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Predictors of Self-Efficacy and Self-Rated Health for Older Male Inmates

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Abstract

Aims—To examine: (1) the relationships between self-efficacy for health management and (a) health-promoting behaviors, (b) health-monitoring behaviors, and (c) self-rated health status in older male prisoners; and (2) the variations in self-rated health status and self-efficacy for health management by inmate characteristics of older men in prison.

Background—The graying of the inmate population around the globe can be attributed to increases in punitive crime control practices, life expectancy; and the aging baby boom generation. Older inmates are typically not a healthy group. Therefore, the needs of burgeoning numbers of older, sicker inmates are issues of international significance.

Methods—A descriptive, correlational, survey was conducted from late 2007 to mid-2008 with Bandura's self-efficacy model as the guiding framework.

Results/Findings—Participants were 131 male inmates, age 50 and older. A significant positive relationship was found between self-efficacy for health management and the indexes measuring health-promoting behaviors ($r=0.550$; $P<0.001$), health-monitoring behaviors ($r=0.323$; $P=0.001$), and the single item rating for self-rated health ($\tau_b=0.411$; $P<0.001$). There was a tendency for education to be positively related to self-rated health, but not self-efficacy ($\tau_b=0.140$; $P=0.054$).

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Conflict of interest:

No conflict of interest has been declared by the authors.

Author Contributions:

SJL, DS & CK were responsible for the study conception and design

SJL performed the data collection

SJL & CK performed the data analysis.

SJL were responsible for the drafting of the manuscript.

SJL, DS & CK made critical revisions to the paper for important intellectual content.

CK provided statistical expertise.

SJL & DS obtained funding

SJL supervised the study

and $\tau_b=0.105$; $P=0.122$, respectively). Years of incarceration was not significantly related to self-rated health or self-efficacy.

Conclusion—These research findings support Bandura’s self-efficacy theoretical work and its applicability to health-related research in prisons. Nurses are front line health care providers in prison, who are in a key position to implement interventions that promote greater inmate self-efficacy for healthy behaviors and chronic disease management.

Keywords

Nurses; Survey; Prison; Research Report; Older People; Self-efficacy; Health-promoting behaviors

INTRODUCTION

Older inmate (age ≥ 50 years) numbers (Loeb & AbuDagga 2006) and percentage of the prison population will continue to grow rapidly in the United States (US) (Rikard & Rosenberg 2007). This “graying” of inmates can be attributed to: more punitive crime control practices; increased life expectancy; and the aging baby boomers (Feldmeyer & Steffensmeier 2007, Rikard & Rosenberg 2007). Challenges for older inmate care extend beyond US borders (Loeb & AbuDagga 2006) to Australia (Grant 1999, D’Souza et al. 2005), Canada (Gallagher 2001), China (McGrath 2002), France (Steiner 2003), Sweden (Fazel & Grann 2002), and the United Kingdom (Fazel et al. 2004, Condon et al. 2008); in short “...prison programmes around the globe are facing an inevitable crisis” (Wahidin & Aday 2005, p. 1).

BACKGROUND

A recent integrative literature review of older prisoners’ health revealed little research designed to address important health issues of older inmates (Loeb & AbuDagga 2006). Stojkovic (2007) noted that empirical data regarding elderly offenders’ health, well-being, and needs is essential if we are to treat these vulnerable elders with “dignity and respect” (p. 115). Beyond the humanitarian and financial motivations, there is the broader societal issue that over 95% of inmates are eventually released back to the community (Bureau of Justice Statistics 2006); therefore, efforts made toward improving older inmates’ health holds potential for positively impacting the health of their family, friends, and community (Freudenberg 2001). A health promotion and disease prevention approach to elderly prisoner health management could prevent chronic disease crises (Sterns et al. 2008) and would represent an approach that Morton (2001) described as ethical, practical, and fiscally responsible.

