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

| TITLE (PROVISIONAL) | Transformation of identity in substance use as a pathway to | |
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| | recovery and the potential of treatment for hepatitis C: A | |
| | systematic review protocol. | |
| AUTHORS | Donaldson, Sarah; Radley, Andrew; Dillon, John | |

VERSION 1 – REVIEW

| REVIEWER | Akiyama, Matthew |
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| | Albert Einstein College of Medicine / Montefiore Medical Center, |
| | Medicine |
| REVIEW RETURNED | 20-Apr-2021 |
| r | |
| GENERAL COMMENTS | This manuscript outlines an important research question at the intersection of substance use disorders and infectious diseases for which rigorously extracted/integrated data would be a welcome addition to the literature. |
| | One notable gap in the search strategy though are data on populations that have high rates of comorbid substance use, but find themselves in a milieu where their current identity may trump that of having a substance use disorder, for example individuals who are homeless, incarcerated, or justice-involved. These groups may evade the proposed search terms even though they may have high degrees of substance use disorders and often experience substantial transformation if treated for their HCV, HIV, etc. Some notable examples of studies in which identity transformations are noted include: |
| | Lafferty L et al. Understanding facilitators and barriers of direct- acting antiviral therapy for hepatitis C virus infection in prison. J Viral Hepat 2018;25:1526–32. |
| | Akiyama MJ et al. Knowledge, attitudes, and acceptability of direct- acting antiviral hepatitis C treatment among people incarcerated in jail: A qualitative study. PLoS One. 2020 Dec 2;15(12):e0242623. doi: 10.1371/journal.pone.0242623. eCollection 2020. |
| | Crowley D et al. Barriers and facilitators to hepatitis C (HCV) screening and treatment-a description of prisoners' perspective. Harm Reduct J 2018;15:62. |
| | The authors may want to widen their search terms to include these key populations, which could add to the value to this already compelling systematic review. |
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| REVIEWER | Høj, Stine Bordier |
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| | Centre de Recherche du Centre Hospitalier de l'Université de Montréal | |
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| REVIEW RETURNED | 23-Jun-2021 | |
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| GENERAL COMMENTS | This paper presents a protocol for a systematic review that aims to describe how changes in identity are implicated in recovery from substance use and the interventions or treatments that stimulate changes in identity. The review also has a specific aim to assess evidence for whether treatment for hepatitis C virus (HCV) causes such a change in identity. | |
| | The topic area is novel and interesting. However, I find the protocol to be lacking in detail and clarity, particularly regarding eligibility criteria and data extraction (outcomes). This is exacerbated by a lack of specificity in the background to the review, where I felt the underlying concepts and rationale could be more clearly delineated, and some inconsistencies between different sections of the protocol (e.g. objectives vs. PICO table vs. eligibility criteria text vs. search strategy). | |
| | MAJOR COMMENTS: | |
| | The specific rationale/impetus for undertaking this review could be strengthened earlier in the paper. How, why, and to whom is it intended to be useful? | |
| | Page 4, para 3. Concepts relating to identity and its implication in recovery provide an interesting basis for the review, but this theoretical background should be explained more clearly in the text. For instance, "social identity" (p4, line 32) is not defined and it is unclear how this differs from "self-identity" (p4, line 28). Similarly, line 28 seems to imply that self-identity may be "derived from" social networks, whereas line 41 suggests that a change in self-identity "shapes" social networks. Please clarify these concepts in relation to the Social Identity Model of Recovery and the hypothesis presented (DAA treatment as a potential catalyst for a change in identity). | |
| | Page 5, objectives. The objectives present a mixture of study objectives (major points) and inclusion criteria (subpoints). I suggest removing the latter and restricting discussion of inclusion criteria to the relevant sections. This will help to ensure consistency throughout the paper and ensure that all pertinent text is presented in the appropriate sections. | |
| | Notwithstanding this comment, is there a reason that the criteria for assessing change in identity are described differently between Objectives 1a and 3a? Are the authors trying to avoid repetition or do these genuinely differ - and if so, why? | |
| | Page 6, PICO table. The table contents do not align well with the text and exclude important precisions/details concerning the eligibility criteria. This should be revised or removed. | |
| | Page 6, Eligibility Criteria. Please specify the types of studies / study designs that will be included (somewhere in this section). | |
| | Page 7, Population. How do you define "dependent substance use"? Does this require a diagnosis of substance use disorder? Are behavioral indicators (e.g. injecting drug use) considered as a | |

