Drug misuse prevention: targeted interventions

Appendix 1 to Evidence Review 2

Contains:
- Evidence tables

National Institute for Health and Care Excellence

Appendix 1A: Evidence Tables **4**
Baer et al. (2007) 4
Braciszewski et al. (2014) 6
Branigan and Wellings (1999) 8
Carlson et al. (2004) 10
Chinet et al. (2007) 12
D'Amico et al. (2009) 14
Elliott et al. (2014) 16
Goldbach and Steiker (2011) 18
Hudson et al. (2009) 20
Kurtz et al. (2013) 22
Lynsky et al. (1999) 24
Nanin et al. (2006) 26
Norberg et al. (2014) 28
Rudzinski et al. (2012) 30
Shrier et al. (2014) 33
Tait et al. (2015) 35
Walker et al. (2011) 37
Walton et al. (2013) 39
Wenzel et al. (2009) 41
Wood et al. (2010) 44

Appendix 1A: Evidence Tables

Baer et al. (2007)

Study details	Population	Intervention/comparator	Results	Notes
Full citation Baer et al. (2007) **Quality score** + **Study type** Randomised controlled trial **Location and setting** USA **Study aims** To improve average treatment responses through modifying the brief motivational intervention design - unblinding intervention group during assessment and allowing counsellors to intervene at any point, providing greater selection and choice for topics of	**Number of participants** n=127 **Participant characteristics** 56% male, 44% female. Average age 17.9 years (SD 1.2). 58% Caucasian, 19% multiracial, 9% Native American, 8% African American, 4% Hispanic or Latino, 2% Asian or Pacific Islander. Average age when left home=13 years (SD 3.4). On the streets for average of 26.0 months (SD 22.9). Abstinence from alcohol and other drugs for average of 8.4 days (SD 9.2) in prior month. 24% reported ever injecting drugs. Authors report no statistically significant	**Intervention** Brief motivational intervention (BMI, n=75) Started straight after baseline interview. Up to 4 BMI sessions total, within 4 weeks of baseline interview. All interviews done by master's level clinicians. Information about patterns and risk related to substance use provided as personalised feedback. Participants picked topics for discussion from booklet of 13 topics. Counsellors aimed to review 2 sections in first session and 3 to 4 in later sessions. Feedback and exercises organised around alcohol, marijuana and other drug use frequency; perceived norms for substance abuse; consequences related to substance abuse; symptoms of substance dependence; personal goals; motivation	**Intervention:** Brief motivational interview (BMI) **Control:** Treatment as usual (TAU) **Outcomes** *Participant satisfaction* Authors state that participants evaluated the intervention positively. Participants indicated that their counsellor understood them (M=4.5, SD=0.58) and was very supportive of them (M=4.6, SD=0.63). Most participants said they would recommend the session to a friend (M=4.4, SD=0.89). Drug outcomes are not presented here. **Analysis** Of 66 youth assigned to BMI, 31 completed all four sessions, 9 completed three sessions, 14 completed two sessions, and 12 completed only one session. The mean duration of time spent in BMI was 73.1 min (SD 43.6). It is not clear how many youth provided satisfaction data for inclusion in the analysis. Data for drug outcomes were reported at baseline, 1 month and 3 months, however, it is not clear when satisfaction data were collected. Participants rated the following on a 5-point scale ranging from *not at all* to *completely*: • the degree to which their counsellor understood them • the degree to which their counsellor was supportive of them • whether they would recommend the intervention to a friend. It is not clear whether participants were assessed verbally or by using a	**Included in review 1** **Limitations identified by the author** Study power: not reported, but study authors state "Randomization was unbalanced during the course of the study to increase experimental power to evaluate differences in response within the BMI group with a final ratio of 3 to 2." **Limitations identified by the review team** Not clear if allocation sequence was randomly generated or how it was concealed. Assessors not blind to allocated intervention. **Other comments** Participants approached and asked to fill in a screening questionnaire by

Study details	Population	Intervention/comparator	Results	Notes
conversation, dividing the intervention into 4 shorter sessions over a 4 week period, providing vouchers for attendance, integrating the intervention into other existing case management services (providing food, hygiene, social activities and case management). **Length of follow up** 3 months **Source of funding** Supported by the National Institute on Drug Abuse Grant R01 DA15751.	differences between groups on demographic measures, rates of substance use, or agency use. Demographics for each group not provided. **Inclusion criteria** 13 to 19 years old. Not stably housed. At least 1 binge drinking episode or used illicit street drugs at least 4 times in prior 30 days. Not received alcohol or drug treatment in prior 30 days (not including Alcoholics Anonymous or Narcotics Anonymous). In the urban area for more than a week and no specific plans to leave in next month. **Exclusion criteria** None stated.	for change; and social influences. Counsellors could also use 3D objects to demonstrate risk relationships (e.g. drug use and housing risk) and normative comparisons (e.g. 100 small objects to represent percentages of groups). Counsellors aimed to be non-confrontational - provided advice about risk reduction only with permission. Counsellors were trained and supervised via session audiotape review by 1 study author. **Comparator** Treatment as usual (n=52 [not explicitly reported, calculated from 127 recruited participants minus 75 assigned to intervention group]) No details provided.	questionnaire.	counsellors at a drop-in centre. 254 youth screened, half were ineligible. Number approached but refusing to be screened was not recorded. Participants assigned using an urn randomisation program balanced for gender and ethnicity (minority vs. non-minority). Brief check-in at 2 months for sample retention. Follow-up interviews by clinician or project director who did not administer the intervention or baseline interview. Participants received $20 to $35 for completing the baseline and follow-up interviews. Participants in intervention group received $10 vouchers for each completed session.

Braciszewski et al. (2014)

Study details	Population	Research parameters	Results	Notes
Full citation Braciszewski et al. (2014) **Quality score** + **Study type** Focus group study **Location and setting** Northeast USA **Aim of the study** To assess the acceptability and feasibility of potential approaches to developing a relevant substance use intervention for youth in foster care. **Source of funding** None declared	**Number of participants** n=23 **Participant characteristics** All participants were female, 87% were Caucasian, 9% were African American and 4% were Hispanic/Latina. Administrators and staff reported first-hand experiences with foster youth populations ranging from 1 to 23 years (M=6.0, SD=6.7) **Inclusion criteria** All staff and administrators at the agency were invited to participate. The only inclusion criterion for foster parents was that they were currently fostering.	**Data collection** Individual focus groups were conducted with 3 groups, all at an agency serving foster youth: • foster care staff • administrators • parents Focus groups lasted approximately 1 hour. A semi-structured script prompted participants to provide feedback on the feasibility and acceptability of 2 potential interventions adapted from programmes commonly used in non-foster care populations: • brief motivational interviewing (MI) to be conducted by trained alumni of foster care • screening, brief intervention, and referral to treatment (SBIRT) conducted by trained case managers or health care workers	**Key themes** • Trust and connections Each of the groups expressed concern about the brevity of the proposed interventions as they believed that there would be insufficient time for foster youth to develop a relationship with the person delivering the intervention: "*…they're not going to trust who's ever talking to them, and I mean even like with professionals it takes a long time for a lot of these kids to really open up and really verbalize what they're going through"* Participants also expressed concern that abruptly ending an alliance between foster youth and the interventionist could be damaging as these youth often make significant attachments with mentor-type figures only for that person to quickly exit their lives: "*…the one thing, for certain, that they don't have, at this moment, is a grounded, permanent, adult connection. The idea of introducing them to somebody…And we know that…we're going to terminate that connection? That's…not where we want to go. We're thinking about kids who already have attachment issues…So, if our best case scenario is a connection will be made and we're going into it knowing that that connection will not be sustained, I guess that gives me pause to have concern about that…for this population of kids."* • Disclosure: empathy and consequences Participants in all 3 groups discussed the high likelihood that foster youth would be unwilling to disclose alcohol or drug use, especially to a service provider or case manager. One potential reason might be a fear that the interventionists would lack understanding or empathy for their background: *"They're not going to say* [anything] *because Dr. Bob doesn't know where* [they've] *been, he only knows what* [their] *chart says…It's another person in a white coat telling* [them] *that* [they've] *got to stop doing drugs or stop drinking alcohol."* Participants also recognised that foster youth may not disclose alcohol or drug use due to	**Limitations identified by author** Small sample size, limited sample representativeness (e.g. exclusively female participants) and exploratory approach restrict generalisation of results. No foster youth included in the focus groups. **Limitations identified by review team** Not clear who facilitated the focus groups. Analysis methods only very briefly reported – not clear how robust their approach was (e.g. whether 2 researchers independently coded focus group transcripts etc.)

