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HEALTH STATUS OF THE OLDER PRISON POPULATION**

The primary objective of this narrative literature review was to provide a broader understanding of the various aspects of the health of older prisoners. Following a comprehensive search, twenty-seven studies published in the last two decades were selected. The studies revealed that the health status and issues related to the health of older prisoners varied considerably. Some studies focused on the health-related quality of life of this group. The challenges of ageing in prison included comorbidities of psychiatric or mental health, physical and psychiatric morbidity, and early mortality. Organizational, social, economic, individual, and family-related factors were found to be the primary barriers to accessing health and social services. Additionally, functional health problems, including those related to activities of daily living, were overrepresented in the older prison populations. Based on the findings, there is a growing need to improve healthcare services and provide specialized health services to this population.

Keywords: *health needs, older convicts, functional health problems, ageing prisoners, comorbidities, healthcare services*

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1. Introduction

The population of older adults in prisons globally has been growing rapidly over the past 20 years, raising significant concerns about their health, social outcomes, and the overall costs of incarceration. This trend has brought attention to the need for adjustments in prison infrastructure to address the changing health needs of older prisoners and promote their well-being and successful reintegration into society (Danelly, 2022; Suzuki & Otani, 2023). The process of ageing in prison typically begins around age 50 to 55, highlighting the unique challenges faced by this population (Aday & Maschi, 2019). The inadequate accommodation of their needs leads to consequential financial, legal, and human costs, highlighting the urgency to adjust prison infrastructure with the changing health needs of imprisoned individuals for improved well-being and successful reintegration (Suzuki & Otani, 2023). As highlighted in the earlier literature reviews, understanding the unique characteristics of this population and challenges they face is crucial for researchers, experts in the field of prison studies, and policymakers alike (Milićević & Ilijić, 2022; Nguyen et al., 2022). These unique challenges usually refer to the lack of specialized correctional facilities and difficulties associated with long-term imprisonment and strict parole rules (Kostić, 2014). Furthermore, ageing prisoners also encounter physical and psychological issues, including violence, anxiety, and separation from their loved ones, which can contribute to an accelerated ageing process (Kostić, 2014).

Despite guarantees provided by moral codes and international regulations, older individuals have often been neglected and denied equal dignity. Violations of older persons' right to dignity include financial instability, limited access to healthcare, inadequate social and healthcare services, lack of protection from domestic violence, and limited legal representation. In general, older persons with low or no income struggle to meet basic needs and face long wait times for medical procedures, leading to a decline in their overall well-being (Radaković, 2020). The ageing prison population poses significant challenges for prison administrators worldwide, as facilities were not originally designed to accommodate older inmates. Older prisoners draw significantly higher costs for incarceration compared to younger prisoners, mainly due to healthcare expenses. Once released into the community, older ex-prisoners have lower recidivism rates but face various social and medical challenges, including housing instability, limited job prospects, multiple chronic health conditions, and a higher risk of health-related mortality (Williams et al., 2012). Poor health among older prisoners can be attributed to previous lifestyle and socioeconomic factors, with female inmates having greater demand for medical and psychiatric services (Aday & Maschi, 2019). For example, in the

U.S, the ageing of prison population is outpacing the general population, leading to a prison healthcare crisis that affects both communities and public healthcare systems, as the majority of prisoners are eventually released (Williams et al., 2012).

This narrative literature review aims to explore different aspects of the health of older prisoners, including their health status, health-related issues, quality of life, and daily activities, while also highlighting the challenges they face and the barriers they encounter in accessing healthcare and social services. By shedding light on these topics, this review contributes to the growing body of knowledge on the ageing prison population and informs future research and interventions to improve the well-being of older prisoners.