Conceptual Framework

Healthcare continues to focus primarily on the medical supply side of the supply and demand equation (Loeb et al. 2008) yet “...demand is overwhelming supply” (Bandura 2005, p. 245) in prison health care because as noted in a review published in the *International Journal of Nursing Studies*, people are living longer and aging in prison with comorbidity (Watson et al. 2004). Social Cognitive Theory offers a demand-side solution, “self-management as good medicine” (Bandura, 2005, p. 245). The core construct is self-efficacy—defined as one’s confidence in his ability to rally the motivation, cognitive resources, and action plans necessary to effectively manage the events in his life (Wood & Bandura 1989) and achieve outcomes such as improved health (Marks et al. 2005). High levels of self-efficacy for performing health behaviors are hypothesized to facilitate people’s enhancement of their health (Daltroy 1993).

We hypothesize that the relationships between self-efficacy and health behaviors, both health-promoting and health-monitoring (e.g., self-assessment for bodily changes in vision, urinary frequency, memory, and sleep patterns), and improved chronic disease outcomes (i.e., self-rated health) hold for prisoners. For example, an inmate who has high self-efficacy for health management would be likely to attempt a new health-promoting or health-monitoring behavior, and to have better self-rated health. If these hypotheses are supported by our research findings, then interventions can be developed to enhance self-efficacy for health management.

Health Status of Older Inmates

Older inmates experience the common chronic diseases like their community-living counterparts, vision and hearing problems, arthritis, hypertension, diabetes, digestive disorders and heart disease (Loeb et al. 2008), and conditions more frequent in prison including hepatitis B and C, HIV, and tuberculosis (Steiner 2003). Further, health disparities occur for mental-health and substance abuse (Caraher et al. 2002). Dawes (2002) reported that the health of Australian inmates resembled people 10 years older in the general population. Findings from one study of older male US state prisoners (n=51), indicated that 100% reported multiple chronic conditions (Loeb & Steffensmeier 2006). In comparison, a survey of officials from US federal, state, and territorial prisons found much lower rates (i.e., 45%) of chronic illness (Sterns et al. 2008).

Most older inmates in several studies conducted in the UK (Fazel et al. 2001) and US (Aday 1994, Marquart et al. 2000) rated their health as being fair to bad/very bad, which differs from the majority in two other US studies who assessed their health as being either good (Loeb & Steffensmeier 2006) or excellent to good (Colsher et al. 1992). Prison medical professionals in three US states perceived that inmates' health improved during incarceration due to better diets and engagement in exercise (Kratcoski & Babb 1990). In contrast, four studies in either US federal or state prisons found evidence of (Koenig et al. 1995) or reports of deterioration in older inmates' health during incarceration (Colsher et al. 1992, Marquart et al. 2000, Loeb & Steffensmeier 2006).

Factors Related to Older Prisoners' Health Status

Inmates have demographic and personal characteristics that have been linked to health status in the general population. For example, educational attainment has a strong relationship with health status (Alwin & Wray, 2005). One study of 111 adult English prison inmates indicated opportunities for healthy behaviors varied across prisons. Inmates 60 and older (n=6) reported challenges to accessing healthy food, concerns about an unhealthy diet, and limited opportunities for physical activity (Condon et al. 2008). Conversely, a study of 133 adult Welsh inmates (Lester et al. 2003) revealed that many inmate participants across the age spectrum did not select healthy alternatives despite opportunities for vigorous physical activity and healthy food choices. Years of incarceration are an important factor relative to health status, because accelerated aging and physical deterioration have been observed in the prison population (Gal, 2002). In a study of 51 male inmates age 50 and older in a state prison in the US, self-efficacy was positively related to older inmate: health status; health-promoting behaviors; and change in health since incarceration (Loeb & Steffensmeier 2006).

THE STUDY

Aims

The aims were to examine: (1) the relationships between self-efficacy for health management and (a) health-promoting behaviors, (b) health-monitoring behaviors, and (c) self-rated health in older male prisoners; and (2) the variations in self-rated health and self-

efficacy for health management by inmate characteristics of older men in prison. Specifically, the hypotheses tested were:

- H1** There is a direct relationship between inmates' self-efficacy for health management and their:
 - 1.1** participation in health-promoting behaviors.
 - 1.2** engagement in health-monitoring behaviors.
 - 1.3** self-rated health.
- H2** Self-rated health is related to education and years of incarceration.
- H3** Self-efficacy for health management is related to education and years of incarceration.

Design/Methodology

A descriptive, correlational survey design was used.

