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Nursing Older People

Systematic literature review of interventions and processes that promote resilience amongst older people in prisons.

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Abstract:	<p>Abstract</p> <p>Community studies show that positive resilience has been linked with better physical and mental health in older adults, however, there is limited research on interventions that promote resilience in older people in prisons. This systematic review investigates interventions, practices and processes that promote resilience among older people in prisons; it included searching, selection, data extraction and quality assessment of relevant literature. Seven databases from the fields of health, criminal justice, psychology and social work were identified and searched for relevant papers. Eight peer reviewed papers were selected for review; these were either qualitative or mixed methods papers. A qualitative synthesis was undertaken, and three themes were identified: organised interventions, relational activities and subjective processes. This review suggests that creating the circumstances to support organised interventions and relational activities can help to promote resilience and well-being in older people in prisons.</p>
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Systematic literature review of interventions and processes that promote resilience amongst older people in prisons.

Abstract

Community studies show that positive resilience has been linked with better physical and mental health in older adults, however, there is limited research on interventions that promote resilience in older people in prisons. This systematic review investigates interventions, practices and processes that promote resilience among older people in prisons; it included searching, selection, data extraction and quality assessment of relevant literature. Seven databases from the fields of health, criminal justice, psychology and social work were identified and searched for relevant papers. Eight peer reviewed papers were selected for review; these were either qualitative or mixed methods papers. A qualitative synthesis was undertaken, and three themes were identified: organised interventions, relational activities and subjective processes. This review suggests that creating the circumstances to support organised interventions and relational activities can help to promote resilience and well-being in older people in prisons.

Key words: Older People in Prisons, older prisoners, prisons, prison nursing, resilience, systematic review.

Background

Older people in prison and vulnerability

The number and proportion of older prisoners has increased acutely over the past 20 years in the UK and worldwide (Gonzalez, 2021). As such, the Prisons and Probation Ombudsman (2017) have described the UK prison service as the largest residential care provider for frail and older men. Older prisoners both import greater levels of dependence and vulnerability when detained and develop social and medical needs as they age. The Criminal Justice Alliance (2020) report that 90% of older prisoners have a moderate or severe health condition, and 50% have more than three. This is significant as Her Majesty's Inspectorate of Prisons (2018) reports that increases in the prevalence of health and disabilities issues expose systematic problems in relation to supporting older prisoners to manage their functional health needs and accessing statutory health and social care services.

The operation of prisons is based upon the 'age crime-curve' (Mann, 2012), which assumes that prisoners are young and able bodied. This means that regimes and accommodation are undifferentiated by age, and this can lead to increased marginalisation and isolation (Turner et al, 2018). The fabric and design of prisons serves to limit access to social and health care facilities and the quality of equipment and furniture (e.g., inadequate beds) is known to exacerbate health problems (Stewart, 2018). Older prisoners are at increased risk of victimisation and exploitation because of their status and frailty (Human Rights Watch, 2012), and because they are more likely to require medication, a sought-after commodity in prison (Turner et al, 2018). There are increasing numbers of older prisoners living with dementia (Forsyth et al, 2019), and longer sentences in later life have led to increased numbers of prisoners dying of natural causes (Shaw et al 2020).

Other causes of distress relate to fears about community reintegration and a lack of meaningful prison activities which help to maintain self-esteem (Aday and Krabill, 2013). As such, the United Nations formally recognise older prisoners as a vulnerable group within prisons (United Nations Office on Drugs and Crime, 2009).

Older prisoners and Emotional Distress

Research by Skowronski and Talik (2018) suggests that time spent in detention can be an inherently stressful experience. Early research regarding prisoner distress focused on structural deprivations such as reduced agency, unfulfilled sexual desires and limited accessibility to services (Sykes, 1958), whilst more contemporary research evidence higher rates of cognitive and emotional distress by comparison to community rates (Vanhooren et al, 2015). Older adults being committed to prison for the first-time face specific problems adapting to the environment, a phenomenon termed as ‘entry shock’ where distress is elevated but decreases overtime (Liebling et al., 2005), however, other studies have found stress levels are maintained or increase over time (Walker et al, 2013).

Numerous prison studies have exposed associations between psychological distress and negative health outcomes (Skowronski and Talik, 2018), for example: anxiety and depression (Ireland et al, 2005); drug use (Fazel et al, 2006); self-injury and suicide (Baidawi, 2017). However, very few studies focus on the factors that support, modify or enhance the resilience of older prisoners.

