Journal of Crime and Justice

ISSN: 0735-648X (Print) 2158-9119 (Online) Journal homepage: http://www.tandfonline.com/loi/rjcj20

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To cite this article: Tina Maschi, Deborah Viola, Keith Morgen & Lindsay Koskinen (2015) Trauma, stress, grief, loss, and separation among older adults in prison: the protective role of coping resources on physical and mental well-being, Journal of Crime and Justice, 38:1, 113-136, DOI: 10.1080/0735648X.2013.808853

To link to this article: http://dx.doi.org/10.1080/0735648X.2013.808853

Journal of Crime and Justice, 2015
Vol. 38, No. 1, 113–136, http://dx.doi.org/10.1080/0735648X.2013.808853

Trauma, stress, grief, loss, and separation among older adults in prison: the protective role of coping resources on physical and mental well-being

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(*Received 8 February 2013; final version received 22 May 2013*)

Recent evidence suggests that older adults in prison experience a high level of adverse life experiences that can be categorized as trauma, stress, grief and loss. However, there is a dearth of research that examines how older adults' use of physical, cognitive, emotional, social, and spiritual coping resources influence their physical and mental well-being. The current study uses a cross-sectional correlational design and a sample of 667 adults aged 50 and older in a northeastern state prison system. Data were collected using a mailed survey that included the Life Stressors Checklist-Revised, the Coping Resources Inventory, and Health-Related Quality of Life Survey to measure the variables of central interest. The majority (70%) of the sample reported some type of traumatic and stressful life experiences that included childhood and/or adult exposure to violence, unexpected and expected loss of a loved one, family separation, or being diagnosed with a serious physical or mental illness. Path analysis results produced a well-fitting model and revealed that five dimensions of coping resources (physical, cognitive, emotional, social, and spiritual) demonstrate a protective affect on the relationship between cumulative, traumatic and stressful life experiences and well-being among older adults in prison. These findings suggest that the lifetime experiences of multiple types of trauma, stress, grief, separation, and loss are common among older adults in prison and place them at risk for later-life physical and mental decline. Multidimensional coping strategies that address physical, cognitive, emotional, social, and spiritual domains are promising intervention techniques that can improve well-being among older adults in prison.

Keywords: trauma; stress; grief; loss; separation; older adults; prison; prisoners; older offenders; criminal justice; well-being; human rights; social justice

Introduction

The aging prison population crisis is gaining international attention as researchers and scholars and human and civil rights organizations detail the rapidly growing rates of older adults in prison and the high human and economic costs of warehousing older and seriously ill adults in prison (ACLU 2012, Human Rights Watch [HRW] 2012). A collective profile of 'aging prisoners' reveals a group of older adults who have commonly experienced the lifetime histories of cumulative disadvantage, based on personal characteristics, such as age, race/ethnicity, physical and mental disabilities and substance abuse; as well as social structural factors, such as family problems, poverty,

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unsafe neighborhoods; and strict criminal justice policy practices and long prison sentences (Aday 2003). Of significant concern, are the often undetected and untreated lifetime traumatic and stressful life experiences of a vulnerable population of older adults prior to and while in prison. Over three decades of research using juvenile and adult populations have documented that upwards of 93% of incarcerated individuals experienced some type of traumatic experience, such as being a victim and/or witness to physical or sexual assault (Harlow 1999, Abram *et al.* 2007). Building on this research, we will broaden this exploration to older adults in prison to examine the types of traumatic and stressful life experiences, their influence on later life physical and mental well-being, and the protective role of physical, cognitive, emotional, social, and spiritual coping resources that may foster resilience to the adverse affects of these experiences.

Prison demographics

The United States has the largest global prison population; individuals aged 50 and older account for 16% of the general prison population, or roughly 250,000 prisoners (ACLU 2012). In fact, the population of older persons in prison has increased more than 1300% since the early 1980s. This number is expected to almost quadruple by 2030. What is particularly troubling about this forecast is that the international correctional system is in its own crisis state, as it grapples with managing an older, chronically ill population with long-term health and social care needs for which it is not designed or staffed to provide. Among older adults in US prisons, seven out of 10 report some type of medical problem and about 3% die each year in prison and are at high risk of victimization (Goetting 1983, 1984, Fazel *et al.* 2001, Maruschak 2008).

The increase in older adults in prison in part reflects the overall aging of societies, but it is also attributed to the passage of stricter sentencing policies. This 'get tough on crime' era has resulted in larger numbers of individuals receiving longer prison sentences, including life sentences (Aday 2003, Wahidin 2004). The result of these punitive policies has created a stockpiling of people destined to grow old and even die in prison. Currently, the field of corrections is inadequately equipped to address the short- and long-term occupational, health, and behavioral and mental health needs of the rapidly growing aging prisoner population (Rikard and Rosenberg 2007).

Costs of incarceration: financial and moral

The economic and human costs of upholding punitive criminal justice policies are staggering. In the United States, state and federal governments spend $77 billion annually to operate correctional facilities (ACLU 2012). About 20% or $16 billion is spent on older adults in prison for health care. Persons aged 50 and older cost approximately three times more ($68,000) per year to incarcerate compared to younger persons ($34,000) in prison (Kinsella 2004, Falter 1999). The human and moral costs, although not easily measured in monetary value, are also high. Over three decades of national and international media coverage that exposes stark images of sick, frail, elderly prisoners, including those chained to beds within hours of their death, are perhaps a wake-up call compelling us to evaluate what is just versus unjust in criminal justice policies and practices (Finlay 1998, Ridgeway 2012). The economic impact, combined with human and moral costs, challenge national and international communities to revisit their universal commitment to basic human rights for older persons, prisoners, and disenfranchised populations. These individuals, who include persons of color and those with mental and physical disabilities, comprise a

large percentage of the aging prisoner population (BJS 2006, HRW 2012). Determining ethically appropriate sentencing policies and intervention practices that foster compassion and care, as opposed to punishment and incapacitation, are important areas for public debate. Although there are compassionate release laws for seriously or terminally ill prisoners in 41 states in the United States, often there is a lack of public support due to safety concerns, even for low-level offenders (Chiu 2010). Compassionate release of incarcerated individuals who commit violent crimes is given little to no consideration even if these prisoners are mentally incapacitated and no longer pose any danger to society (HRW 2012).

Pathways to prison

Profiles of the aging prison population reveal not only the current state of their health and mental status but also the life course pathways that led them there. A modified version of Goetting's (1984) older prisoner typology includes four sub-populations. The 'young short-term first offenders' are juveniles or adults who were incarcerated at a younger age and are released prior to older adulthood. These individuals may experience the collateral consequences of earlier incarceration that have ramifications over the rest of their life course. The 'old timers' are adult prisoners who serve 20 or more years and grow old while in prison. 'Career criminals' are chronic recidivists who cycle in and out of prison and often will spend older adulthood in prison. 'Older offenders' will first be incarcerated in older adulthood. At opposite ends of the age spectrum, there are incarcerated younger and older age groups that have different developmental needs as they age in and out of prison. Those individuals who were incarcerated at a younger age, especially between ages 18 to 24 years, enter prison during a critical developmental stage from late adolescence to early adulthood and must adapt to a highly stressful prison environment (West and Sabol 2008). As incarcerated individuals reach older age in prison, their increased frailty often plagues them prematurely with more serious aged-related health and mental health issues, including increased risk for dementia (Shimkus 2004). These differing pathways to prison have implications for primary, secondary, and tertiary interventions.