Participants

Older inmate participants were recruited from two state prisons in the northeastern US. Inclusion criteria were: age 50 or older; English-speaking; male, and either Black or White. The exclusion criteria were life sentences or death sentences. Each state prison provided a computer generated listing of inmates meeting the enrollment criteria.

A brief explanation of the study was provided in the recruitment invitation that was placed in the mail drawers of 192 randomly selected eligible inmates. Interested inmates met with the principal investigator (PI) and her trained research assistant (RA) to learn about the study, have questions answered, and subsequently be consented to participate in the study, if willing. Despite overrecruiting by 50% to account for refusals, a second randomly selected sample was drawn in order to achieve the target sample. A truly random sample was not possible. However, of those who met with the researchers, only two declined to participate.

Power analyses were conducted with Type I error probability set to 0.05 and Type II error probability at 0.2. The study was powered to find medium effect sizes of 0.5. This required a total of 128 respondents.

Data Collection

The questionnaires, which had a Flesch-Kincaid readability level of grade 7.6, were completed between late 2007 and mid 2008. Inmates with a 7th grade reading level or above (i.e., Test of Adult Basic Education [TABE] scores of 70 or greater) self-administered their surveys, while those with less than a 7th grade reading level had their surveys read aloud to them by a researcher.

Self-Efficacy—Self-efficacy for health management was measured using the 27-item Chronic Disease Self-efficacy Scale (Stanford Patient Education Research Center n.d.), which was slightly modified for inmate participants (e.g., changed exercise examples from swimming and bicycling to running and playing a game of basketball). Possible responses ranged from (1) not at all confident to (10) totally confident. Higher total scores indicated greater self-efficacy for managing health. Areas of self-efficacy assessed included exercise, communicating with physician, general disease management, social and recreational activities, and symptom and depression management.

Health-Promoting Behaviors—Health-promoting behaviors (e.g., avoid smoke, exercise, eat fruits, vegetables, and whole grains, and take safety precautions) were assessed by 17-items from the Health Promotion Activities of Older Adults Measure (HPOAM) (Padula 1997) and 7 similarly structured items that were developed based on a literature review. Possible responses to each item range from never (1) to always (4). Higher composite scores indicated greater participation in health-promoting behaviors.

Self-Rated Health—Self-rated health was measured on a 5 point Likert-type scale ranging from poor (1) to excellent (5). Other health-related variables from the Older Men's Health Program and Screening Inventory (Loeb 2003) also were assessed.

Health-Monitoring Behaviors—A cluster of 13 items measuring health-monitoring behaviors assessed for such body changes as: vision; urinary frequency; bowel movements; mobility; memory; and sleep patterns. A Likert-type scale was used with possible responses ranging from very unlikely (1) to very likely (4), with higher total values indicating greater engagement in health-monitoring behaviors.

Mini Mental State Exam (MMSE)—The MMSE (Folstein et al. 1975) was administered as part of the assessment of general health, not as a screening tool. Possible range of MMSE scores is 0–30 with scores of 24 or higher being considered normal.

Demographic Questions and Questions Specific to Incarcerated Populations—Questions were posed on age, race, education, marital status, employment status prior to incarceration, age when first entered prison, number of years incarcerated considering only their current sentence, and job or profession prior to incarceration. Participants' TABE results were provided by the DOC.

Ethical Considerations

Risks to the older inmates in this study were no greater than encountered in everyday living. No adverse events occurred. The University Institutional Review Board and Department of Corrections (DOC) Research Review Committee provided approvals. Signed informed consents were obtained. Participants were informed that: (a) they were free to withdraw at any time without fear of impact on treatment and (b) that neither participation nor non-participation would be taken into account by the parole board. Because all data collected were self reports, Health Insurance Portability and Accountability Act (a law enacted in the US to ensure privacy of health data) waivers were not needed.