Study details	Population	Research parameters	Results	Notes
	Exclusion criteria None stated.	A thorough description of MI theory and the empirical rationale for inclusion of the 2 interventions was provided. Participants were also asked to design a hypothetical intervention using their own experiences of foster youth's needs and culture, and ideas generated from the description and subsequent discussion of the previous 2 interventions. **Method of analysis** Focus group sessions were audio recorded and then transcribed and analysed for thematic content using a grounded theory approach.	perceived or real consequences within the system: "*There's always going to be that fear that it will go to the social worker and everybody's going to know what they're doing and then, what they're going to have to deal with after.*" Due to concerns about confidentiality and power relations, participants suggested that foster care staff should not act as the interventionist as this could create barriers to client honesty about substance use or other forbidden behaviour: *"…not specifically their case manager, because they wouldn't want to divulge that information that they're smoking that much…I think that it would just be all these thoughts in their head that they wouldn't really divulge the correct information."* • Relevance and creativity Participants agreed that interventions needed to be engaging, relevant and creative in order to affect substance use. Information about substance use or MI language could be helpful if the conversation wasn't forced or mandatory: "*Yeah, I think that's* [engaging the youth in rethinking their substance use] *the best thing. You think they're not listening while they're texting or talking to their friend, but it stays in their head.*" One participant suggested that texting was a culturally preferred way to communicate with foster youth: "*…most kids want you to text them. They don't really want to talk to you face-to-face all the time…they want the help, but 'send me a text message'. You have to find some way that you're going to relate to them".* Staff raised that presenting foster children with population-level statistics about alcohol and drug use was generally ineffective but felt that this information could be very useful if tailored suitably: "*We do…go over all the statistics, although it would be a better impact if it was individually-based that included their risk.*"	**Other comments** Participants were compensated $25 for taking part.

Branigan and Wellings (1999)

<table>
<tr><th>Study details</th><th>Population</th><th>Intervention/comparator</th><th>Results</th><th>Notes</th></tr>
<tr>
<td>Full citation

Branigan and Wellings (1999)

Quality score

-

Study type
Mixed methods study (cross sectional surveys + qualitative interviews)

Location and setting

London, UK

Study aims

To explore the public acceptabilit</td>
<td>Number of participants
Pre-test survey: n=90*

Post-test survey 1: n=88*

Post-test survey 2: n=90*

Post-test interviews: n=18*

It is not clear whether these 4 samples were distinct or whether the same individual could participate in more than 1 survey or interview.</td>
<td>Intervention

The London Dance Safety campaign aimed to minimise harm by providing information in a format and medium that was acceptable to London clubbers. The premise was that club-goers need accurate information to make informed choices and minimise the risk associated with drug use in clubs, rather than strict admonitions to avoid drug use altogether. Messages were informative rather than didactic. The language and tone were pre-tested with focus groups of clubbers.

The intervention comprised:

1. Information dissemination aimed at changing behaviour at the individual level, delivered via a booklet and a series of 6 posters.
• Information via posters

Posters were eye-catching, colourful, informative and identifiable and attractive to clubbers. Posters incorporated the style of 'super club' flyers and included the telephone number for the campaign</td>
<td>Outcomes

<u>Quantitative data</u>
Acceptability of the London Dance Safety campaign materials
<table>
<tr><th></th><th>Post-test survey 1</th><th>Post-test survey 2</th></tr>
<tr><td>% liked the poster designs and approach</td><td>87%
(n=57)</td><td>85%
(n=60)</td></tr>
<tr><td>% thought campaign approach was good idea</td><td>98%
(n=57)</td><td>93%
(n=60)</td></tr>
<tr><td>% would keep the Vital Information Pack (VIP)</td><td>87%
(n=88)</td><td>89%
(n=90)</td></tr>
</table>

In both surveys, a high proportion of respondents indicated that they liked the poster designs and approach, thought the campaign approach was a good idea, and would keep the VIP.

The authors state that there was evidence that exposure to the campaign among the target audience of London clubbers was high: in the pre-test survey, only 9% of respondents reported having seen a drugs information poster in the past month but this rose to 45% and 56% in the 2 post-test surveys respectively. The authors stated that the London Dance Safety campaign was the only ongoing drug prevention poster campaign being promoted in London during this period.

<u>Qualitative data</u>
The authors reported that views expressed in the qualitative interviews supported the survey finding that clubbers liked the poster designs and approach:

"The thing that struck me was the very accepting nature towards it, which was quite unusual compared to previous drug campaigns"</td>
<td>Limitations identified by the author

None acknowledged.

Limitations identified by the review team
No reporting of participant characteristics (age, gender, ethnicity, drug use etc).

Sampling method described as 'purposive' but not described any further; unclear how participants were selected nor what the response rate was.

Potential missing data – the quantitative results data indicate that not all respondents answered the questions about</td>
</tr>
</table>

Study details	Population	Intervention/comparator	Results	Notes
y of the harm minimisation approach used by the London Dance Safety campaign, an intervention designed to address recreational drug use in local dance venues. **Length of follow up** Pre-test and post-test data collected but time frames not reported. **Source of funding** None stated.	**Participant characteristics** None reported. **Inclusion criteria** None explicitly stated but survey respondents were described as "London clubbers' while interview participants were described as "regular London clubbers". **Exclusion criteria** None stated.	helpline. Broad spectrum information delivery methods of reaching the target population were used with 10,000 posters targeting 6 common dance drugs displayed throughout the London Underground and bus network over 3 months. • Information via Vital Information Pack (VIP) Booklet The VIP contained information on individual dance culture, associated drugs, the law, first aid, and useful contact numbers. Facts about staying safe when using drugs were highlighted to enable young people to make informed decisions and dispel myths. The tone was factual and non-moralistic with information presented in a way that emulated the 'trainspotting' ethos of club culture. To add credibility, the inside cover featured an endorsement from a well-known figure in dance/drug culture. 150,000 booklets were distributed by drug outreach workers throughout London clubs in a series of London Dance Safety-sponsored club nights across the city. 2. A multi-level training programme (NB: This component is not evaluated in this paper)	*"Full of information, the facts and figures of it, rather than the actual government hype."* The authors report that the interviews also showed that the target audience were impressed by the quality and the nature of the information presented. They appreciated the approach of presenting simply 'the facts', and the safety guidelines for clubbing: *"It's a really good idea and reminds me a lot of the kind of campaigns that they've got for condoms. It's a really similar approach to not being judgemental in addressing an audience which might be likely to practise in this case drug use, and indicate a safer way to do it."* The authors state that overall, the opinions expressed about the campaign philosophy were positive and this seemed to be attributable to the realistic tone and honest, non-judgemental style: *"I think it's a brilliant idea. I think it's the first time that any drug campaign has the right thrust. Rather than telling people not to take drugs, it's accepting that they do, tells them how to do it properly and tells them how to help their mates out, and not be stupid about it and not die."* *"I think it's an excellent idea, because it's approaching it in a new way. It's almost expecting that people are going to take drugs and telling them how they should take them safely, which I think is good, because I don't think you're ever going to stop people taking drugs."* Some concerns were raised about the possible adverse effects of the mass media approaches used during the campaign; this was due to a belief that people outside the target audience who came into contact with the campaign materials might find them offensive: *"It's gotta be something that's targeted at a much more specific audience, which either is going to come into contact with it* [drugs] *or has come into contact with it* [drugs], *rather than a mass audience where people aren't informed and might be shocked by it* [poster]." **Analysis** Survey and interview questions explored the acceptability, appropriateness and usefulness of the materials as well as assessing how the campaign was received generally. Data from the campaign helpline, correspondence to local Drug Actions Teams from the public, and media coverage of the interventions were all monitored for evidence of adverse reactions to the intervention in the target and non-target groups. It is unclear how data from qualitative interviews were collected or analysed.	acceptability. This discrepancy is not explained in the paper although it may just be that responses were only collected from those who reported having been exposed to the campaign in the first place. Data collection and analysis methods not described for the qualitative interviews. **Other comments** Not clear whether participation in either the surveys or interviews was incentivised. Paper also explored reactions to the campaign among people outside the target group of clubbers (e.g. the media). These findings are not presented here.