Older prisoners and Resilience

Papers considering the promotion of resilience or emotional well-being in older adults in prisons are limited and much of the literature focuses on the causes of stress (Avieli, 2021).

Resilience studies undertaken in the wider community traditionally focus on younger or older sub-populations, and there are known to be several perspectives and definitions of resilience (Fry and Keyes, 2010). Zautra (2010) perceive resilience as a malleable characteristic in which individuals can preserve or recover their mental well-being in the face of social adversity and disability. Masten (2014) suggests resilient individual use positive emotions to rebound from stressful experiences enabling them to thrive, whereas other theorists suggest that resilience resonates with social disadvantage (Hart, 2007). Kinman and Grant (2014) put forward a framework by which resilience can be enhanced via psychological skills development. The more recent academic literature holds that individual resilience should not be viewed as a personality trait, but as a process that depends on socio-ecological systems, for example seeking help from family, communities, or the workplace (Ungar, 2013).

In relation to adapting to prison life, Tugade and Fredrickson (2007) identify building positive social networks as a supportive strategy. Wells (2010) posited that both physical and mental health in older people positively correlated with resilience, and positive mental health was the strongest predictor of resilience. Maschi et al (2013), highlight the economic incentives of promoting well-being among older prisoners in the context of increasing health care costs and reduced public spending.

Aim

This literature review aims to produce a synthesis of interventions, practices and processes that improve resilience in older prisoners, to offer new perspectives to inform health and social care commissioning, nursing practice development and to promote future research.

Methods

A systematic review was conducted involving the traditional stages of searching, study selection, data extraction and validity assessment. A full protocol was developed and published on the PROSPERO database, detailing the search strategy and review methods. As no new research is being undertaken and all data was in the public domain, the University of Brighton did not require ethics applications for the literature review.

Search Strategies

The following databases were searched for relevant papers: PsycINFO, CINAHL plus, MEDLINE (including PubMed), Cochrane Database of Systematic Reviews, Campbell collaboration, International Bibliography of the Social Sciences (IBSS); Criminal Justice Abstracts with full text. Initial scoping searches were performed to finalise search terms, sources included Google Scholar, PubMed and CINAHL plus.

The main syntax utilised Boolean operators and used MeSH terms, providing the following search strings: (“older OR male OR female OR geriatric OR elderly OR disabled” AND “prisoner”) AND (“activities promoting resilience OR interventions promoting resilience OR adaptation OR self-efficacy OR post-traumatic growth OR psychological recovery OR optimism OR coping OR reduce psychological emotional distress”).

Searches ran from 18.05.22 until 22.06.22 and were limited to peer-reviewed, research papers written in the English language (no restrictions on location) and full text must be available. Searches covered a five-year period between 2017- 2022 to retrieve the most recent research. Finally, this systematic review was performed using the PRISMA Checklist 2020 (Page et al, 2021), see Figure 1.

Study selection

Based on the anticipation of a mixed data set, the inclusion criteria was developed using the SPIDER framework (Cooke et al, 2012). The inclusion criteria required that the main topics be interventions, practices and processes that promote resilience. The population was older prisoners (>50 years) in any country, male or female. Study types included were peer reviewed quantitative, qualitative and mixed method primary research papers. Papers were excluded if the population was under the age of 50 years, prisoners of war, older adults not in prison, health care, medical or pharmacological interventions, dementia care, end of life care and papers focusing on matters of security or sentencing. Conference proceedings, descriptive articles, editorials, grey literature, systematic reviews and meta-analyses were excluded. Two reviewers (CC, AT) independently screened abstracts and selected studies through comparison to the inclusion/exclusion criteria; where further clarification was required, the study was discussed by the whole team.

Figure 1. PRISMA Flowchart.

Data Extraction and Quality Appraisal

Data extracted included participant numbers, age, gender, methods/interventions and outcomes, see table 1 (online only). Although quantitative studies were included in the search criteria, after selection, only qualitative and mixed method studies remained. The Critical Appraisal Skills Programme (CASP) quantitative (2020) and qualitative (2018) assessment sheets were completed by all three authors to assess the trustworthiness, relevance and results of the retrieved papers.