An examination of these differing pathways reveals common life experiences among these groups of offenders including life course exposure to traumatic and stressful events. The mental health consequences of trauma, such as post traumatic stress disorder (PTSD), are also documented in upwards of 65% of incarcerated populations (Burton *et al.* 1994, Cauffman *et al.* 1998, James and Glaze 2006). Studies have confirmed that the cumulative impact of stressful life events, such as experiencing the death and loss of a loved one; school, financial, or job problems; experiences of prejudice and discrimination; and geographic location (urban vs. rural areas), have cumulative effects on health and criminal offending patterns, including recidivism (Leach *et al.* 2008).

Explanatory perspectives and theories

Several existing theories, such as the life course perspective, stress process, and cumulative disadvantage theories, offer some insight as to how significant and traumatic personal or historical life events and social relationships are critical social determinants of health and well-being among older adults in prison. Life course/stress process theories posit that protective factors, such as coping resources, foster resilience to the negative impact of such events (Elder 1974, 2003, Agnew 1989, Norris 1992, Sampson and Laub 1993, 2003, Pearlin and Skaff 1996).

Similarly, cumulative advantage theory explains the life course cumulative impact of trauma and stressful life experiences at the individual, interpersonal, and social-structural levels. These multilevel factors may include interpersonal violence (e.g., being a victim or witness to physical or sexual assault), discrimination experiences (e.g., race/ethnicity, age, and gender), socioeconomic status (e.g., poverty), employment status, and living in violent and/or impoverished neighborhood locations that influence health and well-being (e.g., Ross and Mirowsky 2001). Research on cumulative disadvantage theory suggests that the accumulation of stressors or deficits heighten the risk of adverse physical and mental health and criminal justice involvement (Sampson and Laub 1997, Mirowsky and Ross 2005).

Existing studies that examined the correlation between prior traumatic and stressful life experiences and health and well-being have been conducted with incarcerated juveniles under the age of 18 or adults below the age of 40 (e.g., Widom 1989, Abram *et al.* 2009). However, there is a dearth of research that has examined this correlation among older adults in prison whose traumatic and stressful life experiences are compounded over time. The prison adds another dimension of stress as older inmates are vulnerable to victimization by other prisoners and have little hope of returning to the community before their deaths (Aday 2005, Krabill and Aday 2005, Dawes 2009). There is scant research that examines pathways that foster resilience, such as internal and external coping resources, including cognitive, emotional, physical, spiritual, and social, that are available to remediate the adverse consequence on older adults in prison (Piquero and Sealock 2000).

This study attempts to contribute a deeper understanding of the types and frequencies of traumatic and stressful life experiences of older adults in prison. It also explores past and current subjective responses to these events and how coping resources are used to manage the impact of these experiences and the stressful conditions of confinement. Knowledge of the types of traumatic and stressful life experiences of older adults in prison and their subjective impact is important for designing appropriate assessment tools and intervention strategies that will best foster their rehabilitation and later life well-being. Gaining a better understanding of the extent to which coping resources can remediate the adverse affects of trauma and stress can be used to develop prevention and interventions that may help to alleviate any adverse physical, cognitive, emotional, social, and spiritual consequences. Finally, an improved understanding of social and structural determinants of incarceration should reinforce the importance of policies (e.g., housing, employment, education, social, and behavioral supports) that improve our families and communities.

A review of the relevant literature

Trauma and mental and physical health

High levels of lifetime traumatic experiences and life event stressors have been documented consistently among criminal justice populations of juveniles and adults. As shown in Table 1, traumatic events are broad in scope and vary in intensity. These experiences can be described as unusually extreme stressors that involve the threat of, or actual, serious physical and/or psychological harm to oneself, a family member, or a close friend. Examples include physical or sexual assault. Witnessing events such as a shooting or accident, or learning about the serious injury or sudden death of a family member or friend, also may be traumatic. Unlike more commonly experienced life course stressors (e.g., divorce or separation, job loss, failing grades), traumatic experiences result in longer-term psychological distress or PTSD (American Psychiatric Association [APA] 2000) and for children may lead to ongoing depression, anxiety, and cognitive impairment

Table 1. Trauma: objective occurrences and subjective (psychological, emotional, physiological) reponses (DSM-IV-TR 2000).

Objective Occurrence of Traumatic Events (DSM-IV-TR A1 criterion, APA 2000)

- Criterion A1: The person experienced, witnessed, or learned about an event or events that involved the actual or threatened death or serious injury, or threat to the physical integrity of self and others
- Description: Traumatic experiences are extreme events that are 'out of the range' of most human experience that may be directly or indirectly experienced or learned about (APA 2000)
- Types of Events:
- Interpersonal violence
  - Violent personal sexual or physical assault (e.g., being a victim of child sexual abuse, adult rape, robbery, or mugging)
- War-related traumatic experiences
  - Military combat
  - Terrorist attack
  - Being detained as a prisoner of war or concentration camp
- Severe automobile accident
- A natural or manmade disaster
- Being kidnapped or taken hostage
- Being diagnosed with a life-threatening illness

Subjective Responses to Trauma (Psychological, Emotional, and/or Physiological)

- Criterion A2: Subjective Response
  - Feelings of intense fear, helplessness, or horror in response to the event
- Criterion B–D Post Traumatic Stress Symptoms
  - (B) Continual re-experiencing of the traumatic event (images, thoughts, perceptions)
    - Recurrent distressing dreams of event, acting or feeling reoccurrence (sense of reliving the experience, illusions, hallucinations, and dissociative flashbacks)
    - Psychological distress or physical reactivity at exposure to internal or external cues
  - (C) Continual avoidance of traumatic stimuli and numbing of general responsiveness
    - Avoid thoughts, feelings, conversations, activities, impaired recall
    - Feeling detached, restricted affect, sense of foreshortened future
  - (D) Continual increased arousal symptoms
    - Sleep difficulties, irritability, anger outbursts, difficulty concentrating, hypervigilance, exaggerated startle response
  - (E) Disturbance duration one month or more
  - (F) Causes distress or impairment in social, occupational, or other areas functioning

**Temporal Specifiers for Post Traumatic Stress Disorder Diagnosis:*

- Acute: duration of symptoms less than 3 months
- Chronic: symptoms lasts three months or longer
- Delay onset: 6 months have passed between traumatic event and onset of symptoms

(Neal *et al.* 1995, Shmotkin and Litwin 2009). Naturally, victims of trauma manifest their distress in a variety of ways, including physical, psychological and behavioral problems (Piotrkowski 1998).