| marker of dependent use? How do you define "prescribed medication misuse"? |
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| Page 7, Interventions and Exposures. Is the list of health issues presented exhaustive or merely indicative? What are the criteria for a health issue to be considered "related" to substance use? For instance, mental health problems and chronic pain are common comorbid conditions for people who use drugs but neither is presented in the list. |
| Page 7, Interventions and Exposures. Are interventions (e.g. HCV treatment) delivered in mainstream medical settings or in the context of a research study included? How do you define a "community program" or a "citizenship program"? |
| Page 7, Interventions and Exposures. Why are interventions that do not "aim to result in recovery or a change in self-identity" excluded? Neither is typically an aim of HCV treatment – certainly not a primary aim – though pertinent patient-reported outcomes may nevertheless be collected. |
| Page 7, Interventions and Exposures. The paper frequently mentions "actions", interventions and treatments. What is meant by "actions"? Are actions taken by an individual (e.g. 'recovery habits') without external programmatic "intervention" included? |
| Page 7, Context. I believe "C" in the PICO framework should refer to 'comparators'. |
| Page 8, Outcome. Given the central place of identity in the systematic review, I find the concept is inadequately defined. The objectives (page 5) state that it may be measured using "psychological tools or social identity mapping" but this does not particularly clarify the construct(s) you will isolate in the review. How do you conceptualise identity and how is this reflected in the included outcomes? Similarly, how do you conceptualise a recovery journey? Must this include a component of reduced drug use, and if yes, are there any temporal factors to consider (e.g. sustained versus temporary abstinence)? |
| Relatedly, besides clarifying the inclusion criteria for the review (i.e. a systematic approach to achieving adequate coverage of the relevant literature), the authors should also include a separate section that defines and prioritises the outcomes for which data will be sought – see Item 13 in the PRISMA-P checklist. An example – will all dimensions of stigma be included as outcomes or only certain dimensions (e.g. internalised stigma)? Is this considered an aspect of identity, or recovery, or both? |
| Page 8, Search strategy. The search strategy presented in supplementary materials does not include some outcomes mentioned in the text (e.g. abstinence, social functioning, self- efficacy). The authors might also consider including additional terms related specifically to HCV treatment (e.g. 'HCV cure' or 'sustained virologic response'). |
| Additionally, I am unsure why Topic 3 and Topic 4 are combined with an AND statement if some objectives only seek to understand catalysts for a change in identity (and not a recovery component). |

| There also appears to be an error in the heading of Topic 3, which aligns more closely with the contents of Topic 4. |
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| Page 10, Data extraction. Have data extraction forms been developed and piloted? Can these be attached as supplementary materials to the protocol? |
| Page 10, Risk of bias (quality) assessment. How will the CASP checklist be used to identify 'low quality' studies – have the authors pre-specified any criteria for determining this? Similarly, have any criteria been specified to determine when to include a 'low quality' study in the review? How will the authors summarize the confidence the quality of the body of evidence identified as a whole? |
| Page 10, Synthesis and analysis. Have the authors determined that a quantitative synthesis is not appropriate in the present review? If yes, please state this in the protocol and provide the rationale for this decision. Further, can the authors provide additional details on how they plan to proceed (and present their findings) within the thematic analysis? The abstract mentions that findings will be "structured around intervention type, population context, and outcomes" but this is not described in the body of the paper. |
| MINOR COMMENTS: |
| Page 2, line 10 and page 3, 56. What is meant by HCV providing an identity "beyond the control of the individual"? |
| Page 5, line 52. What is meant by, "as a secondary measure"? Does this mean that social acceptance, inclusion, rehabilitation and citizenship are accepted as proxy measures of recovery? |
| Page 5, line 43 and Page 6 (PICO table and line 56). Why is a direction implied to some outcomes ("improved" quality of life)? Do the authors exclude the possibility that some identity changes may be detrimental? |
| Page 7, lines 19-19. "Studies that are related to recovery from substance useare also excluded." It seems to me that this criterion should be described under outcomes rather than population. |

VERSION 1 – AUTHOR RESPONSE

| Reviewer | Author Response |
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| Reviewer 1 | We thank the reviewer for their kind |
| Dr. Matthew Akiyama, Albert Einstein College of | comments and greatly appreciate them |
| Medicine / Montefiore Medical Center | taking the time to do this. |
| Comments to the Author: | |
| This manuscript outlines an important research | |
| question at the intersection of substance use | |
| disorders and infectious diseases for which rigorously | |