2. Methods

To gather information on the ageing prison population and various aspects of their health, health-related issues, and factors affecting their quality of life and daily activities the comprehensive literature search was conducted using Google Scholar – Advanced Scholar Search. The search focused on scholarly and peer-reviewed manuscripts published in English since January 1, 2000, using various combinations of keywords “older”, “elderly”, “ageing”, and “geriatric” combined with “prisoner”, “convict”, “offender” and “inmate”, with the exact phrase “health”, “quality of life”, “activity of daily living”. Furthermore, studies that referenced the identified research were examined in more detail through their titles and abstracts. The following studies were considered eligible: studies focused on health characteristics, health status, health-related issues, quality of life, and daily activities of older prisoners; published in English; including males, females, or both; and original, peer-reviewed articles or doctoral dissertations. After exploring the collected papers and applying specific eligibility criteria, 37 relevant studies were included in this narrative literature review, with the search completed in March 2023.

3. Results

3.1. Health and quality of life

Many older prisoners have chronic health conditions, including cardiovascular problems, strokes, diabetes, vision and hearing impairments, and arthritis (Ridley, 2022). When it comes to the prevalence of health problems and relative risks for the health conditions concerning non-offender older adults, data retrieved from 55 studies involving offenders older than 50 years old confirmed that older offenders had a signifi-

cantly higher risk of developing hypertension, cardiovascular diseases, respiratory diseases, and arthritis compared to non-offender older adults (Solares et al., 2020). However, the risk of cancer was lower among older offenders. Overall, the prevalence of physical health problems among older offenders varied, with hypertension being the most common (42%) and HIV being the least common (3%) (Solares et al., 2020).

A study found that a high percentage of older male prisoners had major illnesses and chronic conditions, with older prisoners being more likely to report medical problems and receive treatment compared to younger prisoners. The differences in treatment were primarily driven by physical health issues (Omolade, 2014).

In one study conducted in France, the health and quality of life among 138 male prisoners aged 50 and above were explored concerning their physical and mental well-being (Combalbert et al., 2019). The authors highlighted several key findings. Firstly, the findings confirmed that older prisoners expressed significantly negative assessments regarding their physical and mental health, as well as their overall quality of life. Secondly, age was significantly associated with various dimensions of quality of life, yet without significant associations with most dimensions of perceived health, except for poor mobility. Thirdly, as the duration of imprisonment increased, there was a noticeable decline in sleep quality. Finally, older prisoners with higher levels of education showed fewer negative emotional reactions compared to those with lower educational backgrounds.

This study conducted in prison in Primorsky Territory, Russia, from 2013 to 2016 found that the quality of life of prisoners was influenced by socioeconomic factors such as education, income, marital status, and comorbidity index (Kosilov et al., 2019). The findings point out to age-specific effects of socioeconomic status on quality of life. While prisoners with a university degree had higher quality of life compared to those with lower education levels, such a trend was not observed among older prisoners. According to the results, income had a significant effect on quality of life, but only in the 45–54 age range. The authors attributed this finding to restrictions on material assistance in prison (Kosilov et al., 2019). Marital status had a verifiable impact on quality of life measures in the 35–64 age range, indicating the importance of social support for those prisoners. Additionally, the comorbidity index showed a strong correlation with quality of life, with older prisoners experiencing consistent differences in quality of life compared to younger ones.

Other findings indicated that older prisoners in open prison regimes had higher satisfaction with their quality of life and well-being compared to those in training and high-security prisons. Humanity and promoting positive identities in enhancing the quality of life and well-being of older prisoners were identified as important aspects.

However, the experience of barriers within the prison system, such as overcrowding and lack of release preparation, limits the potential of older prisoners, resulting in lower satisfaction with their quality of life and well-being (De Motte, 2015).

A recent non-systematic literature review examined the challenges faced by ageing individuals in prison and forensic services (Peixoto et al., 2022). The study revealed a limited number of studies focusing on elderly prisoners and forensic psychiatric patients. However, higher rates of physical and psychiatric health problems were observed as a part of prisoners' experience, leading to increased morbidity and early mortality compared to peer adults in the community. In summary, older prisoners are at a higher risk of various psychiatric disorders, including depression, psychosis, bipolar disorder, cognitive impairment, personality disorder, and anxiety, with higher rates of suicide compared to their peers in the community.

The overall mortality rate among former inmates had a significantly elevated risk during the first two weeks after release in the study that examined the risk of death among former inmates (Binswanger et al., 2007). Drug overdose, cardiovascular disease, homicide, and suicide were identified as the leading causes of death.