Studies have shown that upwards of 90% of criminal offenders report histories of traumatic experiences and life event stressors (Harlow 1999, Erwin *et al.* 2000, Abram *et al.* 2007). In a nationally representative sample of approximately 984,000 prisoners representing all age groups, about one out of five prisoners residing in state institutions reported being a victim of violence (i.e., physical and/or sexual assault) during multiple life course developmental periods. More male prisoners reported being maltreated during childhood or adolescence (i.e., age 17 and under) as compared to adulthood (i.e., over the age of 18) (14.4%, 4.3%, respectively). Female prisoners were likely to report high rates of victimization in both childhood (36.7%) and adulthood (45.0%). These male and female prisoners also reported multiple other stressors such as parental substance abuse

(29.4%, 75.7%, respectively), out of home placement (43.6%, 86.7%, respectively), and having a family member who was incarcerated (20%, 64%, respectively) (Harlow 1999, James and Glaze 2006). Violent victimization histories also were associated with higher levels of violent crime and substance use (Harlow 1999). Hochstetler *et al.* (2004) found that prior victimization experiences predicted revictimization in prison.

Prison as an additional stressor

Research also identifies the prison environment as a source of traumatic experiences and stressor events, especially for older adults. Older prisoners commonly experience stress about their physical safety while incarcerated (Kerbs and Jolley 2007). Older prisoners' fears are often based on their awareness of their increasing frailty, including their diminished ability to defend themselves from assaults from younger prisoners (Stokjovic 2007). Official statistics show that about one out of three older adults reported an injury while in prison as a result of an accident (21%) or fight (13%). Older adults in prison also commonly reported experiencing feeling death anxiety, specifically related to the fear of dying while in prison, more commonly than younger prisoners (Aday 2005). Struckman-Johnson *et al.* (1996) found that of 1800 midwest state prisoners, 20% had been pressured or forced to have at least one unwanted sexual contact. Of those victimized prisoners, half reported being forced to have anal, vaginal, or oral intercourse while one quarter reported being gang raped (Struckman-Johnson *et al.* 1996).

Trauma and later life physical and mental well-being

An important area of research that has only been minimally explored is the temporal and cumulative effect of trauma, especially on later life functioning in older adults in prison. Initial findings of mostly community dwelling older adults suggest that the temporal aspects of survivors' subjective responses may be temporary, persistent, or delayed, only to resurface later in life, especially if a new traumatic experience occurs (Brady *et al.* 2004, Acierno *et al.* 2007, 2010). Early life trauma has been associated with later life physical health issues such as heart disease and diabetes. Other health-related factors include increased use of psychotropic medications with the associated side effects, reduced capacity in activities of daily living, and poorer ratings on self-report health activities of daily living (Draper *et al.* 2008, Stessman *et al.* 2008, Petkus *et al.* 2009).

Research within the last decade indicates that early life traumatic experiences also influence health-risk behaviors (Vielhauer and Findler 2002, Stessman *et al.* 2008, Sachs-Ericsson *et al.* 2010). These risk behaviors include substance use, promiscuity, and heightened stress response, which may further compromise later life physical and mental well-being (Acierno *et al.* 2007, Bright and Bowland 2008, Haugebrook *et al.* 2010). Older adults with life course cumulative experiences of trauma have been shown to be at higher risk of revictimization or elder abuse, especially if their social support network is small in scope (Acierno *et al.* 2007).

A significant number of older adults in prison are diagnosed with mental health problems. Whereas statistics suggest that the number is between 16% and 36%, this percentage is likely much higher because many prisons lack the resources to provide ongoing physical and mental health assessments to accurately gauge health needs (James and Glaze 2006). Official statistics show that older adults in prison also have minor to serious physical health problems, including HIV/AIDS (9%), tuberculosis (16%), and heart problems (13%) (Maruschak 2008). Health problems also are commonly cited as a

source of ongoing mental duress among older adults in prison (Aday 2005). In addition to the high-risk personal histories, the stressful conditions of prison confinement are often viewed as precipitating factors for accelerated aging (ACLU 2012). As a consequence of this accelerated aging the health status of prisoners in their fifties is viewed as equivalent to the health status of community members in their early seventies (Booth 1989).

Recent research has examined the traumatic and stressful life experiences of older incarcerated adults to increase our knowledge of their histories and gain a better understanding of their complex mental and physical health needs (Maschi *et al.* 2011). Results from a mailed survey of 335 state prisoners aged 55 and older by Maschi *et al.* (2011) indicate that about 70% reported a lifetime history of witnessing violence, 32% reported a history of physical or sexual assault before the age of 16, and 68% reported stress related to prison confinement and being diagnosed with a serious physical or mental illness. The authors also found older adults who reported being 'currently affected' (in the past year) by prior traumatic and stressful experiences also reported higher levels of posttraumatic stress symptomatology as measured by the Post Traumatic Stress-Civilian Scale.

Coping and well-being

The role of coping resources as a protective factor among older adults in prison has been minimally explored. Marting and Hammer (2004) defined coping resources as 'those resources inherent in individuals that enable them to handle stressors more effectively, to experience fewer or less intense symptoms upon exposure to a stressor, or to recover faster from exposure' (page 2). Social support may increase an individual's capacity to lessen emotional and psychological distress in response to traumatic and stressful life experiences (Jacoby and Kozie-Peak 1997, Piquero and Sealock 2000). In a sample of 102 older adults in prison, Aday (2005) explored how family and institutional social support influenced prisoners' feelings of distress related to dying and found that higher levels of social support had a significant and inverse relationship to older adults' fear of death.

Study objectives

The research suggests that life course or cumulative traumatic and stressful life experiences are associated with decreased physical and mental well-being among older adults in prison. Consistent with life course, stress process, and cumulative disadvantage perspectives, the research suggests that internal and external coping resources, which may include physical, cognitive, emotional, spiritual, and social coping domains, are potential protective factors for maintaining physical and mental well-being in later life. Yet, coping resources are often overlooked variables in research on the vulnerable population of older adults in prison.

Building upon the extant literature, this study examines the relationship between lifetime and current traumatic life events, coping resources, and current physical and mental well-being among a sample of 667 incarcerated individuals (aged 50 and older) in a Northeastern state prison system. The research questions are as follows: (1) What do older adults in prison report about the types of trauma and stressful life experiences (objective occurrences), the age of which they first occurred, and their subjective responses to these events then and now? (2) What is the role of coping resources on the relationship between cumulative traumatic and stressful life experiences and physical and mental well-being among older adults in prison. Conducting research in this area has important implications

for interdisciplinary practice, policy and future research in the criminal justice system. The findings of this study can be used to confirm or disconfirm existing theories pertaining to older adults in prison settings. It may also provide a potential avenue in which to build an empirical base that can be used to develop or improve prevention, assessment, and interventions for individuals at risk of incarceration or currently incarcerated or post prison release.

Methods

Research design

This cross-sectional study was conducted in a US state prison system located in the northeast in 2010. Of approximately 25,000 prisoners housed in this state, approximately 7% ($n = 1{,}750$) were aged 50 and older. The department of corrections generated the sampling frame for the study and provided identifiers so that invitations and anonymous surveys could be mailed to potential participants and return correspondence could be received.