Qualitative Synthesis

Owing to the complexity of issues, the exploratory nature of the review, the anticipated range of methods and primary sources of data, inductive thematic analysis of included studies was undertaken by all three researchers independently, based on the ideas of Braun and Clarke (2006). The papers were iteratively read multiple times by each of the researchers, initially without discussion. Textual data was read and initially free coded; codes were added as required until a complete set of descriptive codes was formed. Eventually, codes were developed relating to practical activities, enabling and constraining processes, relational issues, emotional issues and underlying causal mechanisms. These codes were then grouped into organisational codes and finally thematic categories that allowed best fit to explain the data. Considerable time was spent deliberating on textual differences, patterns and similarities between the researcher's codes. Regular team meetings were held to ensure consistency and the final account was agreed by all reviewers. Eventually, the codes were clustered, and three themes became evident:

1. Organised interventions.
2. Relational activities.
3. Subjective processes.

Results

In total eight papers [Avieli, 2021; de Guzman et al, 2017; Haesen et al, 2018; Lucas et al, 2018; Noujaim et al, 2019; Ridley, 2022; Wangmo et al, 2018; Wilkinson and Caulfield, 2017], were retrieved that described interventions, activities and processes that upheld or developed older prisoner's sense of resilience. Table 1 shows several key characteristics of the included studies. Seven of the papers were qualitative and one made use of mixed methods, as such, undertaking a meta-analysis was not possible. Four studies were undertaken in prisons with an all-male sample; one study from an all-female sample; three

papers use mixed gender samples. The retrieved papers were published from research undertaken in several countries [Switzerland (n=2); Philippines (n=2); UK (n=2); USA (n=1); Israel (n=1)]. Six of the retrieved papers are based on primary research studies; the remaining papers by Wangmo et al (2018) and Haesen et al, (2018) make use of secondary data, generated through the 'Age Quake' study, which was conducted in Switzerland. Four of eight papers Haesen (2018); Wilkinson and Caulfield (2017), Lucas et al (2018), and de Guzman et al (2017), discuss resilience directly but this is in the context of a broad range of interventions and processes. The remaining four papers provided qualitative explanatory information on the variables that influence stress levels and provided predictions on organised interventions, social activities and subjective processes that helped to ameliorate distress.

Themes

Theme 1: Organised Interventions

Four papers focused on organised interventions which served to support resilience development whilst in prison. Wilkinson and Caulfield (2017) describe the 'Good Vibrations' music project, in which participants produced a compact disk of their work, showing relatives that their time was being used constructively. Wangmo et al (2018), highlight the imperatives of exercise and nutrition for older prisoners to achieve and sustain good health status. They found the range of exercise facilities and programmes varied significantly, with some prisons having no age-appropriate exercises facilities for older prisoners. Ridley, (2022) evaluated a multi-disciplinary, collaborative venture designed to support social, educational and health orientated activities for older prisoners. Haesen (2018) refer to the positive effects of employment whilst in prison in the context of a strong sense of identity and increased social status, suggesting these factors helped prisoners to feel less distressed.

The papers by de Guzman et al (2017), Lucas et al (2018) and Avieli (2021) discussed informal activities, such as choir, cooking and educational activities that were associated with increased resilience. Avieli (2021) described the effects learning and mentoring others, suggesting occupational activities can enhance a sense of purpose. This review highlights that providing activities and a role for older prisoners enables them to build resilience during their incarceration, (though it should be noted that the literature on mentoring only refers to male settings).

Theme 2: Relational activities

Within this theme, Noujaim et al (2019) focus on the importance of supportive relationships with professionals in the context of self-efficacy in health management. Avieli (2021), Wilkinson and Caulfield (2017), de Guzman et al (2017) and Lucas et al (2018) all associate supportive peer relations with increased resilience and well-being among older prisoners.

Within the retrieved literature social interaction is alternatively presented as potentially distressing or supportive, dependent on the support provider and the type of support being provided. For example, de Guzman et al (2017) suggest a need for protection motivated some older prisoners to become friendly with staff or other prisoners with higher social standing. In situations where relationships with staff were positive, less distress was noted amongst the older prisoners and their resilience deemed higher (Haesen et al, 2018). Older prisoners who had frequent visits or were able to rely on family as a source of emotional support, were seen to be more resilient than those without. An emphasis was placed on its safeguarding ability against exacerbation of chronic illness symptoms, (Noujaim et al, 2019; de Guzman et al, 2017).