Since there is growing recognition of the importance of assessing the quality of life as an outcome measure for older individuals in various care settings, including geriatric, forensic, and correctional care, a group of authors examined the relationship between variables related to self, body, and social life and different quality of life domains of older prisoners (De Smet et al., 2017). Data was collected through structured questionnaires administered in individual interviews with 93 older prisoners aged 60 and above in 16 prisons in the Dutch-speaking region of Belgium. The study found that individual variables, such as satisfaction with activities, were related to multiple domains of quality of life among older prisoners. Psychopathological symptoms, except for suicidal ideation, did not significantly impact the quality of life.

Combalbert et al. (2018) examined the cognitive performance of older male prisoners and its impact on their perceived health and quality of life. Findings revealed significant differences in cognitive performance, perceived health, and quality of life between older prisoners and a control group from the general population. However, no significant association was found between cognitive impairment and perceived health or quality of life, highlighting the need for systematic screening and support for cognitive disorders in older prisoners. This study revealed that approximately 20% of male prisoners in France exhibited signs of moderate to severe dementia based on executive function test scores, while others showed indications of cognitive impairments. As explained by the authors, these individuals may not recognize or seek assistance for their

cognitive issues, putting them at a higher risk of victimization and facing challenges in communicating with prison staff (Combalbert et al., 2018).

3.2. Mental health and medications

In prison, some inmates arrive with mental health issues, while others develop them during their incarceration (Aday & Maschi, 2019). Social maladjustment, caregiver roles, personal physical and mental health problems, and substance misuse are significant factors associated with older prisoners who committed homicide (Nguyen et al., 2022).

A systematic review with meta-analysis that included 55 studies involving offenders older than 50 years found a range of mental health problems in older prisoners (Solares et al., 2020). Alcohol abuse was the most common at 36.5%. Schizophrenia, on the other hand, is less prevalent at 5.3%. Although not statistically significant, older offenders have a 2.2 times higher risk of depression compared to non-offender older adults (Solares et al., 2020). Mental health issues such as depression and anxiety are also prevalent (Ridley, 2022).

Older prisoners are less likely to report needing help with a drug problem compared to younger prisoners, and they have lower rates of drug use before custody (Omolade, 2014). The same research has shown that older prisoners have lower levels of drug misuse compared to younger prisoners. Additionally, older prisoners are less likely to report needing help with an alcohol problem and have lower rates of binge drinking compared to younger prisoners. However, no significant difference was found between older and younger prisoners in terms of general alcohol use (Omolade, 2014).

The findings from the study conducted in two prisons in Northern Ireland in 2016 indicated that a significant majority of prisoners aged 50 years or over were receiving medication for stress, anxiety, or depression. This rate was five times higher than that observed among older men in the community (Lawrence & Devine, 2022).

3.3 Activities of daily living and disability

When older prisoners' ability to perform basic activities of daily living, such as walking, dressing, and feeding oneself were explored, results showed that approximately one-third of participants reported difficulty with at least one activity, with 18% experiencing difficulty with two or more activities, according to Lawrence and Devine (2022). The most common challenges to prisoners aged 50 years or over were related to mobility, eyesight, and hearing. Comparisons with community data revealed similar incidence rates for these difficulties.

To gain insights into the demand and differences in needs between older and younger prisoners regarding their social care needs, face-to-face interviews were conducted with male prisoners in North-West England (Tucker et al., 2021). It was revealed that a significant number of participants were facing challenges in personal hygiene, mobility, occupation, and forming relationships. Older prisoners had higher needs for assistance with hygiene, and mobility, and reported more physical health and memory problems.

Older prisoners tend to experience a decline in performance in prison activities of daily living before facing difficulties in traditional activities of daily living (Mofina et al., 2022). Focusing on basic self-care and functional mobility, this rapid review highlights that functional performance in activities of daily living tends to decline with age, and the definition and measurement of functional performance vary depending on the environmental context. As predicted, the optimization and facilitation of performance and independence in activities of daily living differ within and outside of the prison context. Furthermore, within the prison setting, there is a focus on basic activities of daily living as instrumental activities of daily living are often considered less relevant.

