Reviewer’s report

Title: Supporting harm reduction through peer support (SHARPS): Testing the feasibility and acceptability of a peer-delivered, relational intervention for people with problem substance use who are homeless, to improve health outcomes, quality of life and social functioning, and reduce harms: Study protocol

Version: 0 Date: 12 Mar 2019

Reviewer: Marichelle LeClair

Reviewer's report:

Marichelle Leclair completed this review under the supervision of Dr. Anne Crocker as part of a peer review mentoring scheme endorsed in the journal.

This protocol proposes to examine the feasibility and the acceptability of a peer support intervention for people with experience of homelessness and problem substance use, which is expected to potentially improve physical and mental health, health-related quality of life, and substance use recovery outcomes. The specifics of the intervention will be developed in the first phase of the study.

Overall, this protocol addresses an important area of research that may have a substantial impact on the lives and access to care of people who experience homelessness. The use of a collaborative research approach is also of great interest and innovative. However, the manuscript, as it currently stands lacks precision, coherence and clarity, undermining its readability. The authors may want to carefully revise and edit the manuscript to improve coherence and organization to facilitate flow.

Introduction/Background

Major:

1. Given that the intervention draws on principles of psychologically informed environments (p. 9), a short paragraph defining what psychologically informed environments are and providing examples would be helpful.

2. The first paragraph on p. 10 concludes with the statement that there are challenges to the inclusion of peer support staff members in community-based services and suggests ways they can be addressed but falls short of describing what these challenges may be.
3. It may be relevant to include a short review of the literature regarding peer-delivered harm reduction services in non-homeless populations (e.g., Ashford, Curtis, & Brown 2018).

4. A definition of Peer Navigators and peer navigator programs would be helpful.

5. From the last sentence of p. 10 and the objectives, it is unclear if the intervention seeks to promote harm reduction, access to healthcare, social recovery or all of the above. The objectives of the intervention should be consistent throughout the protocol.

6. The authors may want to provide hypotheses of the predicted impact of the intervention on outcomes.

Minor:
1. The sentence on p. 9, lines 22-32 (As well...) is unclear.

2. It would be helpful to provide a short in-text description of what Figure 1 represents.

3. The aims, objectives and research questions would benefit from being edited for concision and clarity. It might improve readability to divide the study objectives in primary and secondary objectives.

Study design and methods

Major:
1. Given that both Phase 2 and 3 address research objectives #3-8, it is unclear from the text how they differ (however, Figure 3 is helpful).

2. To be eligible, participants must self-report alcohol or drug problems (p. 17). It would be important to specify what questions are asked to prompt this self-report, and in what circumstances is substance use considered a "problem".

3. It is also stated that eligibility and "appropriateness of each participant" is discussed (p. 17) - what is entailed by appropriateness and how does it differ from eligibility?

4. Standard care sites have been selected because they are "comparable to the intervention sites in key ways" (p. 17) - which ones, in what ways?
5. The discussion on the ethical importance of peer research is interesting and well justified. Given that it's at the core of the study's approach, it may be useful and more appropriate to move it to the background section.

Minor:

1. Acronyms are not used consistently across the manuscripts, going back and forth between the full expression and the acronym.

2. The reason why the duration of the intervention varies (p. 13, line 10: "up to 12 months"; p. 14, line 1: "between 2 and 12 months") is not made explicit until p. 23. Providing this information earlier and in a single paragraph could help improve readability.

3. Similarly, the authors repeatedly mention that assessments and interviews will be conducted at two time points but only provide details regarding the timing of these timepoints on p. 21. The details provided are also quite vague ("in the early to middle phase and then towards the end of the intervention"). A similar comment may be made for the three time points for Peer Navigators interviews (p. 21).

4. The list of different samples for data collection on p. 19 is difficult to read and would benefit from edits for clarity.

5. P. 20, Line 29: there may be a reference mix-up. Reference #66 is by De Winter and Loom, while #67 is by Terry and Cardwell.

6. Line 2 of p. 23: "a small group of participants will receive a shortened intervention of 2/2.5 months" - can an approximation of how many participants will be impacted be provided?

7. Table 1: The first line of the table states that 54 participants participate to the holistic health check. It is unclear why this number is different from the target of N = 60.

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Were you mentored through this peer review?

Yes: Anne Crocker, Université de Montréal, Institut national de psychiatrie légale Philippe-Pinel