| | extracted/integrated data would be a welcome | |
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| | addition to the literature. | |
| 1 | - | Thank you for highlighting this gap in the search strategy. We have kept the population terms very general and have not focussed on any sub-groups to allow a wide search. We are aware of the papers listed and their importance in addressing HCV testing and treatment uptake in a prison healthcare setting. This is an important concept to explore, however, unfortunately the searches have been completed and it is a limitation of the review which we will include in the discussion of the systematic review results article. |
| | Akiyama MJ et al. Knowledge, attitudes, and acceptability of direct-acting antiviral hepatitis C treatment among people incarcerated in jail: A qualitative study. PLoS One. 2020 Dec 2;15(12):e0242623. doi: 10.1371/journal.pone.0242623. eCollection 2020. Crowley D et al. Barriers and facilitators to hepatitis C (HCV) screening and treatment-a description of prisoners' perspective. Harm Reduct J 2018;15:62. The authors may want to widen their search terms to include these key populations, which could add to the | |
| | value to this already compelling systematic review. Reviewer | Author Response |
| | Reviewer 2 | |
| | This paper presents a protocol for a systematic review that aims to describe how changes in identity are implicated in recovery from substance use and the interventions or treatments that stimulate changes in identity. The review also has a specific aim to assess evidence for whether treatment for hepatitis C virus (HCV) causes such a change in identity. The topic area is novel and interesting. However, I find the protocol to be lacking in detail and clarity, particularly regarding eligibility criteria and data extraction (outcomes). This is exacerbated by a lack of specificity in the background to the review, where I felt the underlying concepts and rationale could be more clearly delineated, and some inconsistencies between different sections of the protocol (e.g. objectives vs. PICO table vs. eligibility criteria text vs. | We thank the reviewer for these helpful comments which are addressed in the revised manuscript as highlighted |
| | search strategy). Major comments | |
| | | 1 |

| review could be stre | le/impetus for undertaking this engthened earlier in the paper. hom is it intended to be useful? | Additional information for rationale/impetus for review added on pages 4 and 5. |
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| implication in recover the review, but this explained more clear "social identity" (p4, unclear how this dif 28). Similarly, line 2 may be "derived fro 41 suggests that a clear social networks. Plear relation to the Social the hypothesis pres | ncepts relating to identity and its ery provide an interesting basis for theoretical background should be arly in the text. For instance, line 32) is not defined and it is fers from "self-identity" (p4, line 88 seems to imply that self identity m" social networks, whereas line change in self-identity "shapes" ease clarify these concepts in al Identity Model of Recovery and ented (DAA treatment as a r a change in identity). | Paragraph reviewed and amended – self- identity is how you view yourself. Social identity provides a sense of who you are based on group membership, their norms and behaviours – a socially derived sense of self. SIMOR requires a change in social identity which will support and influence sense of self; however a change in self- identity is required to support this shift in social network. They are intertwined and one requires the other and each re-enforce the other. |
| of study objectives criteria (subpoints). restricting discussio relevant sections. T throughout the pape | The objectives present a mixture (major points) and inclusion I suggest removing the latter and on of inclusion criteria to the his will help to ensure consistency er and ensure that all pertinent text appropriate sections. | Sub points removed from this section and moved to page 9 |
| the criteria for asse described differently | s comment, is there a reason that ssing change in identity are y between Objectives 1a and 3a? ng to avoid repetition or do these nd if so, why? | Addressed to ensure consistency |
| well with the text an | . The table contents do not align d exclude important oncerning the eligibility criteria. sed or removed. | Table has been revised. |
| | riteria. Please specify the types of gns that will be included section). | Added to eligibility criteria section page 6. |
| substance use"? Do substance use diso (e.g. injecting drug | How do you define "dependent bes this require a diagnosis of rder? Are behavioural indicators use) considered as a marker of w do you define "prescribed ? | Additional information included to define this population further – page 7 |
| health issues prese indicative? What ar be considered "rela instance, mental he are common co mo | ns and Exposures. Is the list of nted exhaustive or merely e the criteria for a health issue to ted" to substance use? For alth problems and chronic pain rbid conditions for people who use presented in the list. | The list is indicative and the related health issues left broad to allow scope to capture any related health issues defined by the research available. |
| interventions (e.g. H | ns and Exposures. Are ICV treatment) delivered in I settings or in the context of a | Additional information to define community and citizenship programmes has been added – page 7/8 |