One line of research showed that the population of older prisoners, who are known to have high suicide rates, is experiencing significant growth. Barry et al. (2020) examined the relationship between functional disability, depression, and suicidal ideation among older prisoners. The findings showed that functional disability was associated with depressive symptoms, and difficulty when climbing stairs and daily living activities were independently associated with suicidal ideation. Depressive symptoms mediated the relationship between functional disability and suicidal ideation.

An earlier cross-sectional study has also examined the relationship between disability in prison-specific activities of daily living and depression and the severity of suicidal ideation in older prisoners (Barry et al., 2017). The findings revealed that disability in prison-specific activities of daily living was associated with higher levels of depression and severity of suicidal ideation, with a stronger association observed in older male prisoners.

The results of a study that followed a group of 2,171 adult prisoners sentenced to 18 months to four years between 2006 and 2007, specifically examining the needs and characteristics of 115 older prisoners (aged 50 and over) when they entered prison, compared to 2,056 younger prisoners (18–49 years old), found that approximately 29% of prisoners reported having a long-standing illness or disability, with higher rates among older prisoners (Omolade, 2014). However, when estimating disabilities using a separate analysis, the rate was around 34% in the sample. Among older prisoners, 54% were assessed as having a disability, mainly physical disabilities, anxiety, and depres-

sion. Comparatively, disability rates in the general population are higher, but caution is needed when comparing the two groups due to differences in age distribution, which may underestimate the difference in disability prevalence between older prisoners and the general population.

3.4. Prison environment

A significant focus in modern criminology revolves around the functioning of correctional or prison systems, particularly the influence of the prison environment on inmates' behaviour and their ability to reintegrate into society, aligning with the intended goals of imprisonment (Ilijić et al., 2020). In the prison environment, specific challenges related to accessing different areas of the prison were further explored, pointing to difficulties accessing toilet facilities during a locked regime. Despite these challenges, the majority of prisoners aged 50 years or over reported receiving no help with their needs, highlighting potential gaps in support (Lawrence & Devine, 2022). A similar observation has been made in other studies that also highlighted the inadequacy of the prison system in addressing the unique needs of older prisoners, further negatively affecting their overall incarceration experience (Peixoto et al., 2022).

Evidence to date highlights the need for more developed and systematic mechanisms to ensure effective prison-to-community transitions for older prisoners (Hagos, Withall, et al., 2022). The barriers and enablers to health and social services for older prisoners transitioning to the community were explored through focus group discussions with corrections and parole officers. The study identified three main themes: organizational, social and economic, and individual and family, along with seven sub-themes (planning the transition, communication, assisting prisoners, transition programs, officers' knowledge and scope of work, social and economic issues, and offenders' conditions).

Ridley (2022) presented and examined a collaborative initiative implemented in prisons located in northern England, which acknowledged the distinctiveness of older prisoners and implemented adaptations to their routines and physical surroundings. Overall, interventions promoting well-being were successful in reducing isolation and facilitating input into wider resettlement (Ridley, 2022). Older prisoners reported being treated respectfully, feeling safe, and having positive relationships with prison officers. They appreciated the calm and friendly environment of the residential unit, contrasting it with other areas of the prison known for noise and intimidating behaviour. The Inside Out Club, designed to enhance purposeful activity and reduce social isolation, received positive feedback, with attendees enjoying the activities, meeting new people, and feeling less isolated. However, the project's impact on resettlement was limited, with pris-

oners expressing frustration over the lack of support from overall prison-delivered resettlement interventions. While the impact of the project on health and well-being was mixed, there were opportunities for improvement, particularly in healthcare provision, medication access, and reducing waiting times (Ridley, 2022).

3.5. A change of perspective

To promote the dignity of older persons, in general, several possible actions can be taken. Firstly, there should be improved economic measures to ensure their financial stability, such as providing a monthly monetary sum that meets their basic needs and supplementing the income of those above the age of 65. Restructuring government-funded social security services to coordinate affordable healthcare and assist with out-of-pocket costs can also be implemented. Local governments and social institutions can offer out-patient health checkups and treatments while providing access to affordable mindfulness activities, rehabilitation centres, and socialization opportunities through government subsidies and community initiatives. Creating dedicated spaces and effective communication channels to inform older persons about events and programs can help enhance their social engagement and overall well-being (Radaković, 2020).