Carlson et al. (2004)

Study details	Population	Research parameters	Results	Notes
Full citation Carlson et al. (2004) **Quality score** - **Study type** Focus group + interview study **Location and setting** Dayton and Columbus, Ohio, USA **Aim of the study** To discuss the increased use of ecstasy in diverse settings as well as the increasing diversity of users, perceived risks, and barriers to prevention among young people. **Source of funding** Research supported by a grant from the National Institute on Drug Abuse. Some of the data were collected	**Number of participants** Focus groups: n=16 (conducted in Dayton and Columbus) Interviews: n=14 (conducted in Columbus) **Participant characteristics** Participants aged 18-31 (M=22.4); 50% female. All participants were white and all were heterosexual. Length of ecstasy use ranged from 6 months-4 years. Occasions of use ranged from 2 to over 150 times; number of tablets per occasion ranged from ½ to 8 (M=2.5). Frequency of use varied from once weekly to once every 1-6 months. Authors stated that all participants could be defined as “recreational” users rather than people who were using it for ‘therapeutic or spiritual reasons’. **Inclusion criteria** • Aged over 18	**Data collection** Focus groups and individual interviews lasted 1-2 hours. No further detail reported regarding session content. Participants were recruited using convenience and snowball sampling methodologies. **Method of analysis** Both focus groups and interviews were audio recorded and transcribed verbatim. Transcripts were entered into a text management software programme. A grounded theory approach was taken to open coding of the data whereby research codes for pre-defined and emergent categories were generated to index segments of text that referred to specific themes. Codes were searched, compared, and text concerning specific themes were summarised.	**Key themes** *Perceptions of risk and barriers to prevention* Authors noted that convincing young people that there are significant health risks associated with ecstasy use is a major challenge to prevention efforts. Participants seemed much more open to harm reduction approaches, rather than what they perceived as “war on drugs” messages, for example: *“What I think the problem is in, is the education just isn’t there. These kids are coming up, “Say no to drugs, say no to drugs.” Everybody they know is doing ecstasy. Some of the straight A students are doin’ ‘em. So, okay, “the say no to drugs people are full of it. These people are lying to us about it. You’re not tellin’ us the truth.” So, they don’t listen. I don’t know how anybody who questions authority is gonna figure out how these people can be successful if they’re taking it* [ecstasy] *moderately. Yeah if they’re overdoing it* [ecstasy] *then, you know, that’s a different story.”* *“When you think about drugs from a government standpoint, it’s different. I wouldn’t listen to it as much as if a person like a social worker was tellin’ me about it face-to-face, kind-of a ‘cool’ person”* To minimise perceived risks of ingesting something unsafe, participants reported trying to obtain ecstasy from trusted friends or from people who have tried a particular ‘brand’ before. 2 participants stated that they look on various websites such as Dance Safe to verify the contents of particular brands they have purchased. Participants wanted general information on the risks of ecstasy use so they could make their own informed decisions about using it in the future: *“I’m sure you read the Time magazine article. That seemed to be*	**Limitations identified by author** Small convenience sample comprising only white, heterosexual participants limits generalisability to wider population of recreational ecstasy users. **Limitations identified by review team** Data collection methods only very briefly reported – no description of focus group content or interview guides. **Other comments** Participants recruited using convenience and snowball sampling techniques. Focus groups conducted in 2001, interviews conducted in 2001-2002. Participants received $20 for taking part.

for the Ohio Substance Abuse Monitoring Network (OASM); OSAM supported by a contract with the Ohio Department of Alcohol and Drug Addiction Services.	• Self-reported ecstasy use at least once in past 12 months • Not currently receiving drug abuse treatment **Exclusion criteria** None stated		*an honest approach to MDMA, and that made me believe it more. I had more respect for that guy in that article than anything I've ever see because it was a fair representation."* Authors concluded that without understanding ecstasy use from the perspective of active users, prevention and/or intervention approaches are unlikely to be successful.	Paper also reported themes regarding initiation to ecstasy, use in difference settings, and several case studies. These findings are not reported here.

Chinet et al. (2007)

<table>
<tr><th>Study details</th><th>Population</th><th>Data collection/analysis</th><th>Results</th><th>Notes</th></tr>
<tr>
<td>Full citation

Chinet et al. (2007)

Quality score

-

Study type

Cross-sectional study

Location and setting
A French-speaking region of Switzerland

Study aims
To investigate the lifestyle and substance use habits of dance music event attendees together with their attitudes toward prevention of substance use, harm reduction measures and healthcare resources.</td>
<td>Number of participants
n=302

Participant characteristics

Participants were aged 16-46 years (M=22.70; SD=4.65). Three-quarters of the subjects were younger than 26. Sample was 60.4% male (n=177) and 39.6% female (n=116).

Substance use prevalence (n=293):
<table>
<tr><th></th><th>Past 30 day use</th><th>Life-time use</th></tr>
<tr><td>Cannabis</td><td>53.8%</td><td>68.8%</td></tr>
<tr><td>MDMA/ecstasy</td><td>22.7%</td><td>40.4%</td></tr>
<tr><td>Amphetamines</td><td>9.9%</td><td>26.4%</td></tr>
<tr><td>Methamphetamines</td><td>8.7%</td><td>20.7%</td></tr>
<tr><td>GHB</td><td>5.1%</td><td>18.8%</td></tr>
<tr><td>Nitrous oxide</td><td>7.3%</td><td>24.4%</td></tr>
<tr><td>Acid/LSD</td><td>9.7%</td><td>22.4%</td></tr>
<tr><td>Other hallucinogens</td><td>9.1%</td><td>35.6%</td></tr>
<tr><td>Cocaine</td><td>20.7%</td><td>35.9%</td></tr>
</table></td>
<td>Data collection

The study sample was randomly recruited at the entrances to 6 dance music events which were held in June and July 2004 in a French-speaking region of Switzerland (population approximately 600,000). The events included clubs and open-air raves, and featured both ‘pure dance music’ and ‘mixed styles’. Each of the targeted events had between 150-500 attendees.
Data were collected via a short self-administered questionnaire. This was developed and tested among dance music event attendees prior to the actual study.

Items related to drug consumption investigated lifetime and current (past 30 days) use, mixed use of drugs (i.e. combined use of several substances on the same occasion), and substance-related problems.
Participants’ opinions’ regarding the need for prevention and harm reduction measures (including ‘information’, ‘counselling’, ‘free water’, and ‘emergency staff’) were collected via the following question: ‘How important is it for you that these things are available at parties?’ Possible response options were ‘not important’, ‘important’, ‘vital’ and ‘don’t know’.</td>
<td>Outcomes
Opinions of the need for prevention measures

NOTE: Data are presented graphically in the paper so it is not possible to tabulate scores here; approximate findings are therefore described narratively.

Respondents seemed to be particularly receptive to harm reduction measures such as the presence of emergency staff and cool water availability on site. On a scale of 0 to 3 (0=not important at all; 3=very important), the mean score for the importance of emergency staff presence was over 2.5, the mean score for the availability of free water was over approximately 2.3, and the mean score for the provision of information was over 2.0. The importance of providing access to counselling appeared slightly less important.