| research study included? How do you define a "community program" or a "citizenship program"? Page 7, Interventions and Exposures. Why are interventions that do not "aim to result in recovery or a change in self-identity" excluded? Neither is typically an aim of HCV treatment – certainly not a primary aim – though pertinent patient-reported | Changed to "report recovery or change in self-identity" |
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| outcomes may nevertheless be collected. Page 7, Interventions and Exposures. The paper frequently mentions "actions", interventions and treatments. What is meant by "actions"? Are actions taken by an individual (e.g. 'recovery habits') without external programmatic "intervention" included? | Actions may be a more appropriate definition for an outcome of a community or citizenship programme. For example a citizenship programme may provide an opportunity to engage with a community project, increasing social inclusion. |
| Page 7, Context. I believe "C" in the PICO framework should refer to 'comparators'. | Thank you for highlighting this oversight. We used PI(E)COC (Population, Intervention/Exposure, Comparator, Outcomes, Context/Setting) |
| | Petticrew M, Roberts H. Systematic reviews in the social sciences: A practical guide. John Wiley & Sons; 2008 Apr 15. |
| | The paper has been amended to reflect this correctly. |
| Page 8, Outcome. Given the central place of identity in the systematic review, I find the concept is inadequately defined. The objectives (page 5) state that it may be measured using "psychological tools or social identity mapping" but this does not particularly clarify the construct(s) you will isolate in the review. How do you conceptualise identity and how is this reflected in the included outcomes? Similarly, how do you conceptualise a recovery journey? Must this include a component of reduced drug use, and if yes, are there any temporal factors to consider (e.g. sustained versus temporary abstinence)? Relatedly, besides clarifying the inclusion criteria for the review (i.e. a systematic approach to achieving adequate coverage of the relevant literature), the authors should also include a separate section that defines and prioritises the outcomes for which data will be sought – see Item 13 in the PRISMA-P checklist. An example – will all dimensions of stigma be included as outcomes or only certain dimensions (e.g. internalised stigma)? Is this considered an aspect of identity, or recovery, or both? | Amendments made to capture important points raised. Social and self-identity expanded upon. The authors accept that a recovery journey has differing meanings for individuals and may not be measured through abstinence and/or reduced frequency of drug use. |
| Page 8, Search strategy. The search strategy presented in supplementary materials does not include some outcomes mentioned in the text (e.g. abstinence, social functioning, self efficacy). | Thank you for highlighting the inconsistencies in language used. This has been addressed to ensure the terms outlined in the protocol are consistent with search strategy. |

| The authors might also consider including additional terms related specifically to HCV treatment (e.g. 'HCV cure' or 'sustained virologic response'). | Thank you for the suggested additional terms. Unfortunately the searches have been completed at the time of submission. It will be noted in the resulting systematic review discussion that the search terms were broad and did not include terms specific to HCV treatment. |
|---|--|
| Additionally, I am unsure why Topic 3 and Topic 4 are combined with an AND statement if some objectives only seek to understand catalysts for a change in identity (and not a recovery component). There also appears to be an error in the heading of Topic 3, which aligns more closely with the contents of Topic 4. | Thank you for highlighting this. Topics 3 and 4 have been reviewed and merged. The heading of topic 3 has been corrected. |
| Page 10, Data extraction. Have data extraction forms been developed and piloted? Can these be attached as supplementary materials to the protocol? | Data will be extracted onto excel sheet recording key characteristics of study design, participant characteristics, results (including themes and quotes), context and author interpretations Data will be extracted via iterative process in duplicate. |
| Page 10, Risk of bias (quality) assessment. How will the CASP checklist be used to identify 'low quality' studies – have the authors pre-specified any criteria for determining this? Similarly, have any criteria been specified to determine when to include a 'low quality' study in the review? How will the authors summarize the confidence the quality of the body of evidence identified as a whole? | Additional information has been included to describe using CASP tool to consider methodology and steps where the authors consider the methodology is not appropriate to meet the states research aims. Where studies are excluded this will be stated. Where there are bias concerns for included studies it will be stated. |
| Page 10, Synthesis and analysis. Have the authors determined that a quantitative synthesis is not appropriate in the present review? If yes, please state this in the protocol and provide the rationale for this decision. Further, can the authors provide additional details on how they plan to proceed (and present their findings) within the thematic analysis? The abstract mentions that findings will be "structured around intervention type, population context, and outcomes" but this is not described in the body of the paper. | The data extracted and made available from the systematic review will guide the authors to determine if quantitative synthesis is appropriate. The plan to present our findings has been left broad to allow the data to guide the structure of the thematic analysis. The process for data synthesis is described on page 12. |
| Minor comments Page 2, line 10 and page 3, 56. What is meant by HCV providing an identity "beyond the control of the individual"? | Statement amended on page 2 and 3 to make it clear that the perception by others is out with the control of the individual. |
| Page 5, line 52. What is meant by, "as a secondary measure"? Does this mean that social acceptance, inclusion, rehabilitation and citizenship are accepted as proxy measures of recovery? | Yes. Described page 9 under Outcome. |

| Page 5, line 43 and Page 6 (PICO table and line 56). Why is a direction implied to some outcomes ("improved" quality of life)? Do the authors exclude the possibility that some identity changes may be detrimental? | Directions removed as it is important to note where some interventions may result in poorer outcomes also. |
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| Page 7, lines 19-19. "Studies that are related to recovery from substance useare also excluded." It seems to me that this criterion should be described under outcomes rather than population. | This criterion has been moved to the outcome section as suggested. |

VERSION 2 – REVIEW

| REVIEWER | Høj, Stine Bordier Centre de Recherche du Centre Hospitalier de l'Université de Montréal |
|------------------------|--|
| REVIEW RETURNED | 18-Nov-2021 |
| | |
| GENERAL COMMENTS | I would like to thank the authors for addressing my detailed comments - I am satisfied with the responses/changes and feel the article is ready for publication. |