However, ageing in prison is a unique and individual process, with the potential for positive changes in the lives of ageing offenders, according to Avieli (2022). Experiences of well-being and ageing in prison, from the perspective of prisoners themselves, originate from comparing ageing in prison with the community, viewing prison as an escape from challenges, the specifics of the role of older prisoners as mentors, and experiences of personal growth and self-discovery.

In one study, interviews were conducted with prisoners before and after their release, and data from nine prisons in the North of England were analysed to examine the healthcare and social needs of older male adults after their release from prison (Forsyth et al., 2015). The main findings were a lack of release planning, poor communication, and discontinuity of care, leading to high levels of anxiety among older prisoners. Those who moved into probation-approved premises had better access to immediate healthcare and social support.

Considering healthy lifestyles and perceptions of health improvement among older men in prison, the recent data revealed that nearly 40% of prisoners identified as living an unhealthy life, compared to 15% of community respondents (Lawrence & Devine, 2022). As explained by the authors, this difference may originate from lifestyle factors imported from the community, such as addictions and poor mental health, as well as the challenges of maintaining a healthy lifestyle in prison. Both groups expressed a belief that they could do something to improve their health, with the most

common response being to eat more healthily. However, prisoners also emphasized the need to reduce stress, which was significantly higher than in the community sample. In addition, there was a notable disparity in the perception of influence over health, with a higher proportion of prisoners feeling they had little or no control compared to older men living in the community, reflecting the limitations on autonomy in the prison environment and the perceived difficulty of making health-related choices.

Despite the stigmatization and challenges faced by older adults in society, the older prisoners viewed prison as a place where they could feel equal to their peers and compared it to a nursing home, reinforcing their perception of being just like any other older person (Avieli, 2022). This perspective, influenced by an adaptive process, allowed them to focus on positive emotional interpretations and optimize their well-being, disregarding the distinctions between ageing inside and outside prison. Despite the negative aspects of incarceration, such as overlooking the darker sides, older prisoners reported finding comfort in having their basic physical and emotional needs fulfilled in prison, which contributed to a sense of psychological well-being (Avieli, 2022).

4. Discussion

Earlier research has consistently demonstrated that imprisoned individuals, regardless of age, report lower levels of perceived health and quality of life compared to the general population (Chung et al., 1998; Lawrence & Devine, 2022). Moreover, both the impact of the prison environment and the necessity of customized healthcare planning to address the specific health needs of older prisoners are emphasized, acknowledging the importance of addressing their unique challenges within the prison system (Lawrence & Devine, 2022). Additionally, there is a need for improved release planning and addressing the specific needs of older prisoners (Forsyth et al., 2015).

Older prisoners commonly experience health issues such as alcohol and substance abuse, depression, anxiety, dementia, and various psychiatric disorders. They also have a higher prevalence of non-communicable diseases like hypertension, cardiovascular diseases, diabetes, respiratory diseases, and cancer (Lawrence & Devine, 2022; Peixoto et al., 2022; Ridley, 2022; Solares et al., 2020). These findings highlight the increased burden of mental health disorders and non-communicable diseases among older persons in prison.

De Smet et al. (2017) recommended creating approaches that will allow older prisoners to express their interests, experiences, and emotions in prison. Furthermore, addressing psychiatric and age-related symptoms in older prisoners should be taken into account as one of the possible approaches, as they may not be effectively communicated

by the prisoners themselves, who may be less assertive compared to their younger counterparts. Prison healthcare services should implement systematic screening for cognitive disorders and neurodegenerative conditions (Combalbert et al., 2018). For those with advanced cognitive disorders and neurodegenerative pathologies, questions were raised about the suitability of continued imprisonment and the need for alternative solutions (Combalbert et al., 2018).