A response rate of approximately 40% was achieved resulting in a sample size of 667 individuals aged 50 and older. This estimate falls within the higher range of expected mail response rates, which are 20–40% for prison populations (Hochstetler *et al.* 2004). The project was part of the Hartford Geriatric Social Work Faculty Scholars Award, which is funded by the Geronotological Society of America and the John A Hartford Foundation. The study was approved by the Fordham University Institutional Review Board and met the standards for conducting research with a special population of older prisoners and on sensitive topics.

Data collection

The Dillman *et al.* (2009) method for mailed surveys was used to maximize response rates. Specifically, potential participants received: (1) a letter of invitation; (2) a packet with a cover letter, consent form, survey, and a self-addressed electronically stamped envelope seven days later; and (3) two thank you cards and reminders sent seven days apart that included an enclosed self-addressed envelope for participants to request a survey replacement.

Traumatic and stressful life events measure

The 31-item Life Stressor Checklist-Revised (LSC-R) was utilized to measure *traumatic and stressful life events* (McHugo *et al.* 2005). The LSC-R estimates the frequency of lifetime and current traumatic events (being a victim of and/or witness to violence), which is consistent with Diagnostic Statistical Manual (DSM IV-TR) Criterion A for post-trauma stress symptoms (APA 2000). It also accounts for stressful life events, such as the unexpected and expected death of a loved one (e.g., grief and loss), physical health problems, family separations (e.g., divorce), and financial and caregiving stress. The LSC-R has good psychometric properties, including use with diverse age groups and criminal justice populations.

The LSC-R enables the measurement of objective cumulative trauma and stressful life events, which is defined in this study as whether or not one or more traumatic or stressful life events have occurred. Traumatic experiences are defined as those objective events that are consistent with *DSM IV-TR* Criterion A for PTSD (APA 2000). Objective measures for stressful life events refer to life course experiences, such as grief and loss associated with losing a loved one or a job, that tax the adaptive capacities of persons experiencing them

but are generally not considered traumatic events. Participants had the option to endorse as to whether or not each of the 31 events occurred (0 = *no*; 1 = *yes*). A summative score was created for objective trauma and stressful life events by adding the 31 items. Participants also were asked the age at which each event occurred.

The LSC-R also includes a subscale for participants' subjective impressions of traumatic and stressful life events. For each of the individual traumatic and stressful life events experienced, participants were asked their past and current subjective impression of these events by rating each type of traumatic and stressful life events. Participants were asked if they 'felt a threat to personal integrity at the time of the event' and whether they 'felt horror at the time.' A summative score was created for each of these subjective responses by adding the 31 items. Participants also were asked about their current situation and rated the degree to which each event reported affected them within the past year. For current subjective responses, each item was measured using a 5-point Likert scale from 1 = *not at all* to 5 = *extremely*. A total score was calculated by adding participants' past year subjective ratings related to each of the 31 possible objective traumatic and stressful life events that were experienced during the life course. Researchers have reported that the LSC-R has demonstrated good criterion-related validity for detecting traumatic and stressful life events among prisoners (McHugo *et al.* 2005). For example, in one study of 2729 women, in which a subset of 186 completed the measure a second time seven days later, the test-retest kappa averaged .70 across the measured items (McHugo *et al.* 2005).

Coping resources measure

In this study, coping resources were conceptualized as internal (cognitive, emotional, spiritual/philosophical, physical) and external (social support from family and friends). Coping resources were measured using the Coping Resources Inventory (CRI) (Marting and Hammer 2004). The CRI is a valid measure of self-reported coping resources that are available to manage stressors and has been used with samples of older adults and criminal offenders (Piquero and Sealock 2000, Marting and Hammer 2004). Overall, the authors report that the CRI has good convergent and discriminant validity and good internal consistency ($\alpha = .80$) across the subscales (Marting and Hammer 2004).

The 60 item scale has five subscales that measure cognitive, emotional, spiritual and philosophical, physical and social coping resources. The cognitive (COG) subscale examines the extent to which individuals maintain a positive sense of self-worth and optimism toward others and life in general. The emotional (EMO) subscale measures the degree to which individuals are able to accept and express a range of emotions. The spiritual/philosophical (S/P) scale measures the degree to which respondents' actions are guided by stable personal, religious, familial, and/or cultural tradition. The physical (PHY) subscale measures the degree to which individuals engage in health-promoting behaviors. The social (SOC) subscale measures the degree to which individuals are involved in social networks (e.g., family and friends) that are able to provide support in times of stress. In this study, the cognitive, emotional, spiritual/philosophical, physical subscales are conceptualized as assessing internal coping resources. The social subscale is conceptualized as assessing perceived external support.

To measure *physical health*, the Center for Disease Control and Prevention Health-Related Quality of Life (CDC HDQOL-14) was used (CDC 2000, Moriarty *et al.* 2003). This instrument consists of three modules: Healthy Days, Health Days Symptoms, and Activity Limitations. The Health Days module contains an integrated set of broad questions about recent perceived health and mental health status and activity limitation.

The first question measures overall self-rated health on a scale ranging from poor to excellent. It also uses a global measure of physical health and mental and emotional distress. These items comprise the measures for subjective physical and mental well-being in the current study. Mental and physical health are probed in separate sets of questions (i.e., number of days felt healthy). The Activity Limitations module contains recent activity limitations and is a global indicator of disability, productivity, and human capital. Authors report good construct validity, including with samples of low-income older adult populations. Acceptable correlations with SF-36 scales for depression (.55), pain (.56), and vitality (.50) have also been found.

Post traumatic stress symptoms measure

Post traumatic stress symptoms were measured using the PTSD Checklist (PCL) for civilian populations. Participants were given the more general instructions to assess 'stressful experiences in the past' as opposed to one specific traumatic event (Weathers *et al.* 1993). The PCL is a 17-item self-administered survey that measures three PTSD symptom clusters: (a) re-experiencing (5 items), (b) avoidance (7 items), and (c) increased arousal (5 items). It measures past month symptoms using a 5-point Likert scale that ranges from *not at all* to *extremely*. Cronbach's alpha for the scale has been shown to be as high as .91 with civilian populations and ex-prisoners of war (Piotrkowski and Brannen 2002). The total number of PTSD symptoms was used because information was not available to determine actual or probable PTSD.

Sociodemographic data

Self-reported sociodemographic data were obtained from a series of short answer questions about the background of participants. This information included such items as respondents' age, race/ethnicity, gender, marital status, and educational status, number of children, income before incarceration, length of sentence, amount of time served, and expected release date and other relevant criminal justice information. Mental health history was measured using the following question, 'have you ever been diagnosed with a mental health problem?' Substance use history was measured by the following question, 'have you ever been diagnosed with a substance use problem?' Military history was measured by using the following question, 'have you ever been in the military.' Respondents could answer yes or no to these three questions.