Participants’ perceptions of prevention measures varied according to their level of drug use. Poly-regular users felt it more important to have fresh water available than alcohol-THC and poly-occasional light users (F=6.27, p<0.001). Poly-regular and poly-occasional heavy users considered it more important to have the opportunity to talk to somebody at a prevention stand compared to alcohol-THC and poly-occasional lights users (F=7.91; p<0.001).

When party drug users (n=146) were asked</td>
<td>Limitations identified by the author

Response rates ranged from 85%-100% depending on the event; no significant differences according to the type of event.

Study power: Power calculation not reported.

Authors state that the quantity and quality of the data collected was ‘voluntarily restricted’ in order to ensure a satisfactory response rate. Responses for most items had a multiple-choice format to limit completion time and encourage participation. The survey was self-administered; possibility that attendees may not have adequately understood the questions.

Limitations identified by the review team

Given the location in which participants were recruited, it seems plausible that some respondents may have been under the influence of alcohol and/or illicit drugs when completing the questionnaire.</td>
</tr>
</table>

Study details	Population	Data collection/analysis	Results	Notes
Length of follow up N/A **Source of funding** Authors state that the study was performed without financial support.	<table><tr><td>**Heroin**</td><td>2.5%</td><td>11.6%</td></tr><tr><td>**Medical drugs***</td><td>10.0%</td><td>20.3%</td></tr></table> *It is not clear if the term 'medical drugs' refers to medicines used as prescribed *or* the misuse of medicines. 4 patterns of substance use identified (these categories formed the basis of subgroup analyses): 1. 52% were alcohol and/or cannabis only users ('alcohol-THC group') 2. 20% were 'poly-occasional light users' having used up to 3 party drugs**, a maximum of once weekly 3. 22% were 'poly-occasional heavy users' as defined by having used more than 3 party drugs or having used drugs more frequently 4. 6% were daily poly-drug users ('poly-regular group') **The authors do not define precisely which drugs they categorised as 'party drugs' **Inclusion criteria** None reported; each person arriving at the selected events was offered the opportunity to participate. **Exclusion criteria** None reported	**Analysis** Univariate statistics are presented to summarise participants' responses to questions about prevention and harm reduction measures. Differences in responses are compared between sub-groups with different levels of reported drug use; the authors do not state which statistical tests or methods were used for these subgroup comparisons.	about their intention to use pill testing if it were available, 27.4% said that they would never use it, 31.1% would use it systematically before taking a pill, and 41.6% indicated that they wouldn't use it unless they did not know the substance, the dealer or both.	Survey items are not comprehensively reported; it is not clear exactly what was meant by 'information' and 'counselling' in relation to prevention/harm reduction measures. Unclear if missing data were an issue and how this was accounted for. **Other comments** Participation was anonymous and incentivised by entrance into a prize draw to win a ticket to a prominent dance music event. This paper also reports findings related to substance-related problems and access to healthcare resources as well as more detailed information about respondents' substance use habits. Only outcomes directly relevant to prevention or harm reduction are presented here.

D'Amico et al. (2009)

Study details	Population	Research parameters	Results	Notes
Full citation D'Amico et al. (2009) **Quality score** - **Study type** Qualitative focus group and interview study **Location and setting** USA (location not specified but authors based in Santa Monica, California) **Aim of the study** To develop	**Number of participants** Interview participants: n=20 Focus group participants: n=9 **Participant characteristics** <u>Interview participants</u>: 20 young women drawn from a sample of 9 shelters. 9 participants were African American, 6 were Hispanic/Latina, 4 were white and 1 participant was mixed ethnicity. Women were 18-19 (n=7), 20-22 (n=7), and 23-25 (n=6). 8 women reported using alcohol to the point of being intoxicated, 5 reported marijuana use, and 1 reported crack cocaine use in the last 6 months. 12 reported that they had made reductions	**Data collection** A theoretical framework, interviews with women and focus groups with community experts and shelter providers were used to develop content for the intervention. The theoretical framework was based on social learning theory (SLT) and decision making theory (DMT). <u>Semi-structured interviews</u> Face-to-face semi-structured interviews (approx. 1 hour) were conducted by trained female interviewers and included close-ended questions about AOD use in the past 6 months as well as open-ended questions on attitudes to AOD use and abuse. <u>Focus groups</u> 2 focus groups designed to elicit feedback on developing a prevention programme for impoverished women. Key AOD-related questions included: • *Drawing on your expertise and your experiences working with impoverished and homeless young women, especially those staying in shelters, what do you think marks a successful transition to young adulthood for these women?* • *What are some major barriers to a successful transition to adulthood that are faced by these young*	**Key themes** **Interviews** <u>What would help young women avoid using AOD</u> • Support (formal and informal) *"Role model or mentor", "Counseling* [sic] *or program* [sic]", *"Being educated about it", "I pray",* *"Loving themselves", "If they have families that…encourage them not to use"* • Values *"You see these people, and it's like, I don't want to turn out that way, ever."* *"If I didn't have my baby, I'd still be whatever I was doing before I had her."* **Focus groups** <u>Many young women see these problems as normative</u> "*AOD use, violence and sexual risk-taking seem normal; so talking about how this is NOT normal would be helpful"* <u>You need to empower young women so they will learn</u> Respondents indicated that women should be given resources and taught how to use services. *"What would help them is allow them to set their own goals"* <u>Use a harm reduction approach</u> Participants indicated that it would be helpful to present options for women to choose from. *"We can't expect them to stop on the spot, but can start the process"*	**Limitations identified by author** None acknowledged **Limitations identified by review team** Response rate not reported. Limited information about characteristics of focus group participants. Questions asked about drug use along with alcohol use – findings may relate to AOD use as a whole rather than being specific to illicit drugs. Analysis

a prevention programme for homeless young women that targets alcohol and other drug (AOD) use, HIV risk behaviours, and victimisation through intimate partner violence [pilot study reported in Wenzel et al, 2009] **Source of funding** Supported by a grant from the National Institute of Drug Abuse	in AOD use on their own. 9 reported experiencing verbal abuse, 6 reported physical abuse, and 2 reported sexual victimisation. Focus group participants: 9 community experts and providers recruited based on their work in shelter settings or other work for the benefit of homeless women (no demographic information reported). **Inclusion criteria** Shelters: • Served women aged 18-25 • Served a majority homeless population **Exclusion criteria** Settings: • Shelters for domestic violence • Residential AOD treatment sites • Exclusively served a Spanish-speaking population	*women?* • *What are some specific things that a program* [sic] *might do in the shelter setting to help reduce alcohol and drug use by women ages 18 to 25?* • *What kinds of cultural considerations should be taken into account in such programs* [sic]*?* • *Alcohol and drug use…occur in a larger context where the women are dealing with poverty and instability, limited employment and educations, and simply making it day to day. What could be done to address this context so that women might better take advantage of such programs* [sic]*?* **Method of analysis** Interviews audio recorded and transcribed and Transcripts processed in a qualitative text management software programme. Text relating to AOD use, risky sexual behaviour and partner violence was marked. Responses to each of the key areas were examined and sorted into categories based on thematic similarity. A codebook was built up and then applied to the entire text. The saliency of each theme was assessed by counting the number of times each was mentioned by different respondents. Focus groups were audio recorded and detailed notes were taken. A similar procedure was used to identify themes arising from transcripts and notes as was used with the interview data.	*"Permission goes a long way…people are capable of making the right decisions if they feel that they have it [permission]"* Cognitive behavioural techniques were also suggested as a specific thing that a prevention programme in the shelter might use to reduce AOD use. The facilitator needs to be non-judgmental – the issues transcend cultures *"You have got to do something else, something non confrontational; use a non value laden approach; don't point a finger at them"* *"You just have to create an environment that makes it safe for them to share."* Barriers to women's successful transition to adulthood Barriers noted by participants included a lack of housing and health care, poor decision-making skills, and attention to personal safety. Low self-worth and working to survive day-by-day were emphasised as contextual factors that may make it harder for homeless women to mature emotionally and negotiate service systems. A successful transition to adulthood A successful transition should be benchmarked differently for non-homeless women with help given to assist them make better decisions and care for themselves: *"They need to know it's not just their case manager caring for them, they have to care about themselves."* **Developing the intervention** Authors report that the interview/study group findings support the value of: • using a non-confrontational and non-judgmental method when presenting information, especially when challenging normative beliefs • motivational interviewing approaches in discussing sensitive issues such as AOD use. • providing women with knowledge and conducting skills training	methods not reported. **Other comments** Participating shelters received $100 honorarium. Women participating in interviews received $30. African American women were oversampled because they are disproportionately represented in shelters. This paper also investigated the prevention of risky sexual behaviour and intimate partner violence; these findings are not presented here.