The retrieved papers suggest for those older prisoners who were able to create a sense of familial ties, be it between family outside of their incarceration or having made friends within prison are better equipped to cope.

Theme 3: Subjective processes

In this category, papers by Avieli (2021), Haesen et al (2018), Noujaim et al (2019), all described positive subjective processes that restored older prisoner's sense of equanimity or developed their resiliency. Positive subjective processes included maturity, opportunities for growth, self-discovery, increased status, processes associated with learning, enhanced self-esteem and the benefits associated with faith or spirituality.

The papers by de Guzman et al (2017) and Lucas et al (2018) both provided conceptual models that mapped temporal processes to adjustment or successful ageing in prison. Noujaim et al (2019) attempted to quantify the subjective effects of emotional support; the remaining papers provided qualitative evaluations of the benefits of various intra-personal processes. Avieli (2021, p13) suggests having the time and peace of mind to read and learn something new increased older prisoner's sense of self-acceptance "giving rise to feelings of joy, rejuvenation and pride".

Discussion

This is the first review to explore the relationship between older prisoners and resilience. A greater understanding of interventions, activities and processes to support their needs could be crucial to influencing the development of age-appropriate meaningful activities and changes to prison regimes. Several papers were initially retrieved but fell outside of the

search parameters or were rejected for various reasons (see Figure 1). For example, a paper by Mackenzie (2021) described a theatre production intervention for sex offenders but specific demographic details (e.g., the participants age) was not described. While these papers did not meet the parameters of this systematic review, they provided context and a helpful point of comparison to the retrieved papers. Ultimately, no literature reviews that specifically address the resilience needs of older prisoners were retrieved.

Qualitative thematic synthesis of the retrieved literature derived three themes; theme one addressed the retrieved literature on organised interventions. The connection between exercise and prisoners' physical and mental health is well discussed in the wider literature, for example, reduced depression (Battaglia et al, 2015), and rehabilitation and social integration (Manocci et al, 2015). The results of this systematic review support the view that it is likely that constructive use of time can lead to reduced anxiety and an increased sense of self-worth in older prisoners. Therefore, there are potential benefits for the resiliency of older prisoners from engagement in opportunities for occupation and employment.

As older prisoners are perceived as generally more vulnerable and potentially isolated (Turner et al, 2018), relationships with family, friends and peers takes on additional importance. The literature discussed in theme two infers that positive relational ties can instate a sense of resilience, although it cannot be confirmed that relationships are the main reason for high resilience, as in many cases their relationships are either negatively impacting or non-existent. For example, Luke et al (2021) highlight that social support in prisons may only be helpful in cases where supportive peers are emotionally robust or resilient. Peer support is used on a widespread basis within penal systems and brings several benefits:

positive self-identity, self-confidence, employability skills and a positive impact on attitudes and behaviour, (Buck, 2020).

The papers in theme three discussed various subjective processes associated with imprisonment. Although conceptual and therefore difficult to evaluate, a synthesis of the retrieved papers show imprisonment can dualistically disrupt or in some cases, enhance prisoners' subjective perceptions of self and age-related identity. The evidence presented may encourage professionals to listen to the narratives and meanings that older prisoner's give to life in prison and to provide the resources to develop positive intrinsic processes. Therefore, circumstances and conditions can be promoted to enhance positive subjective processes.

The researchers felt the themes themselves may form a typology for future research, or for practitioners seeking to develop and implement interventions to support older prisoners to increase their resilience. This tripartite approach speaks to socio-ecological perspectives on resilience (Masten, 2014; Ungar, 2013), in which older prisoners should look for activities and other sources of support within their environments to maintain their mental health.

The literature shows a weighting towards male participants which is commensurate with the global prison demography. While it is difficult to generalise the differences in the findings based on gender, a key feature of Lucas et al (2018) exclusively female sample, was the importance of religion and adjustment to prison life, while papers with a male only sample focus on the benefits of organised and social activities, occupation and learning. Additional variables include unknown differences between prison regimes and resourcing in penal systems in different countries.

The literature appears to show, a non-linear relationship between time and distress that is likely to be influenced by subjective internal factors such as, coping abilities, and external factors, such as movement between prisons, court appearances and exposure to situational factors such as, aggression. An understanding of entry shock and an early recognition of psychological deterioration may prompt professionals to facilitate appropriate counselling or supportive interventions.