Data Analysis

Descriptive statistics were computed for the demographic variables, TABE, and the key variables of interest for Aims 1 and 2. SPSS version 17 was used for analysis. Listwise deletion was applied in the computations for all variables in each Aim. All tests were two-tailed. For Aim 1, Pearson product-moment correlation coefficients were used to evaluate the strength and direction of the relationships between self-efficacy for health management and health-promoting behaviors and health-monitoring behaviors; these three variables are continuous. Kendall's tau-b (τ_b) was used to evaluate the statistical significance and direction of the relationship between self-rated health, an ordinal (i.e., ordered categorical) variable, and self-efficacy for health management, health-promoting behaviors and health-monitoring behaviors (Blalock 1979). (Note: no measures required reverse scoring). Aim 2 was analyzed using Kendall's tau-b and Pearson product-moment correlation to examine the relationship between self-efficacy for health management and inmate characteristics: education and years of incarceration respectively. To determine relationships between self-rated health status with education and years of incarceration, contingency table analysis and

Kendall's tau-b were used. Regression models were used to determine whether survey response method (self-administered versus read aloud to them) had an impact on responses. Cronbach's alpha reliability estimates are provided for the scaled variables in this study.

Validity and Reliability

The Chronic Disease Self-efficacy Scale components were normed in previous studies with community-living adults/elders and had Cronbach's alpha reliability estimates ranging from .77-.92 and test-retest reliability ranging from .72-.89 (Stanford Patient Education Research Center n.d.). In the current study, the Cronbach's alpha was .94 (see Table 1). The Cronbach's alpha for the modified group of items measuring health-promoting behaviors was .86 in a previous study (Loeb et al. 2006). Both content and concurrent validity were established on the original HPAOAM (Padula 1997). In the current study, the Cronbach's alpha was .90 (see Table 1). The items measuring health-monitoring behaviors had an alpha of .82 in a prior study of older inmates (Loeb et al. 2006) and an alpha of .91 in the current study (see Table 1). The effectiveness of the MMSE has been established with older adults and institutionalized adults, and it has been validated extensively in practice and research (Kurlowicz & Wallace 1999).

RESULTS

Demographic Characteristics of the Sample

A sample of 131 older male inmates was recruited (see Table 2) from two state prisons in the northeastern US. Inmates' ages ranged from 50–74 years ($M=56$ years); 48% identified themselves as White, while 41% identified themselves as Black; only 22% were currently married; and had educational levels ranging from no formal education to some graduate school with the majority (77%) having earned a high school diploma/general equivalency diploma or higher. Over 92% had two or more chronic conditions. The majority of participants rated their health as either good (44; 34%) or fair (43; 33%). Sixty-one percent reported that their health had worsened to some degree since incarceration. The three most frequently reported health conditions were vision problems 104 (80%), hypertension 64 (49%), and arthritis 61 (47%). Over half (58%) were employed full time immediately prior to being incarcerated. The mean age was 34 years upon first entering the prison system, and the mean for years incarcerated was 10.3 considering only their current sentence (see Table 2).

Hypotheses Testing

Results for Aim 1—Pearson correlations and Kendall's tau-b provided support for all three hypotheses under Aim 1 with relationships all in the expected direction. For Hypotheses 1.1 and 1.2, there was a significant positive relationship between self-efficacy for health management with health-promoting behaviors ($r=0.550$, $P<0.001$) and health-monitoring behaviors ($r=0.323$, $P=0.001$); participants who had greater self-efficacy for health management were more likely to engage in health-promoting and health-monitoring behaviors. Also, there was a statistically significant positive relationship between self-efficacy and self-rated health ($\tau_b=0.411$; $P<0.001$) for 1.3. Self-rated health was significantly and positively related to health-promoting behaviors ($\tau_b=0.179$; $P=0.010$), but was not significantly related to health-monitoring behaviors ($\tau_b=0.107$; $P=0.114$). A strong positive relationship was found between health-promoting and health-monitoring behaviors ($r=0.576$; $P<0.001$).

Results for Aim 2—Kendall's tau-b was used to assess the relationship between self-rated health with education and number of years of incarceration on the current sentence. Kendall's tau-b and Pearson correlation was used to assess the relationship between self-

efficacy and these two inmate characteristics (education and number of years of incarceration), respectively. Results indicate a tendency for education to be positively related to self-rated health, but not self-efficacy ($\tau_b = 0.140$; $P=0.054$ and $\tau_b = 0.105$; $P=0.122$, respectively). Years of incarceration was not significantly related to either self-rated health or self-efficacy (self-rated health and years of incarceration: $\tau_b = -0.059$; $P=0.377$; self-efficacy and years of incarceration: $r=0.092$; $P=0.314$).