Elliott et al. (2014)

<table>
<tr><th>Study details</th><th>Population</th><th>Intervention/comparator</th><th>Results</th><th>Notes</th></tr>
<tr>
<td>Full citation

Elliott et al. (2014)

Quality score

+

Study type
RCT

Location and setting

North-east USA

Study aims
To assess the short-term effectiveness of eCHECKUP TO GO (e-TOKE), a web-based intervention, in changing marijuana involvement and perceived norms in undergraduate university students.

Length of follow up
1 month

Source of funding</td>
<td>Number of participants

n=317
Intervention: n= 161
Control: n=156

To check for assessment reactivity, half of the participants in each condition completed the full assessment at baseline while half completed a brief assessment that did not include any marijuana use assessment.

Participant characteristics

Participants were aged 18-23 (M=19.34; SD=1.22). 52% of the sample were female, 78% of the sample were white.

No significant baseline differences between intervention and control groups were found.</td>
<td>Intervention

n=161 (full baseline assessment=77; brief baseline assessment=84)

The Marijuana eCHECKUP TO GO (e-TOKE), a self-directed, web-based marijuana educational programme designed to prompt self-reflection and consideration of decreased use. Participation typically takes 20 minutes although a thorough review of all material can take 45 minutes.

Programme assesses:
• marijuana use
• pros and cons
• perceived norms
• alcohol and cigarette use
• substance-related expenses
• other valued activities
• readiness to change

Participants receive:
• feedback (e.g. on norms and annual expense of substance use)
• health information
• campus resource</td>
<td>Intervention: Web based assessment and feedback

Control: Assessment only

Outcomes
Participant satisfaction with e-TOKE intervention

Of the 149 intervention participants who responded to the evaluation questions about participation, only 84 (56%) remembered completing it. These 84 participants' satisfaction with e-TOKE is summarised below.

<table>
<tr><th>Time</th><th>Minutes</th></tr>
<tr><td>About how much time did the programme take you (in minutes)?</td><td>22.30 (11.42)</td></tr>
<tr><td>Attention</td><td>1= minimal; 3= some; 5= a lot</td></tr>
<tr><td>How much attention did you give the programme?</td><td>3.48 (0.90)</td></tr>
<tr><td>Utility</td><td>0= not at all useful; 4= very useful</td></tr>
<tr><td>The feedback about how your use compares to that of other students</td><td>2.24 (1.23)</td></tr>
<tr><td>The feedback about how much money you spend on marijuana, alcohol, and tobacco</td><td>2.27 (1.24)</td></tr>
<tr><td>Thinking about other things that are important to you, and other ways to spend your time.</td><td>1.72 (1.23)</td></tr>
<tr><td>Considering ways to begin decreasing your marijuana use</td><td>1.28 (1.16)</td></tr>
<tr><td>Campus resources (e.g. phone numbers to call)</td><td>1.08 (1.26)</td></tr>
<tr><td>Satisfaction</td><td>0= strongly disagree; 4= strongly agree</td></tr>
<tr><td>This programme was an appropriate length (not too time-consuming)</td><td>2.20 (1.12)</td></tr>
<tr><td>The programme was easy to use</td><td>3.34 (0.75)</td></tr>
<tr><td>It was useful that programme was available online</td><td>3.42 (0.86)</td></tr>
<tr><td>I would recommend this programme to my friends who use marijuana</td><td>1.67 (1.27)</td></tr>
</table>
</td>
<td>Included in review 1

Limitations identified by the author

1 month follow up as brief.

Loss to follow up: 1.6% (completers and non-completers did not differ on any baseline variables).

Study power: Power calculation not reported.

Participants were psychology student volunteers; unclear if this group would resemble specific populations who may be targeted by such interventions e.g. mandated or help-seeking students.

A substantial minority did not remember completing e-TOKE which may have contributed to the lack of effect for use.

Limitations</td>
</tr>
</table>

Study details	Population	Intervention/comparator	Results	Notes
None stated.	**Inclusion criteria** Participants recruited from psychology courses at large private university. Students were eligible if they reported past-month marijuana use. **Exclusion criteria** None stated.	information • tips to decrease use (e.g. set a limit, hide paraphernalia) **Comparator** n=156 (full baseline assessment=85; brief baseline assessment=71) Assessment only.	Participants gave the highest utility ratings to feedback on norms and money spent on use. Responses also indicated that they liked the online format and found it easy to use. However, participants indicated that they were not likely to recommend e-TOKE to friends. **Analysis** Participants reported on time and attention spent on e-TOKE. They also reported their satisfaction with various sections. 158/161 (98.1%) participants assigned to the intervention group went on to participate. Non-completers did not differ on age, gender, use frequency, marijuana problems, abuse or dependence symptoms, norms, or social desirability, but did differ in ethnicity.	**identified by the review team** **Other comments** Drug use outcomes are reported in a separate evidence table for Review 1.

Goldbach and Steiker (2011)

Study details	Population	Research parameters	Results	Notes
Full citation Goldbach and Steiker (2011) **Quality score** + **Study type** Focus group study **Location and setting** A midsized city in southern USA **Aim of the study** To qualitatively explore how LGBT-identifying youth interpret and tailor an evidence-based prevention curriculum, with the goal of making recommendations for making the curriculum more culturally relevant for their peers.	**Number of participants** n=8 **Participant characteristics** Of the 8 participants, 3 self-identified as gay males, 3 as lesbian females, and 2 did not identify their sex or sexual orientation. Participants were aged between 14 and 17 and included 5 Caucasian individuals (2 female, 2 male, 1 non-identifying) and 3 Hispanic individuals (1 female, 1 male, 1 non-identifying). **Inclusion criteria** • Aged 12-18 • Considered himself or herself a participant in	**Data collection** Participants completed 2 focus groups aimed at exploring their perceptions of substance abuse prevention programmes. They were also asked to participate in several sessions where they suggested adaptations to an existing programme, *Keepin' it Real* (KiR), to make it more culturally relevant for their peers. *Keepin' it Real* teaches critical thinking skills, communication skills, conflict resolution and drug refusal skills. NOTE: KiR is not evaluated in any of the studies included studies for Review 1. All data collection was completed in person with a member of the research team present. A grounded theory approach was taken with brief, overarching questions developed to guide the initial focus group sessions, and loose (but systematic) guidelines were developed for adapting the curriculum workbook. The initial focus group questions were: • What are the things that stress you out? • How do you cope with stressful things? • Is there a difference for you when trying to cope with daily things, as opposed to more important life events? • What drugs are popular? • Are any drugs considered "not okay" to use? • What kinds of things influence young people to use or not use drugs? • If you had a younger sibling or friend who approached you because they wanted to try a drug, what would you say or do? • Did you go through any drug prevention	**Key themes** • Participants stressed the need for gender neutrality in adaptation. A conscious effort was made to avoid gender-specific names (e.g. Daniel) and pronouns (e.g. him, her). Instead, they suggested using gender-non-specific names (e.g. Jessie) and either using third-gender pronouns (e.g. hir) or avoided the use of pronouns entirely. For example, a scenario that once read "*A girl you like…*" was changed to "*A person you like…*" Participants felt strongly that it was important that all scenarios could be generalised to the spectrum of gender identity as well as sexual orientation. • Participants identified content that didn't require adaptation and were keen to stress that many issues they faced were common to all young people. Responses suggested that participants were sensitive to differences between themselves and their heterosexual peers, or the perception that others believed they were significantly different: "*I don't agree with the blanket statement that gay people have more problems. But that is typically a big thing* [that people say]. *You have a lot of the problems that the straight community has, but also have the problems that the straight community puts on you, like, what you are. It just creates more problems for you. I mean, you don't know what's going on with other people, they could have a lot more problems than you, but there's just a lot more frequent problems in the gay community. I mean, that's just why they would use more* [drugs] *, they have continuous stress".* However, there was acknowledgment that LGBT	**Limitations identified by author** 6/14 youths who received consent forms did not return them. As the study site was a community drop-in centre, it was not possible to follow up these 6 individuals to explore reasons for non-completion (including any potential concerns about confidentiality). The agency where the study was conducted had clear guidelines about youths feeling comfortable with their sexuality and not being required in any way to identify themselves within a certain sexual context. Although the researchers maintained these standards throughout the study, it would have been helpful to understand the differences between the participants and any common themes or divergences across groups (e.g. transgender youths or lesbians). There are limitations to generalising study findings to the entire LGBT youth population as only 8 participants were involved in