Data analysis

A simple path analysis (See Figure 1), an extension of regression modeling using structural equations (see Kline 2010 or Muthén and Asparouhov 2012 for detailed reviews of structural equation modeling theory and practice), will test the directional and theoretical relationship between trauma, coping, and physical/mental well-being. The path analysis uses latent variables, or mathematically inferred variables, constructed from several observed items in the data (see Bollen 1989 for a classic discussion on latent variables). Latent variables are similar in theoretical purpose to factor analysis, where multiple observed items are hypothesized to coalesce around a central theme. The central theme is the latent variable. For example, in this study the latent variable for trauma consists of the objective and subjective trauma measures. The latent variable for coping consists of the five scales of the Coping Resources Inventory. The latent variable for physical/mental

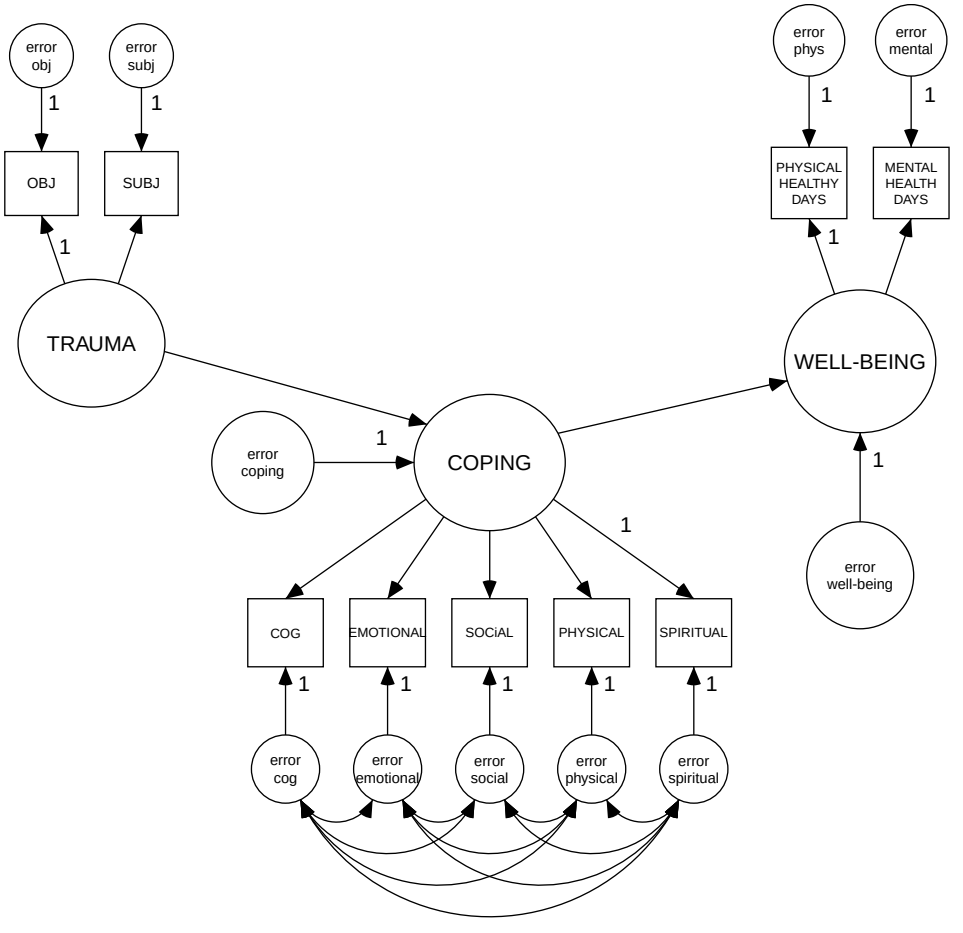

Figure 1. Hypothesized Model.

well-being consists of the physical and mental health healthy days items from the CDC Healthy Days Measure.

The latent variable of trauma is an *exogenous variable.* Exogenous variables have causes not explicitly represented in the model and are causally prior to all dependent variables in the model. There is no causal ordering of the exogenous variables. Conversely, the latent variables of coping and physical/mental well-being are *endogenous* variables. The causes of endogenous variables are specified in the model. Exogenous variables must always be independent variables, but may also be dependent variables. For example, coping is modeled as a cause of mental/physical well-being (independent) but also the outcome of the predictive trauma latent variable (dependent). In Figure 1, the one-way arrows are the direct causal effects in the model, also known as the *structural effects*. These are similar to regression weights. Due to the likelihood of collinearity between coping scales, the path model hypothesizes covariation between the five coping scales as represented by the curved arrows connecting the five coping scale residuals. Modeled residuals are represented by circles.

Simple path analysis can be conducted in traditional software such as SPSS. Model analysis involves an examination of indices of model fit (e.g., does the model fit the data;

Bollen 1989). The most common fit index is the chi-square (a nonsignificant chi-square means an insignificant difference between model and data), but it comes with two weaknesses. First, models with large sample sizes almost always produce a significant chi-square. Second, the statistic is influenced by the model correlations, with larger correlations producing poor model fit. Therefore, other indices are recommended in a review of model fit (Kline 1998). The comparative fit index (CFI; Bentler 1990) is interpreted on a 0 to 1 scale, with any value between .90 and .95 representing acceptable model fit and values greater than or equal to .95 representing good model fit. The root mean square error of approximation (RMSEA; Browne and Cudeck 1993) expressed per degree of freedom (making it sensitive to model complexity) with a good-fitting model produces a value less than or equal to .05; any value between .05 and .10 represents adequate fit. A 90% confidence interval is calculated with the RMSEA.

Results

Sample description

As shown in Table 2, of the 667 participants, 45% were aged 50–54, 44% were aged 55–64, and 9% were aged 65 and older. The racial/ethnic background of participants consisted of African-American (45%), White (35%), Hispanic/Latino (11%), and other racial ethnic groups, such as Asian/Pacific Islander and Native American (9%). Ninety-six percent of the sample were men; 4% were women. Of the total sample, approximately 74% reported having at least a high school diploma and 16% a college degree, compared to 10% who reported having no high school diploma. There was religious diversity among the participants. The majority reported being Christian (62%) followed by Islamic/Muslim (13%), Atheist/Agnostic (13%), or another religion (12%). Thirty percent reported having a military history. Participants also reported having a mental health (28%) and/or alcohol or drug problems (25% and 44%, respectively). Almost one out of five (21%) participants reported having a serious physical illness, such as cancer, HIV/AIDS, or lung disease. Almost three out of four participants (72%) reported being involved in religious activities in prison and one third (33%) reported being in mental health treatment.

As for family relations, 25% of participants reported currently being married (14%) or partnered (11%); 44% reported either being widowed (8%), separated (7%) or divorced (29%); and 29% were never married. Most participants reported having children (80%), including children under the age of 18 (23%). The majority (61%) reported having one or more grandchildren of which 56% were under the age of 18. About half (48%) of the participants reported having at least one other incarcerated family member.