To assess whether survey response method (self-administered versus read aloud to them) had an impact on responses, a series of regression models were estimated which included each of the predictors listed in Aims 1 and 2, the method of answering the survey, and the interaction term between the predictor variable and the method used to answer the survey. The outcome variables in these models were self-efficacy and self-rated health. The interaction term was not statistically significant in any of the models.

Results of exploratory analyses—Exploratory analyses were conducted that examined the relationship between some demographic variables not considered in Aim 2, and self-rated health. Because these analyses are exploratory, sample size was not held constant (i.e., pairwise deletion was used). There was a significant relationship between employment status (note: unemployed and employed part-time were collapsed into one category for analysis) and self-rated health; a contingency table analysis indicated that inmates who were employed full-time were more likely to rate their health as “excellent” compared to those who were either unemployed or employed part-time prior to incarceration. On the other hand, inmates who were either unemployed or employed part-time were more likely to rate their health as “fair” ($\chi^2=9.906$; $df=4$; $P=0.042$) compared to those who were employed full-time. Neither age nor age when first incarcerated was significantly related to self-rated health ($\tau_b = -0.084$; $P=0.218$; $\tau_b = 0.093$, $P=0.161$, respectively) using Kendall’s tau-b.

Marital status was not significantly related to self-rated health ($\chi^2=10.426$; $df=12$; $P=.579$) using contingency table analysis. There was a tendency for a positive relationship between TABE scores with self-rated health ($\tau_b = 0.120$, $P=0.074$). Kendall’s tau-b was used to conduct the analysis for TABE scores with self-rated health.

DISCUSSION

Limitations

Limitations of this study include challenges to generalizability, because the sample was drawn from two state prisons in one northeastern US state and we were unable to fully achieve a truly random sample. Thus, there exists the possibility of some bias being introduced into our study since inmates who were more confident about managing their health and who engaged in greater efforts to remain healthy may have been more likely to participate. Some missing data occurred, but was managed through listwise deletion for the major study aims. On a positive note, these inmate participants were representative of the broader inmate population over the age of 50 in several important ways: inmates of a wide range of educational levels participated (no education and/or a score of 0 on the TABE through those with some graduate level education and/or a score of up to 160 on the TABE); participants had a mean age of 56 which is nearly the same as the average for those over 50 in prisons; and Whites, not of Hispanic origin were most common in this sample with Blacks, not of Hispanic origin being second most frequent, which is reflective of the broader older inmate population in the US (Wahidin & Aday 2005).

Findings in Context of Available Literature

Our finding that on average inmate self-ratings of health were between fair and good differs from prior US (Aday 1994; Marquart et al. 2000) and UK (Fazel et al. 2001) studies in which health was rated as fair to bad/very bad, and a US study where health was rated as excellent or good (Colsher et al. 1992); while, at the same time tending to confirm findings from two other US studies where self-rated health largely fell in the “good” range (Kratcoski & Babb 1990, Loeb & Steffensmeier 2006). The varying findings in regard to self-rated health among older inmates is likely partially attributable to the fact that “a high proportion of prisoners come from socially disadvantaged sections of the community at large and very often suffer from mental disturbances, substance misuse problems, or more generally, long standing illnesses or disabilities” (Steiner 2003, p. 268). Other older offenders either commit their first crime (or first get apprehended) late in life and would likely not suffer from the longstanding health disparities of the former group. Therefore, the mix of older prisoners could impact the mean self-ratings of health for an institution or group of institutions. Also, nearly two-thirds (61%) of inmate participants indicated that their health had worsened during incarceration, a finding congruent with findings in previous studies (Colsher et al. 1992, Marquart et al. 2000, Loeb & Steffensmeier 2006). The implication of these findings is that there is considerable need for health programming but a one-size-fits-all approach will likely fail to result in uniform affects for all older prisoners.

The significant relationships between self-efficacy for health management with both health-promoting behaviors and self-rated health are noteworthy – first, because they are consistent with those reported in one prior study (Loeb & Steffensmeier 2006) and second, because so “little is known about their [older inmates’] specific health promotion needs and the health choices they make in prison” (Condon et al. 2008, p. 156). In addition, the finding that some older inmates have the wherewithal to promote their health in settings that are inherently disempowering, restrictive, and non-therapeutic (Watson et al. 2006) provides foundational support for policy initiatives such as the UK’s extension of the national health promotion framework *Choosing Health* to prison settings (Condon et al. 2008). However, success is contingent upon attention being paid to the difficulties that inmates experience when attempting to make healthy choices in prison. Therefore, policy efforts that engage and facilitate inmates’ pursuit of good health are important.

