	1.00	1.00
Type of crime	07	.08	.89	.35	1	.93	.80	1.08
Total offences	.04	.01	43.62	<.001	1	1.04	1.03	1.05
Model Evaluation			$\chi^2$		Df		Sig	
Omnibus Test			259.4		4		<.001	
			8					
Hosmer & Lemeshow			17.30		8		.03	
Pseudo-R <sup>2</sup>								
	Cox & Snell		.04					
	Nage	lkerke	.05					

# Table 3: Odds ratios and model-data fit indexes of incarcerated older adult recidivism correlates

The overall explained variance in the logistic regression was relatively small. This likely points towards the relative importance of included covariates in the model—factors understood to be important contributors to recidivism for younger adult prisoners do not necessarily hold true for older adult prisoners. Meaning, known demographic and criminogenic covariates do not have as much utility in explaining variation in prison readmission for older adults.

#### Limitations

These findings represent data collected from one southeastern U.S. state and thus are not representative or generalizable to other states, larger U.S. geographic regions, or international jurisdictions. Data was collected by staff at NCDOC facilities. It remains unknown whether the data can be considered reliable though some evidence points toward limits of survey data and strengths of administrative data in social and behavioral science research (Beam, 2012). Data was also collected on prison releases that occurred during 2004-2005, and may not reflect more recent trends in crime and sentencing. As discussed earlier, definitions of both older adulthood and recidivism face critique. However, the current study sought to remedy some of these concerns by clearly denoting definitions used for both constructs to benefit future researchers.

There are inherent limitations to defining continuous variables such as age in categories, including reduced variation and artificial truncation. It is worth mentioning that effect sizes of the regression model were small potentially resulting from ill-fit covariates. A statistically significant result of the Hosmer Lemeshow test may be a consequence of the large sample or indicate poor model-data fit. Over-dispersion, though unlikely to influence odds ratios, may bias results by reducing standard error and inflating statistical significance, therefore *p* values should be interpreted with caution (Field, 2013).

#### Implications

The growing population of incarcerated older adults pose challenges society must address. Most prisons are ill equipped to care for individuals experiencing agerelated decline and related chronic medical conditions. Coupled with growing evidence of low prison readmission, findings from the current study suggest parole practices require revision. Agency administration enhanced efforts to educate the community, families of imprisoned older adults, and incarcerated persons regarding geriatric parole is of importance. Many of such policies require that an advocate initiate the process; others dictate self-initiation is required (Maschi et al., 2015). Thus, individuals who are unaware of this parole option cannot utilize the policy. Opportunities for reformation also extend to the pre-imprisonment phase of the criminal justice system. Considering the human rights concerns and the high economic costs associated with imprisonment of older adults, alternatives to imprisonment should be considered (Maschi et al., 2015).

Given the small effect sizes of emerging relationships examined in this study, it is reasonable to hypothesize that correlates of recidivism are different for older adults than their younger adult peers as has been noted in previous research (Jhi & Joo, 2009). Future researchers' incorporation of variables known to contribute to successful aging for community dwellers (i.e., social support, continuity of healthcare, religiosity/spiritually) may provide clues to understanding what factors are associated with recidivism among older adults. These findings may be important in developing interventions that meet the needs of this burgeoning population.

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**Dr. Stephanie Grace Prost** aims to promote health, quality of life, and social justice for incarcerated persons, criminal justice officers, and forensic service providers through her research, teaching, and service efforts. Dr. Prost's substantive area of research is social work and correctional health, namely chronic and terminal illness (e.g., cancer, dementia) in jails and prisons. Her research efforts also extend to criminal justice officers, specifically understanding factors associated with officer-involved domestic violence whereby criminal justice officers perpetrate emotional, physical, and sexual violence against their families. E-mail: <u>Stephanie.prost@louisville.edu</u>

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