Study details	Population	Research parameters	Results	Notes
Source of funding This study was part of a larger multisite study funded by the National Institute on Drug Abuse (NIDA).	the agency where study took place • Obtained consent if aged under 18 • Signed assent as a desire to participate **Exclusion criteria** None stated.	programmes in high school? What was your experience of them? Participants were then asked to systematically make adaptations to the KiR workbook. Criteria for making changes required that the "core themes" of workbook scenarios were retained but then tailored to meet their culture. For example, participants were encouraged to change names, places, and language, without changing the core concepts in each scenario. In order for workbook changes to be agreed with the authors/publishers, participants had to agree that at least 75% of them had either personally experienced the situation or knew someone else who had. **Method of analysis** Methods included template analysis and a constructivist grounded theory approach. Focus group sessions were audio taped and transcribed verbatim, and adaptation session included diligent note taking. Transcripts were analysed for themes related to substance use, attitudes towards substances, attitudes towards the curriculum, and helpful prevention strategies for participants. 2 researchers independently analysed transcripts and assigned codes Researchers met after coding transcripts and workbook changes to achieve consensus on preliminary codes; these codes were then sorted into categories, which produced emergent core themes to reflect major findings in the data. Memo writing was also used for organising and interpreting data findings. Memos were organised by coding theme.	youths may experience increased stresses, which can lead some to use alcohol or other drugs: "…*in the corporate workplace, if their boss finds out that they're gay, they might face some discrimination such as not having the same opportunity for advancement, they can't really work their way up the corporate ladder…I'm sorry but that's just how it is. And because of that stress, that oppression, I think gay people are more likely to turn to drugs as a way to cope."* • Participants made references to sexual acts in their workbook scenarios and discussed sex much more frequently than other population groups who participated in the wider research project to adapt KiR. It is likely that these youths consider sex and sexual identity a core component to their life experience. For example, a KiR refusal skills scenario that originally read "*Let's ditch math class*" was changed to "*Let's ditch math class and have sex*". Though the scenario did not necessarily require changing, the participants felt it was important to infuse sexuality into many of the changes they made. • Participants readily discussed their beliefs around substance use in the adult population. 2 youths made extensive comments about "what happens in the bathrooms" at gay bars, as well as their perceptions of the amount of substance use that occurs in the adult LGBT population. Data indicate that some LGBT youths believe that drug and alcohol use, and other high-risk behaviours, happen in adult gay situations. Whether accurate or not, the youth's focus on adult behaviours was a recurring theme throughout the focus groups and adaptation sessions.	the study. A significant proportion of the LGBT youth population do not participate in community drop-in centres like the one involved in this study. Many individuals who have not yet "come out" may hesitate to engage in these types of programmes. It is also likely that subgroups of the LGBT population (e.g. transgendered youths) may have different responses to prevention activities. **Limitations identified by review team** Findings are not comprehensively reported; key themes are highlighted but there is not a great deal of supporting detail. Intervention adaptations not clearly summarised. **Other comments** Participants recruited from a community drop-in centre for LGBT youths. Participants offered a maximum $30 incentive for taking part ($15 for first focus group and $15 for post-workbook adaptation focus group)

Hudson et al. (2009)

Study details	Population	Research parameters	Results	Notes
Full citation Hudson et al. (2009) **Quality score** + **Study type** Qualitative focus group study **Location and setting** Santa Monica, California, USA **Aim of the study** To explore homeless youths' perspective on the power of drugs in their lives, the preferred types of drugs used, barriers to treatment, and strategies to prevent drug initiation and abuse. **Source of funding**	**Number of participants** n=24 **Participant characteristics** 18 men, 6 women. 10 participants aged 17-20 years, 14 participants aged 21-25 years. 63% participants were white, 21% were black and 13% were Hispanic. Marijuana was the most commonly used drug for 9 participants, followed by alcohol (n=7). **Inclusion criteria** None explicitly stated but all participants described as 'drug-using homeless youth'. **Exclusion criteria** None stated	**Data collection** A community-based participatory research approach was taken whereby the community actively participated in the design, implementation and assessment of the study. A community advisory board was formed that included academic researchers and faculty, homeless youth and staff affiliated with a drop-in site for homeless youth. The purpose of this advisory board was to gain diverse perspectives in designing a semi-structured interview guide to be used in the focus group sessions with homeless youth. The semi-structured interview guide was designed to capture the outlook of homeless youth regarding their peers' substance use, available health services, other drug use and health-related issues, and ways to engage the youth via artistic media such as animation, development of videos, drawings, and poetry. 5 focus group sessions; each focus group comprised 4 to 6 youth and lasted for 1 hour. Sessions were conducted by researchers, faculty staff and 2-3 homeless youth community advisory board members. 1 facilitator asked the questions from	**Key themes** • Ways to discourage youth from initiating drug use Participants suggested ways to discourage young people from becoming interested in drugs, for example: "*if you can get them to concentrate…If you're busy, there's no time to do drugs.*" Others thought that support in dealing with employment was important; 1 participant thought that a temporary service would be important while another participant stated that the creation of jobs would help homeless youth on the street. 1 participant suggested that activities such as sport could be a way to assist youth in handling their situations. Another suggested that allowing youth to hang out somewhere and giving them something to do would be a good thing. Another suggested playing in a band. An area that received a lot of attention was the use of art, music, or film to create messages that might dissuade youth from becoming interested in starting drug use. For several participants, personally reaching out to their peers and talking with them was considered important: *"Have them interview us…bring them to us…let us talk to them and let them know what drugs can do to them."* 1 participant commented that an even more powerful approach would be to show future youth what life was like by means of films or documentaries: *"Take them down to Skid Row and tell them everything that happens out there, let them see it for themselves…once they see it, that will…ring…in their head."* • Ways to get youth to stop using drugs	**Limitations identified by author** Generalisability limited by convenience sample and single geographic location and self- report narratives. **Limitations identified by review team** Questions from semi-structured interview guide not reported. **Other comments** Participants received $15 for taking part in the focus group sessions. This paper also reported findings related to participants' drug use preferences (i.e. which drugs they primarily used) and