Being employed full-time prior to incarceration also was significantly related to higher levels of self-rated health, which is congruent with the positive influence of employment on oral health-related quality of life found in McGrath’s (2002) study of older prisoners in Hong Kong. We posit that this finding could be related to: greater health resources which are likely available to those who are employed; benefits gained from having a purpose and meaningful activities to engage in; or both.

CONCLUSIONS

Adequacy of Self-efficacy Framework

The promotion of health self-efficacy could be counterintuitive when thought is given to the fact that in the very controlled prison environment inmates have little decision making opportunity or control over day-to-day life. However, these findings support the conclusions that older inmates can and do have varying degrees of self-efficacy in managing their health while in prison and those with greater self-efficacy actually are able to engage in more health-promoting and health-monitoring behaviors and perceive that they have better health than do those older inmates with lower levels of self-efficacy. These research findings are congruent with Bandura’s (1986) theoretical self-efficacy work and support its use in future health-related research focused on older inmates.

Implications for Nursing Practice

The period of incarceration should be viewed by nurses as an opportunity to improve not only the health of older inmates, but also to facilitate their transition back to the community (Loeb & Steffensmeier 2006). Important topics for criminal justice-public health collaborations include: the provision of health information resources designed specifically for inmates; management of chronic illnesses; and disease prevention, health education, early intervention, and support. These common sense interventions are all in line with the UK's application of the national health promotion framework, *Choosing Health*, in prisons (Condon et al. 2008). Another important approach to consider is administering the Chronic Disease Self-efficacy Scales (Stanford Patient Education Center, n.d.), as part of the intake assessment to inform care plan development and health program delivery. Taking the call for UK geriatricians to regularly visit penitentiaries (Collins & Bird 2007) one step further—as suggested in Loeb, 2009), we view prison healthcare as an area of potential growth for geriatric advance practice nurses. Specifically, gerontological clinical nurse specialists and geriatric nurse practitioners could expand the knowledge of staff nurses who work in prisons (and other prison workers [e.g., officers/guards]) and increase their sensitivity to issues of older inmate health; an approach that is supported in Caraher and colleagues assertion that "...developing health promotion as part of the work of every member of the prison staff..." (2002, p. 227) is key. This side-by-side learning of health care professionals and criminal justice professionals also has been espoused by Leone (2007). Such efforts could make strides toward preventing what Sterns and colleagues describe as "a crisis building in U.S. corrections that can be averted only by deliberately modifying existing facilities, personnel training and programming to support and house frail older inmates" (2008, p. 70).

Implications for Nursing Education

Nursing students may encounter older inmates in prisons through community health clinical rotations or in hospital settings, where inmates are typically transferred when health care needs exceed the capabilities of prison infirmaries. Health teaching that is mindful of the environmental limitations of prison (Condon et al. 2008) could help to promote inmates' knowledge of how to better manage their chronic conditions. In addition, teaching realistic measures to promote health and regarding signs and symptoms of worrisome body changes would be time well spent during students' clinical experiences.

Implications for Nursing Research

The findings from this study provide support for and contribute to the knowledge needed to plan intervention protocols for a unique population of older adults, those living behind the walls of prison. The Chronic Disease Self-Management Program (CDSMP) (Lorig et al. 2006) is an intervention that is based on Bandura's self-efficacy work and has demonstrated effectiveness for community-living adults and elders (Kennedy et al. 2007, Lorig et al. 1999). Further, the CDSMP has been delivered world wide in Arabic, Bengali, Chinese, Dutch, German, Hindi, Italian, Japanese, Korean, Norwegian, Spanish, Somali, Turkish, Vietnamese and Welsh (Stanford School of Medicine, n.d.). Research testing the CDSMP with the aim of enhancing health self-efficacy in an aging inmate population holds promise for: contributing to a more effective inmate health system; decreasing public treasury expenses; paying dividends in the long-term health of communities (Loeb et al. 2008); improving nurses' knowledge of older prisoners' health needs; expanding the scope of research on health in the general population to the understudied inmate population; applying successes of older inmates who are self-managing health in an effective manner through serving as peer leaders in health programming (e.g., CDSMP); and enhancing a nation's ability to meet a health agenda such as *Healthy People 2020* in the US.