As for legal issues, about 64% reported having a violent offense history (64%), sex offense history (25%) or drug offense history (46%). Slightly over one-third (35%) had a delinquent offense history. About 44% of participants reported a history of a violation of probation and 42% reported a prior parole violation. The length of prison term served varied between participants from 4 months to 42 years. About 24% reported having served 20 or more years. Expected release date varied as well: within one year (22%), 2–5 years (37%), 6–10 years (13%), 11–50 years (12%), and 51 years to life (5%). About one out of 10 participants (9%) reported spending one or more days in solitary confinement in the past year.

History of traumatic and stress life experiences

Factors associated with the mental well-being of older adults included self-reported histories of traumatic and stressful life experiences prior to and while in prison. Using the

Table 2. Sociodemographic profile of a sample of 677 older adults in a Northeastern prison.

Characteristics	*%*	*N*	*Characteristics*	*%*	*N*
Chronological Age			*Family Relations*		
Young Old (Aged 50–54)	44.7	288	*Marital Status*		
Middle Old (Aged 55–64)	44.0	284	Never Married	28.6	182
Oldest Old (Aged 65 to 100)	9.3	60	Married	14.3	91
Race/Ethnicity			Partnered-not married	10.8	69
White	35.0	227	Divorced	29.4	187
African American	44.9	291	Separated	7.2	46
Hispanic/Latino	11.0	71	Widowed	7.9	50
Other	9.1	59	Other	1.7	11
Gender			*Children and Family*		
Male	96.0	626	One or More Children	79.9	504
Female	4.0	26	One or More Children < 18	22.7	129
Education			One or More Grandchildren	61.3	365
No High School Diploma	10.0	65	One or More Grandchildren < 18	56.4	324
HS Diploma	74.3	481	Incarcerated Family Member	47.7	306
College degree or above	15.6	101	*Offense History*		
Religion			Delinquent Offense	35.3	226
Christian	62.2	335	Violent Offense	63.5	413
Islamic/Muslim	13.2	71	Sex Offense	25.2	163
Atheist/Agnostic	13.2	71	Drug Offense	45.5	294
Other	11.5	62	Violation of Probation	44.0	285
Military History	30.3	196	Parole Violation	41.9	271
Health			*Expected Release Date*		
Mental Health	28.2	183	0–1 year	21.7	145
Alcohol Problem	25.4	165	2–5 years	36.7	245
Drug Problem	43.5	283	6–10 years	12.6	84
Serious Physical Health Issues	21.0	143	11–50 years	12.3	82
Services Used (in Prison)			51 years to life	4.5	30
Prison Religious Participation	71.7	463	*Time Served*		
Prison Mental Health Treatment	32.8	212	1–5 years	37.5	250
			6–19 years	27.7	185
			20 or more	23.8	159
			Solitary Confinement (Days Past Year)		
			1–10	1.7	12
			11–150	3.2	22
			151–365	3.7	25

LSC-R, participants reported on whether an event occurred, the age at which it occurred, and its subjective impact then and now (see Table 3).

The majority of respondents, nearly seven out of 10, reported experiencing one or more direct traumatic or stressful life experiences. Particularly noteworthy is that a significant number of participants reported a history of physical, sexual, or emotional abuse or neglect in childhood. Over one third had experienced emotional abuse or neglect (36%) or were physically attacked before the age of 16 (34%); nearly one-fifth had been sexually assaulted (19%) or touched (22%) before the age of 16. In the overwhelming majority of cases, participants reported still being moderately to extremely affected by these experiences in the past year (73%, 59%, 69%, 65%, respectively).

At least half of the participants reported indirect exposure to violence or witnessing violence at some time in their lives. Particularly noteworthy is that 48% reported being exposed to family violence before the age of 16 of which most participants (74%) reported

Table 3. Frequencies and percentages of the occurrence of traumatic experiences, age of first occurrence, and subjective response at the time and now.

	Objective Occurrence		Average Age first Occurred		Believe someone could get hurt		Horror felt at time		Moderately to extremely affected past year (Subjective)	
	%	*N*	M	SD	%	*N*	%	*N*	%	*N*
Direct Exposure (self)										
Had serious accident (self)	52.1	318	26.2	13.4	80.6	250	79.1	246	53.8	171
Been robbed, attacked, mugged	49.6	304	27.5	13.9	79.7	239	81.8	247	48.4	147
Emotional abuse or neglect (self)	36.3	224	13.2	11.5	48.2	106	84.9	186	72.8	163
Been in serious disaster (self)	35.6	216	22.3	15.9	78.9	168	75.7	162	44.4	96
Been in combat or war	15.2	92	19.7	4.6	94.6	87	77.8	70	64.1	59
Kidnapped, hostage, tortured	6.1	37	22.2	12.7	92.1	35	94.4	34	73.0	27
Sexual harassment	12.9	78	18.6	12.4	36.5	27	62.7	47	55.1	43
Physical neglect (self)	18.1	111	12.9	12.7	44.8	47	84.0	89	71.2	79
Physically attacked < age 16	34.4	211	9.2	4.6	62.7	128	88.7	181	58.8	124
Sexual assault < age 16	18.5	117	9.9	3.6	62.1	72	86.7	98	69.0	80
Sexual touch < age 16	21.9	132	10.1	4.4	56.9	74	85.5	106	65.2	86
Physically attacked > age 16	20.6	125	18.7	10.5	68.9	84	84.9	101	66.4	83
Sexual touch > age 16	9.4	57	16.6	9.5	64.9	37	89.1	49	75.4	43
Sexual assault > age 16	9.1	55	19.6	11.1	62.7	32	79.2	42	61.8	34
Indirect Exposure (Witness)										
Seen family violence < age 16	47.7	293	9.3	5.9	74.4	209	88.3	249	58.4	171
Seen serious accident	62.0	392	21.9	12.1	84.6	324	76.2	291	37.5	147
Seen robbery, mugging, attacked	52.2	320	21.2	11.8	76.2	248	69.5	214	27.2	87
Ever lived in violent neighborhood	44.3	270	16.4	12.4	87.7	228	71.2	185	56.0	151
Stressful Life Experiences										
Death, Separation, Loss										
Someone close died *(not unexpectedly)*	69.9	446	38.1	15.5	19.5	78	67.3	264	62.1	277
Unexpected death-someone close	60.2	372	36.5	15.6	29.3	103	79.9	291	69.6	259
Forced separation from child (self)	27.5	167	34.9	13.1	24.2	38	84.1	132	77.8	130

(*continued*)

Table 3 – (*Continued*)

	Objective Occurrence		Average Age first Occurred		Believe someone could get hurt		Horror felt at time		Moderately to extremely affected past year (Subjective)	
	%	*N*	M	SD	%	*N*	%	*N*	%	*N*
Separation or divorce (self)	52.7	323	34.0	10.6	12.0	38	48.9	153	48.6	157
Parents separated or divorced	42.1	256	9.2	6.8	16.3	39	55.6	135	47.3	121
Physical and Mental Health										
Serious physical illness (self)	41.0	256	37.7	16.4	58.4	142	81.6	199	68.0	174
Serious mental illness (self)	26.8	162	34.4	14.9	62.4	93	85.5	130	70.4	114
Caregiver of person serious illness	24.5	148	37.2	13.5	30.6	44	59.4	85	61.5	91
Had child with handicap	5.4	32	30.0	14.1	33.3	11	72.7	24	71.9	23
Financial Strain										
Serious money problems (self)	51.9	319	32.0	14.0	24.6	75	74.4	229	61.1	195
Prison & Institutional Care										
In foster care or adoption (self)	9.8	60	8.4	8.3	25.0	12	60.0	33	51.7	31
Prior jail term (self)	68.0	422	23.7	10.7	35.4	148	63.9	267	59.5	251
Close family member in jail/prison	44.7	276	22.2	14.4	27.3	73	45.3	121	45.0	124
Experienced abuse/stress in prison	52.5	321	46.5	13.3	73.7	227	94.2	292	85.7	275

that they believed someone would get hurt, felt horror at the time (88%), and felt moderately to extremely affected by it in the past year (58%).