Limitations and future research

One of the main findings of this systematic review is the sparsity and complexity of literature relating to older prisoners and resilience, which suggests that more research needs to be carried out in this area. Interventions to support older prisoners were not always robustly evaluated and contradictions within the evidence base make it difficult to reach firm conclusions about which interventions support older prisoner's resilience. Given the differences between genders and penal systems, the review indicates a need for further research considering several important questions, such as, what works, for whom, under which circumstances, and at what stages in their sentence? Researchers will need to consider the interplay between age, environment, social activity, occupation, planned interventions and generic prison life.

Despite these limitations the findings of the review have significant implications for intervention development and further research. As most of the retrieved papers were qualitative in design future research could test specific social interventions using mixed methods, making use of pre and post intervention outcomes measures and interviews to gain more well-rounded perspectives.

Recommendations for Practice

The findings from this review can be used to help prison administrators and prison healthcare providers to identify how to support older prisoners, and critically, develop the conditions to support themselves. Significantly, temporal processes appear critical to the process of adaptation and subsequent development of resilience. Therefore, as a minimum, prison administrators should implement interventions during the initial period of imprisonment. Future research could make use of the ‘organised interventions / relational activities / subjective processes’ typology as a framework to develop future research or interventions to support older prisoners with resilience.

Conclusions

This systematic review brings together the available literature on organised interventions, relational activities and subjective process that support older prisoners’ resiliency. Based on the results of the review, it appears that prisons can play a positive role. The retrieved literature shows a complex interplay between the overlapping themes. This fits with socio-ecological theories of resilience, as resiliency can be enhanced via engagement with both organised interventions and social activity.

Key points

The review can be used to help prison administrators, nurses, and other healthcare practitioners to identify how to support older prisoners.

- As resilience is linked to health benefits, promoting resilience amongst older prisoners may improve well-being, saving health care costs up-stream.
- Future research could test specific social interventions using mixed methods to gain new insights into what works to support older prisoner’s resilience.

- Prison nurses, healthcare providers and researchers could make use of the ‘organised interventions / relational activities / subjective processes’ typology as a framework to develop future interventions, practices and research to support older prisoner’s sense of resilience.

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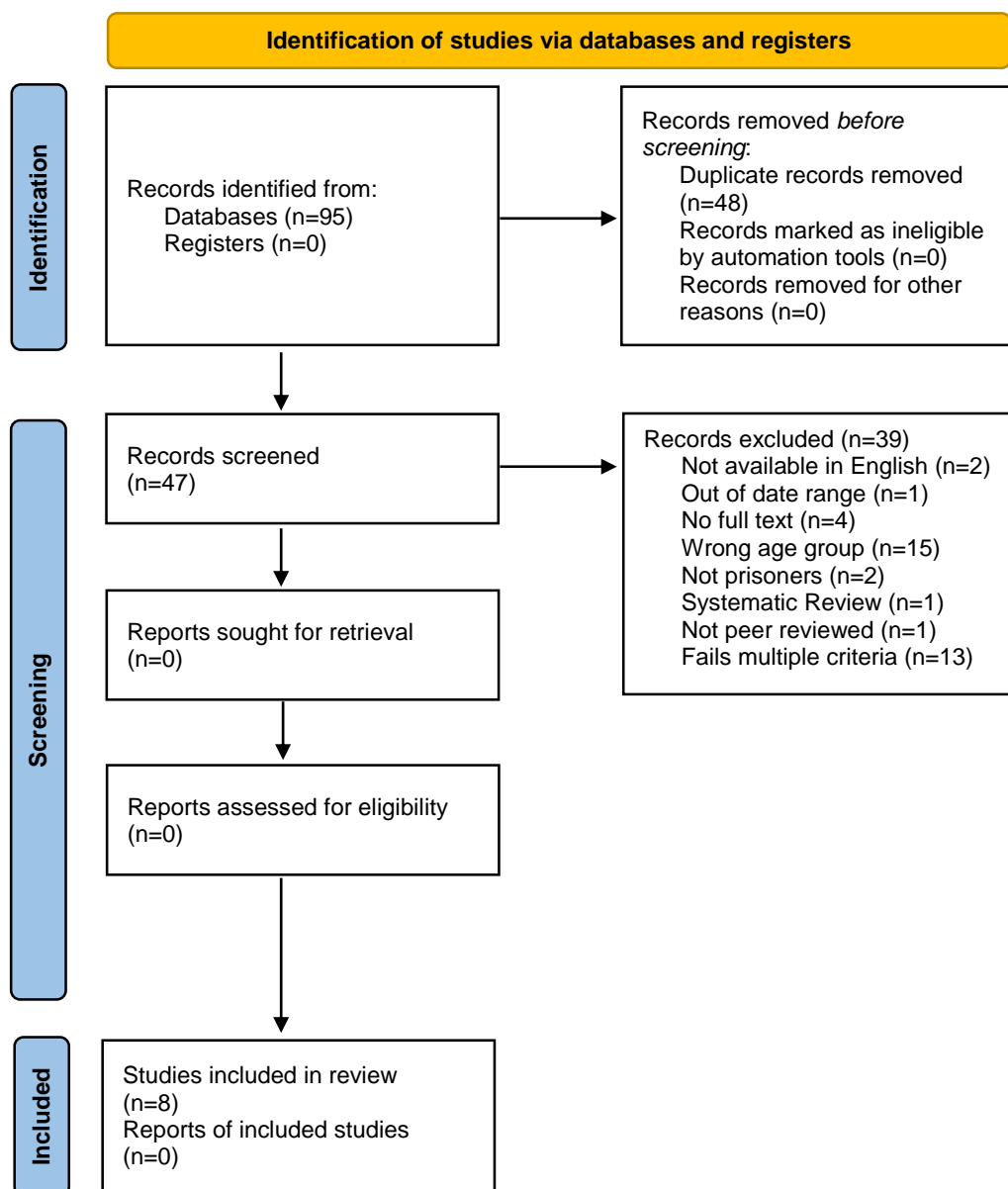
Wangmo, T., Handtke, V., Bretschneider, W., et al. (2018). “Improving the Health of Older Prisoners: Nutrition and Exercise in Correctional Institutions”. *Journal of Correctional Health Care*. Vol.24. No.4. 352-364.