SUMMARY STATEMENT

What is already known about this topic

- Inmates age 50 and older are a rapidly growing cohort in prisons around the world and they typically are not a healthy group.
- The cost burden of caring for older inmates is far greater than that of caring for the inmate population in general.
- Health promotion is a practical, ethical, and fiscally responsible approach to health care.

What this paper adds

- Confirms and extends the findings of one pilot study that self-efficacy for health management is significantly related to health-promoting behaviors, health-monitoring behaviors, and self-rated health in older inmates.
- Reveals that inmate participants who were employed full-time immediately prior to incarceration had better self-rated health.
- Demonstrates a positive (although weak) relationship between education and self-rated health status in older prison inmates.

Implications for practice and/or policy

- The period of incarceration is an opportune time for nurses working in prisons to take steps to educate older inmates and help them to increase their confidence in managing their health and hence their health behaviors to improve their health.
- Guidance on chronic disease management, as well as engagement in health-promoting and health-monitoring behaviors are appropriate areas of focus.
- Finding that self-efficacy for health management is significantly related to health-promoting and health-monitoring behaviors, as well as self-rated health, offers support for implementing a health promotion framework to the prison setting if the underlying challenges are acknowledged and barriers are addressed.

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Descriptive and Scale Statistics for Self-efficacy for Health Management, Health-promoting behaviors, and Health-monitoring Behaviors Composite Measures

Table 1

Measure	n	Cronbach's Alpha	Mean	Std. Dev.	Minimum	Maximum
Self-efficacy for health management scale (higher values indicate greater self- efficacy)	123	0.941	186.6	46.37	65	270
Health-promoting behaviors index (higher values indicate greater participation in health-promoting behaviors)	119	0.895	67.3	12.73	38	96
Health-monitoring behaviors index (higher values indicate greater engagement in health-monitoring behaviors)	129	0.912	43.6	7.85	17	52

Table 2

Demographic Characteristics of Inmate Participants (n=131)

Variable	Number	Percent
Age		
50–59	102	78%
60–69	27	20%
70–74	2	2%
Mean (Median)	56.0 (55.0)	
Minimum-Maximum	50–74	
Race/Ethnic Status*		
White (not of Hispanic origin)	62	48%
Black (not of Hispanic origin)	53	41%
American Indian/Alaskan Native	6	5%
Other (largely indicated mixed race)	7	6%
Highest Educational Level Completed*		
1. No formal education	1	1%
2. Some elementary school	5	4%
3. Some high school	24	18%
4. High school graduate or completion of GED	45	35%
5. Some college or technical school	29	22%
6. Completion of technical school/2-year college degree	22	17%
7. Completion of 4-year college degree	3	2%
8. Some graduate school	1	1%
Current Marital Status		
Single (never married)	48	37%
Married	29	22%
Divorced	45	34%
Widowed	9	7%
Employment Status Immediately Prior to Incarceration*		
Unemployed or Employed part-time	54	42%
Employed full-time	75	58%
Age When First Entered Prison System		
Mean (Median)	33.8 (35.0)	
Minimum-Maximum	9–68 years	
Number of Years Incarcerated (current sentence only)		
Mean (Median)	10.3 (8.0)	
Minimum-Maximum	1–35 years	
Self-Rated Health		
Poor	14	10.7%

Variable	Number	Percent
Fair	43	32.8%
Good	44	33.6%
Very Good	22	16.8%
Excellent	8	6.1%
Change in Health Since Incarceration		
Worsened greatly	37	28%
Worsened slightly	43	33%
Stayed the same	24	18%
Improved slightly	19	15%
Improved greatly	8	6%
Mini Mental State Exam		
Mean (Median)	27.8 (29.0)	
Minimum-Maximum	17–30	

* Information regarding Race/Ethnic Status, Highest Educational Level Completed, and Employment Status Immediately Prior to Incarceration were missing for 3, 1, and 2 subjects respectively.