Funded by a grant from the National Institute on Drug Abuse.		the semi-structured interview guide while another facilitator acted as a note-taker, taking down any non-verbal dynamics or observations. Other facilitators in the room contributed by asking additional questions. **Method of analysis** Focus groups were audio recorded and transcribed by trained research assistants under the supervision of the study investigator. Constant comparative methodology was used to guide line-by-line coding and content analysis of the transcribed notes. Saturation was reached after concurrent coding no longer yielded unique themes and categories.	Participants said a variety of factors, including their family, decreasing interest, and realisation of their problem, can play into youths' reduction of drug use. For several participants, there were special circumstances that enabled them to clear drugs from their lives, even if temporarily. 1 stopped using when their daughter was born: "…*I am doing it this time because of my baby….with my daughter. I didn't care about anything…this time I wanted to do it myself…I sobered up on my own…change comes from the person.* Other participants commented that there were conditions that were critical for programmes to be successful. For example, the youth should be the one responsible for making the decision to seek help: "*If I want to change, it got to be me. I'm not going to let someone else make the decisions. I got to make it for myself."* *"…don't force yourself to do a program* [sic] *if you know it is not going to work…some places help, but you have to want the help. If they can come to you and talk about their problems, that is the first step…admit they are in a situation that they need help to get out of it…"* Participants felt that facilities that created a 'home base' with various activities could be useful in aiding the reduction of drug us:. "*You really need to have a place where youth can go and feel like hey this is home for me here."* Some participants felt that constructing a trusting environment free of regulations and full of likeminded individuals could stop them and their peers from using drugs and alcohol: *"Furthermore, there should not be rules for when youth needed to return at night and make sure programs* [sic] *fit their needs.*"	barriers to accessing treatment. These additional findings are not presented here. It is not clear if the 'ways to get youth to stop using drugs' discussion was about prevention or if it was more treatment-oriented.

Kurtz et al. (2013)

Study details	Population	Research parameters	Results	Notes
Full citation Kurtz et al. (2013) **Quality score** - **Study type** Mixed methods study (longitudinal study + qualitative focus groups) **Location and setting** Miami, USA **Aim of the study** To examine the progression of club and non-medical prescription drug use, and to assess changes in health and	**Number of participants** Longitudinal 'natural history' study: n=444 (NOTE: This component of the study is not described in detail here) Qualitative focus groups: n=28 **Participant characteristics** Focus group participants were selected from those in the main study sample who had completed their 18 month assessment. Each group included participants 'to achieve diversity as to gender, race/ethnicity, and primary drug at study entry.' Focus group sample was 53.6% male and mean age was 22.9 years (SD=3.47). 60.7% of participants were Hispanic, 25.0% were African American/ Caribbean, and 17.9% were white.	**Data collection** Longitudinal 'natural history study': Respondents completed a standardised baseline demographic, behavioural, health history and social risk assessment (approximately 2 hours). Data were collected via laptop computer-assisted personal interviews. 1 hour follow-up interviews were conducted at 6, 12 and 18 months from study entry. NOTE: The findings from these surveys are not presented here other than to describe participant characteristics. Qualitative focus groups: Following completion of the survey component of the study, 8 focus groups were convened with the aim of exploring the changes in substance use observed over the course of the study. Sessions lasted 1 hour and the interview guide included open-ended questions about: • benefits and drawbacks to participation in the club scene	**Key themes** Large effects sizes were observed in the main study for reductions in club and prescription drug use over 18 months. Given the absence of an intervention, the authors sought to investigate whether participation in the study itself – particularly the detailed assessments – was a factor in the observed changes in behaviour. The authors concluded that there was evidence from the focus groups to suggest that the interview assessments played a key role in risk reduction over time. They reported that the intervention-type effects of the assessments were attributed by participants to: • the friendly, non-judgemental field staff of same-age peers • the thorough and detailed assessments, particularly those items related to HIV risk knowledge and behaviours, lifetime and current substance use quantities, social ties and economic status, and mental health symptoms • an emerging self-awareness of substance use-related problems based on their responses to the assessment items. Key focus group themes included: <u>Initial motivation</u> Participants 'almost universally' reported that they had not been contemplating behaviour change at study enrolment. Initial motivators for participation included the monetary incentives, an interest in research, or curiosity. Some stated that they would have been unlikely to participate in the study had it been framed as an intervention, largely because they were unaware of their problematic drug use at the point of study entry. <u>Assessment as a tool for self-reflection</u> Nearly 70% of participants indicated that participating in the assessments prompted self-reflection on their level of drug use as	**Limitations identified by author** Sample may not be representative of wider population of Miami club-goers because of the eligibility criteria requiring regular, recent use of both club and prescription drugs. Likely that unbalanced gender ratio reflects women's lower frequency of drug use rather than representing differences between the numbers of men and women in the club scene. Likely that more well-off club-goers were less inclined to participate than those on lower incomes for whom the cash stipends were a significant incentive. Some respondents may have refrained from fully reporting the extent of their drug use. The main study lacked a control or comparison group – changes in drug use cannot be conclusively attributed to the assessment experience.

Study details	Population	Research parameters	Results	Notes
social consequences of this use over time. **Source of funding** Research supported by a grant from the National Institute on Drug Abuse	**Inclusion criteria (for entire study)** • Aged 18-29 years • Willing to provide contact information • Use of 1 or more club drugs (defined as powder cocaine, ecstasy, GHB, ketamine or LSD) at least 3 times in past 90 days • Use of1 or more psychoactive prescription medications 3 times or more in the past 90 days for non-medical reasons • Regular attendance at large recognised local nightclubs at least twice per month **Exclusion criteria** None stated.	• motivations for study enrolment • positive and negative experiences of study participation • changes in drug use, sexual behaviours and/or other health and social indices over the course of the study • reasons for any mentioned change in behaviours or health **Method of analysis** Focus groups were audio recorded and transcribed using pseudonyms to identify individual speakers. Transcripts were segmented and coded using text analysis software. A constructivist-oriented grounded theory approach was used to identify and develop emerging themes. The number of groups was considered sufficient when discussions reached saturation or convergence i.e. when additional data collection was not expected to generate new knowledge or themes.	the act of calculating and expressing answers to the survey items "turned on a light" for them. The growing self-awareness tended to be focused in 2 key areas: recognition of the amount of drug use that a participant was engaging in over time, and making connections between drug use and health or social problems. "*When you start getting numbers down, like 'I've done this many pills', and then after you start thinking like how much money you've spent, and like in the end…'I've gotten into pretty big trouble'"* *"And you're like, 'why is this number so big?' You think about it rationally laying in ned or something. It never occurs to you just how big of a number it is, and then you look at like 'wow, that's me'"* <u>Insight into drug-related problems</u> Specific areas of insight into health and social problems and their associations with drug use were mentioned by several participants as motivations for change. Examples included family and relationship problems, employment and school responsibilities, legal issues, money issues, and the lack of supportive social networks. Many expressed a general dissatisfaction with the "superficial" relationships they were able to form within the club scene, and reported general feelings of isolation and lack of communications with others. <u>Behaviour change as an individual decision</u> Behaviour change was described repeatedly as an individual decision with participants generally agreeing that each person needs to come to the conclusion about change for themselves. "*If you would tell me 'You have a problem' and stuff, I used to laugh in your face and I didn't care"* Many expressed a need to "figure it out on my own", and explicitly objected to self-help groups, feeling that this approach would not work for them.	**Limitations identified by review team** Not clear if more than one researcher transcribed and coded focus group transcripts. Response rate for main study not reported (presumably because of difficulties calculating it from respondent-driven sampling). Not clear how focus group participants were selected from main study sample. **Other comments** Participants were recruited via respondent-driven sampling and entered the study between May 2006 and June 2008. Participants in the main study received HIV education literature, condoms, and a $50 stipend upon completing each assessment. Focus group participants were compensated $50 for taking part.

Lynsky et al. (1999)

<table>
<tr><th>Study details</th><th>Population</th><th>Intervention/comparator</th><th>Results</th><th>Notes</th></tr>
<tr>
<td>Full citation

Lynsky et al. (1999)

Quality score

-

Study type

Uncontrolled before and after study.