Wells, M. (2010). “Resilience in Older Adults Living in Rural, Suburban, and Urban Areas”. *On-line Journal of Rural Nursing and Healthcare*, 10(2), 45-54.

Wilkinson, D., Caulfield, L. (2017). “The Perceived Benefits of an Arts Based Project for health and Well Being of Older Offenders”. *European Journal of Psychology*. Vol.13. 16-27.

Zautra, A.J., Hall, J.S. and Murray, K.E., (2010). *Resilience: A New Definition of health for People and Communities*. In Reich, A. J. Zautra, A.J., and Hall, J.S. (Eds). *Handbook of Adult Resilience*. 3-29. The Guildford Press, Guildford.

*Figure 1. PRISMA Flowchart.



Amendments: Systematic literature review of interventions and processes that promote resilience amongst older people in prisons.

Thank you for these helpful suggestions and comments.

Data extraction table, changes to table 1:

1. Spellings amended.
2. Articles placed in chronological order as suggested.

Changes based on the editor's on-script comments.

1. Sub-headings removed from abstract, changed to narrative style.
2. Small amount of text removed from abstract, 'study design' and 'practices and processes'; added 'of relevant literature'.
3. Suggested spelling errors and typos amended, e.g., page 2 and elsewhere.
4. Text removed, p.2: 'particularly the Victorian prisons'
5. Reference to Fazel et al (2001) removed.
6. Where more than 3 authors are cited within text and reference list, changed to 'et al'.
7. Sentenced and reference removed: The issues have been exacerbated by years of reduced spending and staffing (National Audit Office, 2020).
8. Reference to McAllister and McKinnon, removed.
9. In-text citations harmonized with reference list, (e.g., National Audit Office on p.3).
10. References amended, e.g., Skowronski and Talik (2018) page 3.
11. Reference to Armour, removed from script, at page 3, and reference list.
12. Term 'Elderly' changed to 'older prisoner / adult' as suggested.
13. Sub-heading - Aim, moved as suggested.
14. Wording in methods sections amended as suggested.
15. Sentence removed p6 Inductive thematic analysis....
16. 'Figure 1' added, p.6
17. Retrieved papers by author added to text on page 7.
18. Acronym 'OPIPs' removed from script as suggested.
19. Wording changed and removed 'of the retrieved papers' at page 8.
20. Bracket added at p.10 as suggested.
21. Text removed: 'current situation'.
22. Reference changed from Stewart (2021) to Turner et al (2018), page 12, and reference removed from reference list. Reference to Stewart (2021) removed at page 12.
23. Small amounts of text removed from themes sections.
24. Theme titles amended/standardised throughout.
25. CASP details added in-text, and in reference list.
26. Paragraph beginning 'The findings from this review can be used...' moved to before conclusion.
27. Sentenced moved to explain excluded papers on methodological reasons. 'For example, a paper by Mackenzie (2021) described a theatre production intervention for sex offenders but specific demographic details (e.g., the age of the participants) was not described'.