Participants also reported stressful life experiences, which included situations of grief, loss, and separation. These experiences included the unexpected death of someone close (60%), someone close died – not unexpectedly (70%), forced separation from a child (28%), and separation or divorce (53%). Over half to two-thirds of participants reported still feeling moderately to extremely affected by their loss or separation. Participants also reported that physical and mental health concerns were stressful life experiences. Participants reported being diagnosed with a serious physical or mental illness (41%; 27%) on average in their mid to late thirties. Interestingly, most participants reported a subjective reaction in which they felt horror at the time of the diagnosis of serious physical or mental illness (82%; 86%) and were still being moderately or extremely affected by it in the past year (68%; 70%). Participants also reported stress over being a caregiver of a person with a serious illness (25%) or having serious money problems (52%).

Stress over prison and institutional care also was commonly reported among participants. These events included a history of foster care or adoption (10%), prior jail term (68%), having a close family member or friend in prison (45%), and experiencing abuse/stress in prison (53%). Particularly noteworthy is the occurrence of abuse/stress in prison; the average age the event first occurred was 47 ($SD = 13.3$), of which 74% of participants believed at the time someone would get hurt, 94% felt horror at the time, and 86% still felt moderately to extremely affected by prison abuse/stress in the past year.

Path analyses

Base Model. In the base model all parameters are allowed to freely estimate (Figure 1). That means there are no *a priori* constraints on any regression path between latent variables. The model produced a strong fit to the data (Table 4; $\chi^2 = 39.47$, $df = 15$, CFI $= .99$, RMSEA $= .05$ [90%] CI $= .03$ to $.07$). Specifically, the paths between trauma and coping ($\beta = -0.56$, $p < .001$) and between coping and physical/mental well-being ($\beta = -0.76$, $p < .001$) were significant and indicated a negative relationship between trauma and coping and coping and well-being (Table 5). In this model, 57.6% of the variance in the outcome variable (latent variable of physical/mental well-being) was explained by the path analysis.

All covariances between the five coping scales were significant ($p < .001$). This was expected since the five scales all come from the CRI. Finally, the standardized regression weights for each observed item in the latent variables were all significant ($p < .001$), indicating the three latent variables were robust and well constructed (see Table 5).

Table 4. Model fit indices.

χ^2(df)	p	CFI	RMSEA (90% CI)	$\Delta\chi^2(\Delta df)$
		Base		
39.47(15)	$<.001$	.99	.05 (.03 to .07)	–
		Constrained		
64.56 (16)	$<.001$	.98	.07 (.05 to .09)	$\Delta\chi^2(2) = 25.09$***

***$p < .001$.

Table 5. Standardized regression weights for base model.

Parameter	β
	Latent Variables
Trauma	
Objective Trauma	.84***
Subjective Trauma	.99***
Coping	
Spiritual	.28***
Physical	.55***
Social	.35***
Emotional	.27***
Cognitive	.46***
Well-being	
Physical	.63***
Mental	.79***
Paths	
Trauma → Coping	−.56***
Coping → Well-being	−.76***

***$p < .001$.

Constrained Model. In the constrained model, the paths between trauma and coping and coping and physical/mental well-being were constrained to equality. This was designed to test if these two paths had equivalent roles in the path analysis hypothesis. When constrained to equality, the paths between trauma and coping and coping and physical/mental well-being estimated at $\beta = -.56$, $p < .001$. The model produced good fit ($\chi^2 = 64.56$, $df = 16$, CFI = .98, RMSEA = .07 [90%] CI = .05 to .09). However, when comparing the chi-square fit with the base model, this new model produced a significantly reduced overall model fit ($\Delta\chi^2 = 25.09$, $\Delta df = 2$, $p < .001$). Consequently, the paths between trauma and coping and coping and physical/mental well-being should be considered as unique and different (Table 4).

Discussion

This study explored the relationship between cumulative trauma and stressful life events, coping resources, and well-being among older adults in prison. It builds upon the extant literature by examining these relationships among a sample of older adults in prison. It was found that coping resources had a significant and positive influence on current subjective ratings of physical and mental well-being even in the presence of cumulative traumatic and stressful life experiences. These findings are generally supportive of the life course, stress process, and cumulative disadvantage theories that posit that adverse life experiences challenge the adaptive capacities of individuals who experience them and that protective factors, such as internal and external support, foster a resilient response that maintains physical and mental well-being. What is particularly noteworthy about the current sample of older adults in prison is that the construct of trauma and stressful life experiences is explained by multilevel factors in which interpersonal and social structural types of experiences account for the accumulation of life course stressors. Perhaps most importantly the subjective responses to earlier life traumatic and stressful experience often resulted in subjective distress at the time of the event and may have had lingering affects even into their later life years. Older adults commonly reported trauma and life events that occurred in childhood, such as being a victim and/or witness to violence. Chronic

separation and loss, especially as it pertained to family, were commonly reported subjective responses then and now. This finding is of particular interest given the pending DSM-V revisions for trauma and stressor-related disorders that may tentatively include complicated grief in this classification (APA 2012). Of additional interest were the high rates of subjective distress related to being diagnosed with a serious physical or mental illness. The construct of coping resources suggests that there are multiple dimensions of well-being that may be managed by physical exercise, positive thinking and emotions, social engagement, and connecting with one's spirituality.

Although these are preliminary findings, we offer some suggestions as to what existing interventions may hold promise for addressing the special issues related to trauma, grief, and loss of an older adult population in confined settings. Assessment is key to evaluating the extent to which older prisoners take into account the types of traumatic and stressful life experiences, which include grief and loss, that occurred prior to or during prison. If these types of experiences continue to go undetected then intervening to reduce the risk of adverse physical and mental health outcomes will be limited.

