

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Prison cell spatial density and infectious and communicable diseases: a systematic review
<b>AUTHORS</b>	Simpson, Paul; Simpson, Melanie; Adily, Armita; Grant, Luke; Butler, Tony

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Flavia Riccardo Istituto Superiore di Sanità, Italy
<b>REVIEW RETURNED</b>	02-Nov-2018

<b>GENERAL COMMENTS</b>	The paper addresses a very relevant public health research question and has adopted an impressively inclusive review methodology leading to the identification of over 13 000 records. Due to the selection criteria, only six articles were included and their quality led to conclude with an evidence rating of C. The conclusions are nonetheless extremely relevant as they highlight a need for further research and can encourage and guide future studies on this topic. I would suggest to explain a little more extensively the reason for excluding the records assessed in full text, this would make the paper clearer. I would also suggest that authors take this opportunity to list best practices/recommendations in research in this field to provide a reference tool for future studies.
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<b>REVIEWER</b>	Allen Johnson Rollins College, USA
<b>REVIEW RETURNED</b>	28-Nov-2018

<b>GENERAL COMMENTS</b>	<p>The authors have done a nice job for this review. I only have very minor recommendations.</p> <p>Page 2. Line 41: In the conclusion in the abstract page, it should be explicitly stated what association you are referring to. For example: .... provides some support for an association between .... and ...</p> <p>Page 5. Lines 42-51: you state "we were engaged by the New South Wales Department of Justice, Corrective Services to conduct a systematic review". The wording "engaged by" is too vague and it is unclear what it specifically is referring to in this context.</p> <p>Page 12. Line 18: I believe 'being' should read 'be'.</p>
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## VERSION 1 – AUTHOR RESPONSE

### Reviewer 1

1. I would suggest to explain a little more extensively the reason explain for excluding the records assessed in full text, this would make review. the paper clearer.

“Articles were excluded from full text review if the study design did not feature in the Australian National Health and Medical Research Council’s (NHMRC) Hierarchy of Evidence. This hierarchy includes systematic reviews

The following text has been revised and added to page 8 to further the two key reasons why records were excluded from full text

2. I would also suggest that authors take this opportunity to list best practices/recommendations in research in this field to provide a reference tool for future studies.

outcomes to ensure outcome misclassification is prevented or minimised and include adequate detail on how cell floor or spatial density was determined to facilitate a clear assessment of exposure misclassification.

of prospective cohort studies (level I evidence), prospective cohort study (level II evidence), ‘all or none’ study (i.e. either all or none of the people with the risk factor(s) experienced the outcome of interest) (level III-1 evidence) retrospective cohort study (level III-2 evidence), case-control study (level III-3 evidence), or cross-sectional study or case series (level IV evidence). Articles were also excluded if they did not conduct an analysis that examined the relationship between the exposure variable of prison cells accommodating one or more persons with a specified cell spatial density or cell dimensions and an outcome variable of an infectious and/or communicable disease.”

In most articles reviewed, inadequate attempts were made to adjust for personal characteristics of prisoners and/or prison-related factors as potential confounders. This statement acknowledges that cell spatial density, as an objective condition of crowding, is likely to be embedded in a complex interplay of psychological, social/cultural and institutional factors, and that variations of any health effects cannot be fully understood without their consideration. Thus, future research should seek to collect more extensive data on prospective confounding and mediating factors to examine how such factors interact with cell spatial density and health effects. In an upcoming publication, we reviewed the twelve eligible articles identified in this review and a mental health review2 in addition to key international reports on prisoner conditions, prison crowding and

We thank the reviewer for this suggestion. We have included additional text under the section titled ‘Implications for researchers and policy makers’:

“Further research is needed that addresses the confounding, bias and chance elements in studies examined by this review. We recommend that future studies include clinically verifiable health

prisoner health to identify what factors might mediate the association between prison cell spatial density and adverse health effects. From this review we recommend that future research consider the following factors: (i) personal characteristics of prisoners such as age, education level, gender, ethnicity, underlying medical conditions and health risk behaviours (e.g. current intravenous drug use); (ii) physical environment measures such as air ventilation and privacy afforded to the prisoner; and (iii) social and policy environment of prison such as time spent in cell per day, cell allocation policy and practice, health service access, length of incarceration and custody and security classification of prisoner.”

Reviewer 2

1. Page 2. Line 41: In the conclusion in the abstract page, it should be explicitly stated what association you are referring to. For example: .... provides some support for an association between .... and ...

Thank you for this suggestion. The text in the abstract has been revised.

2. Page 5. Lines 42-51: you state “we were engaged by the New South Wales Department of Justice, Corrective Services to conduct a systematic review”. The wording “engaged by” is too vague and it is unclear what it specifically is referring to in this context.

Thank you for pointing this out. This sentence (on page 5) has been revised and now states:

“To determine the extent and quality of evidence on the association between prison cell crowding and health impacts, Kirby Institute researchers and authors (PLS, MS, AA and TGB) were commissioned by the New South Wales Department of Justice, Corrective Services to conduct a systematic review of ... “.

3. Page 12. Line 18: I believe ‘being’ should read ‘be’.

This word has been amended.

## Correction: *Correction for Prison cell spatial density and infectious and communicable diseases: a systematic review*

Simpson PL, Simpson M, Adily A, *et al.* Prison cell spatial density and infectious and communicable diseases: a systematic review. *BMJ Open* 2019;9:e026806. doi: 10.1136/bmjopen-2018-026806

This article was previously published with errors. The authors noticed below errors:

- ▶ The acronym for the International Committee of the Red Cross presented in the last paragraph of the article (p. 8) should read ICRC and not ICPA.
- ▶ The guidelines stated in the last paragraph of the article (p. 8) should read ICRC guidelines.
- ▶ The initials of the reviewers who screened publications (p. 3) should read: PLS, AA and MS, TB.

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