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28. Admitted changed to committed and ‘into’ / to
29. Text altered to: Papers considering the promotion of resilience or emotional well-being in older adults in prisons are limited and much of the literature focuses on the causes of stress (Avieli, 2021).
30. Page 4 reference added as suggested (although this is at the expense of other references). ‘Kinman and Grant (2014) put forward a framework by which resilience enhancing skills can be developed’.
31. P.4: Text altered to: ‘In relation to adapting to prison life, Tugade and Fredrickson (2007) identify building supportive social networks as a positive strategy’.
32. P.6: ‘formal’ removed.
33. Spelling error amended.
34. P.10: de Guzman – year added
35. Theme 3 p:10, text altered in response to the suggestion: ‘In this category, papers by Avieli (2021), Haesen et al (2018), Noujaim et al (2019), all described positive subjective processes that restored older prisoner’s sense of equanimity or developed their resiliency.’
36. P: 11. Spelling error altered.
37. Reference added p12.
38. P.14 Prison nurses change to ‘healthcare providers’
39. P:14 administrators changed to ‘healthcare providers’

Reviewer one comments.

Changes based on comments on gender differences.

It is predominantly males who commit crime and most prisoners are males. As such criminology is known to overlook women prisoners and focus mostly on males. Three papers were retrieved that discuss female prisoners this was quite surprising. The text on gender differences has been amended in the discussion section: ‘The literature shows a weighting towards male participants which is commensurate with the global prison demography. While it is difficult to generalise the differences in findings based on gender, a key feature of Lucas et al (2018) exclusively female sample, was the importance of faith and adjustment to prison life, while papers with a male only sample discuss the benefits of organised and social activities, occupation and learning. And later in the limitations section: “Given the differences between genders and penal systems, the review indicates a need for further research considering several important questions, such as, what works, for whom, under which circumstances, and at what stages in their sentence?’ (on p.13).

40. This sentence was moved and added to the above paragraph: ‘Additional variables include unknown differences between prison regimes and resourcing in penal systems in different countries’.
41. Text altered on p.14 as suggested.
42. We could have extended our search by more years but this we were concerned about changing our PROSPERO application.
43. Comment added to Table 1 (online only)
44. I have removed the term ‘methodological’ from page 11, the reasons for exclusion are stated in the PRISMA chart.

45. Explaining 'ecological' in more depth, p.12. Text changed to: 'This tripartite approach speaks to socio-ecological perspectives on resilience (Masten, 2014; Ungar, 2013), in which older prisoners' could look for activities and other sources of support within their environments to maintain their mental health'.

Different perspectives from reviewers.

Respectfully, the searches did not exclude papers/studies from the U.S., for example, the paper by Noujaim was based on a study in Connecticut. We are aware that there are many papers on end-of-life in prisons, dementia and peer care in prisons from the US, indeed this is one of the reasons why we searched over a five-year period. We did not locate many papers with resilience as their main focus in older prisoners from many countries.

Again respectfully, we didn't feel we needed to add a second table explaining why we selected the papers. The papers were included because they were retrieved in our searches and reviewed against our criteria. An outline of each paper is included in the 'themes' sections. We are unsure of what an extra table will add.