These findings suggest that interventions, such as grief counseling, stress management, and trauma interventions are warranted. Due to the high frequency of traumatic experiences in the older population in prison, age specific trauma-informed care approaches are an especially important area to explore. The Substance Abuse and Mental Health Services Administration (SAMHSA 2012) has developed a definition of trauma that incorporates the occurrence of an objective event or events in which there is a subjective reaction that is physically or emotionally harmful or threatening and a lingering effect on psychosocial spiritual well-being. There is a plethora of evidence to suggest that cognitive behavioral therapy is an efficacious treatment for trauma-related conditions, such as post traumatic stress disorder (Butler *et al.* 2006, Stewart and Chambless 2009). Research by Hyer *et al.* (2004) examines the effectiveness of cognitive behavioral treatment in the treatment of older adults in particular. Because cognitive functioning slows down as the result of the aging process, practitioners have unique challenges in providing psychotherapy with older populations, especially those in prison settings. Core therapeutic components to cognitive behavioral treatment that address the influence of age include establishing a strong therapeutic alliance, socialization, cognitive restructuring and behavioral activation, psychological resource building sensitive to age differences, and affect or emotional tolerance (Hyer *et al.* 2004).

The National Institute of Corrections recommends an integrated approach to treating trauma, stress, and PTSD (Hills *et al.* 2004). Individuals who have experienced trauma and stress often have related subjective distress in response to these experiences that may have immediate or lingering psychological or emotional effects. As a result, these individuals tend to have exaggerated responses that may lead to inappropriate or offending behaviors or may have difficulties managing their thoughts or emotions even in response to less severe life stressors that may occur in the workplace or at home. The International Society for Traumatic Stress Studies Practice Guidelines (ISTSS 2009) has identified cognitive-behavioral therapy to gauge emotions and subjective units of distress (SUD) as the only effective treatment for comorbid trauma and post traumatic stress disorder. In particular, the program Seeking Safety is their recommended treatment of choice. Seeking Safety addresses the cognitive, behavioral, interpersonal and case management needs of the incarcerated individual. It uses a person-centered and empathic approach to educate clients about the psychological effects of trauma and strives to restore their sense of safety, which is challenged after a traumatic event, and coping skills. Coping skills are reinforced using a curriculum of twenty-five topics that include *Asking for Help, Honesty, Setting Boundaries in Relationships and Integrating the Split Self.* The language used in the program is simple

and easy to understand and offers practical solutions to program participants. The program is flexible in its implementation making it ideal for correctional settings. Some facilities offer Seeking Safety on a weekly or biweekly basis, while others create two blocks of twelve sessions each. Preliminary evidence with younger age groups suggests that Seeking Safety is effective with incarcerated women with histories of trauma. For example, Lynch *et al.* (2012) found significant improvements in post traumatic stress and depressive symptoms among the Seeking Safety participants ($n = 59$) compared to a sample of incarcerated women on a wait-list for the program ($n = 55$).

Of the coping resources that fostered resilience among older adults in prison, spiritual coping is an area that is receiving increased attention among studies of older adults in the community. Using data from a national study of 969 white and African American adults aged 66 and older, Krause (2009) examined whether religious coping helps older people cope more effectively with the negative impact of lifetime trauma. Older adults in prison who prayed reported coping more effectively with post traumatic experiences.

Policy implications

The findings of this study suggest that system wide reform is needed to address the impact trauma, stress, grief, and separation, combined with the cumulative effects of adverse life experiences, has on older prisoners. Integrating trauma informed care into the policies, procedures, and care practices in correctional settings may mitigate the experiences of prison life in which older adults are retraumatized by victimization or neglect. The Substance Abuse and Mental Health Services Administration has recommended eleven key guidelines for incorporating trauma informed guidelines care that can be used in correctional settings. These guidelines are: (1) providing governance and leadership within the organization to lead and oversee a trauma informed care model, (2) having a written policy that establishes a trauma-informed approach as central to an organization's mission, (3) actively involving all trauma survivors, consumers, and family members in organizational decision-making, (4) bridging child and adults systems of care, such as child welfare, juvenile justice and criminal justice systems and other community service providers, (5) using culturally responsive evidence-based assessment, intervention, and referral systems for individuals and families, (6) providing trauma training and workforce development, including training on vicarious and secondary trauma among staff, (7) using trauma informed principles that guide organizational procedures and community cross agency protocols, (8) conducting ongoing quality assurance of evidence-based trauma treatment interventions, (9) using financing structures designed to support a trauma informed approach, (10) using a trauma informed evaluation component, and (11) providing a physical environment where program participants feel safe (SAMSHA 2013). Of particular importance for older adults in prison, creating a prison environment in which individuals are free from prison abuse and stress, such as physical assault or rape, bullying, and exploitation, is critical. Many of these same guidelines are applicable for older adults reentering the community. Establishing interagency collaboration with health, mental health, substance abuse, housing, and social welfare organizations will assist with reducing the stress associated with the uncertainty many older adults experience transitioning to the community from prison.

Limitations of the current study

This study has methodological limitations that warrant discussion. The use of a cross-sectional correlation design significantly limits the ability to establish causality among

the variables of central interest. Self-reported data cannot be verified and is subject to recall bias, including in our sample the possibility that events are exaggerated; subject to telescoping (e.g., events recalled at incorrect times); and/or attribution (e.g., negative outcomes may be blamed on others than oneself) bias. Social desirability bias may have affected the results because self-report measures were used with older adults about sensitive topics of which many events occurred decades earlier. Also, limitations are characteristic of standard multiple regression analyses, most notably collinearity issues that may cause beta weights in our model to be less accurate and which may influence the ability to generalize our findings. Finally, it is important to note that a well-fitting model does not indicate the only way to conceptualize these data (e.g., Bollen 1989). Even though the path model fit the data, there are likely other well-fitting models that also adequately address the theoretical relationships between these variables.

Future research directions

The current findings suggest future directions for research and evaluation. As noted above, older adults in prison reported lifetime and cumulative histories of trauma, stress, grief, and loss, and separation at the interpersonal levels, such as being the victim and/or witness to family violence, and at the social structural/environmental level, such as experiencing human or natural disasters, community and prison violence. Additionally, other types of stressors, such as the high levels of expected and unexpected death of someone close to them, being diagnosed with serious physical or mental illness, and caregiving stress also were common and carried with them a reported subjective distress at the time of such occurrences and now. These findings suggest that multi-level trauma and stress at the interpersonal and social structural level have an initial and lingering affect on older adults in prison. Future studies that incorporate both quantitative and qualitative methods can provide additional information of the full compendium of trauma and stressful life experiences, including experiences of discrimination based on age, race/ethnicity, gender, sexual orientation, and disability and their potential cumulative and/or moderating effects on later life well-being. Future studies that examine the effects of coping resources can further define what types of psychosocial spiritual interventions foster health and well-being even while in stressful settings, such as prison confinement.

Conclusion

An in-depth portrait of the ‘aging prisoner’ reveals that older adults in prison commonly report a lifetime of cumulative traumatic and stressful life experiences that influence their current subjective rating of physical and mental well-being. However, despite these experiences, many older adults remain resilient to these adverse effects when they utilize internal and external resources to help them cope with prior life experiences and the stressful conditions of confinement. Although these results are preliminary, future assessments and interventions that incorporate a more comprehensive definition of traumatic and stressful life experiences, subjective responses to these events, and coping resources, may deepen our understanding of the root causes of physical and mental illness among older incarcerated adults. It may enable us to more effectively treat these individuals, and as a consequence, more humanely preserve later life physical and mental well-being among older adults behind bars.

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