Based on the previous results, as an explanation, the unavailability of services for a significant proportion of prisoners or their inadequate provision is mentioned in the literature, including mental health support (Fazel, 2001). On the other hand, the educational level of old prisoners probably plays an important role in shaping their perceived health and quality of life (Combalbert et al., 2019). Neglected health needs within the prison system often result in more extensive and costly treatments upon release into the community. This is particularly impactful for older prisoners, as unaddressed health issues can impede their ability to reintegrate into society and function independently (Lawrence & Devine, 2022).

Nguyen et al. (2022) highlighted an increased need for specialized forensic services tailored to older prisoners. Other authors pointed to the importance of providing social care and support for older prisoners to ensure their safety, dignity, and effective use of their time in prison (Tucker et al., 2021). Furthermore, there is a need for interventions to reduce the risk of death among released prisoners (Binswanger et al., 2007).

Based on the recommendations provided by Mofina et al. (2022), the assessment of instrumental activities of daily living in the corrections setting or prison environment should be reevaluated. This implies that the current assessment methods may not adequately capture the functional abilities and needs of incarcerated individuals. It also emphasizes the importance of considering the specific activities that are relevant within different prison environments and how transitions between these environments can affect the significance of different activities. This indicates that the prison environment is dynamic and diverse, requiring a tailored approach to understanding and addressing the functional capabilities and challenges of individuals within different contexts of incarceration. Some studies emphasized the importance of targeting depression and assessing functional disability in suicide prevention efforts among older prisoners (Barry et al., 2020). As explained earlier, identifying prisoners with difficulty when performing prison-specific activities of daily living may help identify those at risk for depression and severe suicidal ideation, particularly among older male prisoners (Barry et al., 2017).

Managing the growing geriatric prison population requires creating an effective social environment, as concluded by Aday and Maschi (2019). On the other hand, regarding the care and management of older prisoners, conflicts between custody and healthcare systems are considered inevitable (Hagos, Butler, et al., 2022). When discussing ageing in prison, it also should be recognized that life imprisonment and long-term imprisonment penalties intensely violate human rights (Paunović & Pavlović, 2021). One of the approaches to reaching best practices includes integrating care plans with safety and security routines and addressing bureaucratic obstacles. Furthermore, adaptations to the physical and social environment, as well as work processes, could lead to optimizing the care of older prisoners, but financial constraints hinder their implementation. Interdisciplinary teams are crucial, and lessons can be learned from hospice care programs regarding teamwork and role recognition. Nurses and healthcare workers in custody require specific competencies, and their well-being and psychological support should be prioritized. The authors also suggested adapting person-centred care to the unique prison environment and focusing on individualized care, prisoner involvement, choice, and self-management (Hagos, Butler, et al., 2022).

5. Conclusion

The growing population of older prisoners worldwide presents significant challenges for prison administrators, particularly in terms of addressing their unique health and social needs. This narrative literature review examined various aspects of the health of older prisoners, including their health status, health-related issues, and factors affecting their quality of life and daily activities. The findings highlighted the prevalence of chronic health conditions among older prisoners, with higher risks of hypertension, cardiovascular diseases, respiratory diseases, and arthritis compared to non-offender older adults. Mental health problems such as depression and anxiety were also observed, emphasizing the need for targeted suicide prevention efforts among older prisoners, focusing on those with depression. Additionally, assessing functional disability may help identify older prisoners who should be screened for mental health issues.

The factors of the prison environment, more precisely barriers, and enablers, could have further implications for policy, research, and practice. The prison system often fails to meet the unique needs of older prisoners, suggesting the need for specialized services or adapted units. The findings underscore the urgency of adapting prison infrastructure to meet the changing health needs of this ageing population and improving their overall well-being and successful reintegration into society. Future research and interventions should continue to address the unique challenges faced by older pris-

oners and promote their health, social support, and quality of life. Considering the health and quality of life is crucial for the proper prison treatment of older prisoners, given their vulnerable physical and mental health. However, there is still a lack of research on how this population of prisoners perceive their health and quality of life, despite the need to understand their unique challenges and needs. By conducting comprehensive evaluations in this area, we can gather valuable insights to develop tailored interventions and support systems that address the well-being and rehabilitation of older prisoners.

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