Homelessness and drug use: a narrative systematic review of interventions to promote sexual health

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**CRD summary**
This review evaluated the effectiveness of interventions to promote sexual health amongst homeless drug-using populations. The authors concluded that limited evidence shows that interactive interventions are effective in promoting attitude and behavioural change for drug use and sexual activity. The authors' conclusions reflect the evidence presented; however, potential methodological flaws in the review mean that their reliability is unclear.

**Authors' objectives**
To evaluate the effectiveness of interventions to promote sexual health amongst homeless drug-using populations.

**Searching**
MEDLINE (1966 to 2003), EMBASE (1980 to 2003), PsycINFO (1985 to 2003), CINAHL (1982 to 2003), Web of Science (1981 to 2003) and the Cochrane Library were searched to identify relevant studies for the review; the search terms were reported. Relevant journals from the preceding 5 years and reference lists were also screened for additional studies. There were no language restrictions and unpublished literature was sought from experts in the field.

**Study selection**
**Study designs of evaluations included in the review**
All longitudinal controlled study designs, including randomised controlled trials (RCTs), quasi-experimental and non-experimental designs were eligible for inclusion in the review.

**Specific interventions included in the review**
Studies that evaluated interventions to promote sexual health were eligible for inclusion. A significant proportion of the included studies compared a 'traditional' and 'specialised' multi-component acquired immunodeficiency syndrome (AIDS)-focused programme, involving group educational and practical elements. Other studies included counselling, and benefits/housing assistance.

**Participants included in the review**
Studies of homeless drug-using populations in high-income developed countries were eligible for inclusion. Backpacker and asylum populations, and studies where housing status was not made explicit, were excluded. Amongst those included in the review were men and women (aged between 18 and 69 years, where reported), largely of African-American or Latina origin, in homeless shelters and/or drug recovery programmes, and with a history of drug and sexual activity. One study included men with a chronic psychotic disorder. All of the studies were conducted in the USA.

**Outcomes assessed in the review**
Studies measuring sexual health in terms of a reduction in sexual risk behaviours (defined as increased condom use or reduction in the number of sexual partners), and others relating to sexual health, including reductions in drug-taking risk behaviour, changes in self esteem and coping, and changes in awareness and behaviour for risk factors, were eligible for inclusion. These represented the outcomes actually measured in the review. All of the included studies measured self-reported outcomes.

**How were decisions on the relevance of primary studies made?**
Study selection was initially carried out as an open assessment by one reviewer, and was followed by independent assessment by a second reviewer who was blinded to study authorship details. Any discrepancies were resolved by discussion with a third reviewer.
Assessment of study quality
Study quality was assessed using established checklists relevant to different study designs. The definition of homelessness and the validity of the outcome measures also formed part of this assessment. The authors did not state how the validity assessment was performed.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. Data were extracted on the various determinants of sexual health (reported above). Significance levels (p-values) and 95% confidence intervals were reported, where appropriate.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative.

How were differences between studies investigated?
Differences between the studies could be observed in the tables and text.

Results of the review
Six studies (n=2,233) were included in the review: 3 RCTs (n=1,254), 1 quasi-experimental retrospective study (n=300) and 2 non-RCTs (n=679). The reviewers stated that there appeared to be overlap of some participants in 3 studies.

Only one of the 3 included RCTs reported blinding and concealment procedures, and none described attempts to avoid contamination effects or other aspects of researcher bias. All 3 papers reported study attrition. One RCT explicitly defined homelessness. Four studies (including one non-RCT and one quasi-experimental) reported using validated questionnaires to measure the outcomes.

Reduction in sexual risk (6 studies).
Four studies (including 2 RCTs) (n=2,077) described a 'traditional' versus a 'specialised' AIDS-focused intervention and showed sustained statistically significant differences in terms of sexual risk reduction only when the outcomes of the two groups were combined and compared with an undefined control group. The combined intervention group showed a reduction in 'multiple partners' and 'sex without condoms' and the latter outcome was reported up to 2 years post-intervention (p<0.05). A further RCT showed a 3-fold reduction in sexual risk behaviour (increased use of condoms) as a result of a multi-component AIDS-focused intervention (p=0.01), and this remained significant 18 months later. A statistically significant increase in knowledge of the human immunodeficiency virus was also reported in a non-randomised multi-component study of a day care programme (p=0.03).

Reduction in drug-taking risk behaviour (5 studies).
Reductions in cocaine use (up to 2 years) and non-intravenous drug use (up to 12 months) were reported in the 'specialised' group in 3 studies (including one RCT and one quasi-experimental study) (n=1,161) that compared this with the 'traditional' intervention (above). When the intervention groups were combined, reduced cocaine and heroin use and high-risk drug-related behaviour (p<0.001) was reported up to 2 years post-intervention. A further non-RCT of a multi-component programme reported a statistically significant increase (p=0.03) in awareness of substance use in longer standing participants. One RCT reported a reduction in drug use in both 'specialised' and 'traditional' intervention groups with no significant difference between them.

Self esteem and coping skills (4 studies).
Four studies (including 2 RCTs) (n=2,077) measured outcomes relating to psychological and social functioning as part of the 'specialised' versus 'traditional' intervention comparison (above). Both groups showed improvements on all measures (except for coping skills) at 6 months post-intervention, although those in the 'specialised' group showed less emotional disturbance at the 2-year follow-up (p<0.05).
Authors' conclusions
Limited evidence suggests that brief interventions, targeting attitudes and behaviour change in homeless drug users using interactive methods and group work, appear to be effective in reducing risk from drugs and sexual activity. However, the sustainability of effects after 1 year is unclear. The interventions did not appear to result in risky sexual activity in those who were previously sexually inactive.

CRD commentary
The review question was broad and allowed the potential retrieval of a wide range of programmes and outcomes. However, (as the authors acknowledged) relevant studies might have been missed given the imposition of further criteria on the explicit reporting of housing status. The search strategy was comprehensive and included appropriate attempts to reduce language and publication biases. Failure to report how the data were extracted and how the quality assessment was performed means that biases in the review process cannot be ruled out. However, a detailed assessment of study quality was carried out according to study design and the results of this were used in the discussion of the review findings. A narrative synthesis was appropriate given the heterogeneity of the studies and there was some attempt to group studies according to similarities. The authors drew attention to potential difficulties in generalising the review findings to a UK setting and pointed out some relevant directions for future research. The authors' conclusions reflect the limited evidence presented, but (given some methodological flaws in the review process) their reliability is unclear.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further studies are required outside the USA, paying attention to the development of interventions delivered at different levels (individual and societal), the use of reliable and valid outcome measures (including those relating to defining housing status), and to the exploration of adverse outcomes in non-sexually active participants. In particular, there is a need to develop and evaluate sexual health programmes in homeless drug users in the UK.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.