Authors, Year, Title	Methods	Age / Gender	Number of participants	Interventions and findings	Results and conclusions	Other information	Trustworthiness
de Guzman, A., Imperial, M., Javier, R., Kawasaki, A. (2017).	Grounded theory design; interviews and thematic analysis as proposed by Boyatis, (1998).	60-80 Participants aged 60-70 N=17 or 68% All male	N=25 Sample recruited with the help of healthcare professionals	The authors propose the 'Maze Theory of Resilience' by which older inmates find meaning and life in prisons, these consists of three elements: 'sending up, sending off and sending in'. Emphasis on the benefits of religious frameworks.	The theory could help health professionals identify psychological distress. Interventions could be delivered at each of the three phases. Social interventions can promote optimism.	College of Nursing, University of Santo Thomas, Manila	Low
Wilkinson, D., Caulfield, L. (2017).	Semi-structured interviews and thematic analysis.	50 – 65 Mean: unstated. All male sample.	N=13 From two security category C English prisons	Themes included: meditation and managing emotions; communication and social skills; sense of achievement and motivation; age and mobilisation; age and the unknown; something to do with your time; start and end of the sentence; critical reflections.	The activity helped to off-set the effects of accelerated ageing by encouraging creativity and cognitive functioning, developing new activities, fostering positive interactions and motivations.	University of Worcester and Bath Spa.	Low
Haesen, S., Wangmo, T., Elger, B. (2018).	Interviews and thematic analysis. Secondary analysis of data taken from the 'Age quake' study.	51-75 Mean: 61 Number of male participants: 30 Number of female participants: 5	N=35 Sample recruited with the help of healthcare professionals from 12 prisons in Switzerland.	Three main themes were identified: 'personal characterization of identity, occupational identity and social identity'. Support from others, prison activities, occupational practices, mentoring and social comparisons all influenced subjective views on identity.	Identity was seen to be expressed as a mix between positive and negative traits. Developing a positive sense of identity can contribute to better mental health for the individual and the likelihood of successful rehabilitation.	University of Basel, Switzerland.	Low
Lucas, H., Lozano, C., Valdez, L., Manzarate, R., Lumawag, F. (2018).	Grounded theory design, interviews.	61-79 Mean: 66.4 All female sample.	N=15	The study generated the 'Road to Success' model. Five phases of transition to successful ageing in prison were generated: Struggling, Remotivating, Reforming, Reintegrating and Sustaining. Emphasis on the benefits of religious frameworks.	The findings serve as an impetus for structural and procedural changes in prisons to promote recognition of older prisoner's efforts at successful ageing and conducive environments.	College of Nursing, University of Santo Thomas, Manila.	Low
Wangmo, T., Handtke, V., Bretschneider, W., Elger, B. (2018).	Interviews and thematic analysis. Data taken from the 'Age quake' study.	51-75 Mean: 61 Number of male participants: 30 Number of female participants: 5	N=35 Sample recruited with the help of healthcare professionals from 12 prisons in Switzerland.	Increasing exercise and improving prison diet is imperative. There is a need to adapt prison food to address the needs of older and unwell prisoners. Access should be arranged to provide opportunities for engagement with appropriate physical activities.	As it is known that the cost burden of caring for older prisoners is high and good nutrition and exercise is known to promote health, there are positive economic outcomes for prisons and OPIPs.	Institute for Biomedical Ethics, University of Basel, Switzerland.	Low
Noujaim, D., Fortinsky, R., & Barry, L. (2019).	Cross-sectional study, interviews.	Mean age: 57 Number of male participants: 91 Number of female participants: 48	N=140	Higher emotional support and a greater proportion of support from clinicians, where associated with lower likelihood of poor health related self-efficacy. Those whose emotional support coming from other prisoners had higher likelihood or poor self-efficacy.	Perceiving that there is someone to listen may facilitate confidence in one's ability to manage health. Emotional support may serve as a safeguard from ongoing stresses of the prison environment that may exacerbate chronic illnesses.	Health Center, University of Connecticut, USA	Medium
Avieli, H. (2021).	Analysis of semi-structured interviews, using Interpretative Phenomenological Analysis.	62-91 Mean age: 74 All male sample.	N=18	Ageing in prisons may not be perceived as a single, unified process, but as a personal and individual phenomenon. Old age may facilitate positive changes in the lives of ageing offenders in prisons.	Prisons can serve as a nurturing environment and promote successful ageing. It is essential to promote opportunities where OPIPs can thrive, e.g. activities that promote sense-making, self-growth and mentoring.	Dept. of Criminology, Ariel University, Israel.	Medium
Ridley, L. (2022).	Survey and interviews.	50 – 70+ All male	N – not specified.	The author collaborated with a mixed group of prison employees to develop a facility that provide social, educational and health-based activities.	The author suggests that the project successfully developed approaches, regimes and infrastructure that were beneficial of older prisoners. They report an increased feelings of safety and gym use.	University of Northumbria	Low