Location and setting
San Bernadino, California, USA

Study aims
To evaluate the Youth Alternative Sentencing Program (YASP), an intervention to change adolescent offenders' intention to use alcohol and marijuana by improving their self-efficacy. Overall goal is to decrease the number of substance abuse offenses, injuries,</td>
<td>Number of participants
<u>Received the intervention</u>
n= 209

<u>Participated in pre-test evaluation*</u>
n=164 (78%)

<u>Participated in the post-test evaluation*</u>
n=139 (67%)

Evaluations were completed anonymously so it cannot be assumed that the pre- and post-test groups are the same individuals.

Participant characteristics
<u>Participants in pre-test evaluation</u>

Age range12-19 years (M=17); 136 (83%) male

112 (68%) attended regular school, 31 (19%) attended alternative schools for youth with academic or disciplinary difficulties, 21 (13%) did not attend school.

157 (96%) reported ever using marijuana.
<u>Participants in the post-</u></td>
<td>Intervention

The Youth Alternative Sentencing Program (YASP) is a court-prescribed alternative to a conviction for offenses such as:
• being under the influence of alcohol or a controlled substance in public
• driving under the influence of alcohol or a controlled substance
• possession of marijuana while driving

YASP is an educational programme with 5 components delivered over 6 to 8 weeks:
<table>
<tr><td>1. Orientation

(BI)HEADS examination to assess suitability for the programme and identify health issues or needs for referrals</td><td>• Expectations
• Contracts
• BI(HEADS) exam
Body
Image
History
Education
Activities/peers
Drugs/alcohol
Sexual activity
Psychologic
Family history</td></tr>
<tr><td>2. Coroner's visit

1 hour visit including morgue tour and graphic presentation of deaths related to drugs, alcohol and violence</td><td>• Slides
• Tour
• Refrigerator
• Debriefing</td></tr>
<tr><td>3. Trauma centre visit

4 hour visit to enable</td><td>• Emergency department
• Intensive care unit
• Rehabilitation</td></tr>
</table></td>
<td>Intervention: YASP

Control: N/A

Outcomes
Authors identified 4 themes from participants' comments about the intervention. Excerpts from participants' essays were provided as an example of each theme.

1. Participants thought the programme was going to be adults lecturing them about the dangers of alcohol. They were surprised that it was not.

"As I stepped out of the car and walked up the steps to my first YASP meeting, I figured it would be another meeting where some adults nagged at you for a few hours about how drugs and alcohol are bad for you. To my surprise I realized [sic] these people were really trying to help me. They weren't preaching, but explaining to me that I had choices, they weren't telling me not to drink, but telling me I had the choice whether or not I wanted to drink."

2. The programme changed their life.

"It's hard for me to say this, but I'm glad I got caught, it stopped me from getting to [sic] involved in a life of drugs. I just hope I never have to see a loved one die because of their own abuse or someone else stupid enough to drink and drive. Doing drugs is definitely in my past and I'm concentrating on my future."

3. Participants realised that the dead and injured patients they encountered on the visit to the trauma centre or coroner's office could have been them or one of their loved ones.

"I used to think I was invisible [sic] and that nothing could ever happen to me, but after this programme my thoughts</td>
<td>Included in review 1.

Limitations identified by the author

Loss to follow up: 164/209 (78%) participants provided pre-test data and 139/209 (67%) provided follow-up data. Not possible to calculate loss to follow-up between pre- and post-test as different individuals may have participated at the 2 time points.

Study power: Not calculated.

The long-term aim of YASP was to reduce substance abuse offenses and substance-related injuries and deaths. A much longer follow-up period would be required to measure the programme's effectiveness in</td>
</tr>
</table>

Study details	Population	Intervention/comparator	Results	Notes
and deaths in the adolescent population. **Length of follow up** 8 weeks **Source of funding** Not stated.	<u>test evaluation</u> Not reported **Inclusion criteria** Explicit inclusion criteria not reported. Participants were all adolescents in the county juvenile court system who had been convicted of a civil or criminal offense related to alcohol or controlled substances (e.g. driving under the influence of alcohol or drugs). **Exclusion criteria** None stated.	exposure to drug and alcohol related injuries — unit; • Wheelchair exercises **4. Group workshops** 3 workshops covering 12-step programme for drugs or alcohol plus self-efficacy skills eg decision making in drug and alcohol-scenarios, coping skills, and goal setting — • Drug and alcohol education • Debriefing • Lifestyle choices • 12-step meeting **5. Essay** 500 words about their own drug or alcohol experience, their conviction, or that of their peers, or the impact YASP — • 500 words This study also included an optional evaluation process whereby willing participants completed pre- and/or post-intervention questionnaires. It is not clear who delivered the intervention or what their level of training was. **Comparator** N/A	*have changed. I realized* [sic] *anything is possible and anything can happen."* *"One slide of a lil* [sic] *girl hit me hard. This little girl looked just like my sister, and the girl was killed by a drunk. It could have been my sister and that is pretty scary."* 4. Participants made references to awareness of the consequences of their actions. *"The thing I have gotten out of this programme more than anything is that it is not worth it to drink and drive and have to face the consequences."* **Analysis** Quantitative outcome data were collected using an instrument designed by the evaluation team; these data are presented in a separate evidence table. Participants also had the opportunity to comment upon the impact of the intervention via evaluation forms, in workshop discussions, and in the reflective essay. Through this process, the study authors noted a 'distinct pattern of comments' although it is not clear if any formal thematic analysis was undertaken.	achieving these outcomes. Evaluation tool 'did not perform as expected': requires redesign to increase sensitivity to detect participants' change in intention. **Limitations identified by the review team** Participants' responses not coded to allow identification of individuals providing data at both pre-test and post-test. **Other comments** Alcohol outcomes are also included in the paper but are not reported here.

Nanin et al. (2006)

Study details	Population	Intervention/comparator	Results	Notes
Full citation Nanin et al. (2006) **Quality score** - **Study type** Cross-sectional study **Location and setting** New York City, USA **Study aims** To measure reactions to 3 public health campaigns that encouraged gay and bisexual men to avoid or reconsider using crystal methamphetamine. **Length of follow up** N/A **Source of funding**	**Number of participants** n=971 **Participant characteristics** 93.7% of the sample was gay-identified, with the remainder identifying as bisexual. 26.9% of respondents were aged 18-30, 33.6% were aged 31-40, 25.4% were aged 41-49 and 14.1% were aged 50+. Majority of participants were European/White (61.6%), then Latino (16.4%), African-American (9.1%), Asian/Pacific Islander (7.5%), and other (5.5%). 78.8% (n=765) reported being HIV negative, 13.4% (n=130) reported being HIV positive, and 7.8% (n=76) reported never having been tested/not knowing their status. Lifetime use of crystal meth reported by 19.3% of participants and 9.4% reported recent use (last 3 months). Of crystal meth users, 73.4% percent	**Intervention** 3 public health campaigns involving colourful, eye-catching phone booth posters and magazine advertisements around Manhattan, New York City, in 2004. Campaigns sought to discourage use of crystal methamphetamine (also referred to as 'crystal meth' or 'crystal') • Campaign advertisement 1, initiated by a gay rights activist: "*Buy Crystal, Get HIV For Free*" • Campaign advertisement 2, initiated by the HIV Forum: "*Crystal meth: nothing to be proud of"* • Campaign advertisement 3, initiated by Gay Men's Health Crisis: *"Crystal: It's dangerous. Know the risks"* [Poster images contained within the research paper] **Data collection** A cross-sectional brief intercept survey method was used to administer a questionnaire to participants at 2 large-scale lesbian, gay, and bisexual (LGB) community events in New York City in 2004. Both events required paid admission to gain entry. At both events, the	**Outcomes** *Proportion of affirmative responses to campaign exposure statements* 61.8% of respondents reported seeing any of the 3 campaign slogans. No differences were observed in campaign exposure with regards to age, ethnicity, HIV status or the recruitment site at which participants completed the survey. Respondents who reported lifetime use of crystal meth, recent use of crystal meth, and recent use with sex were significantly more likely to have seen the campaigns (p<0.001). Of those who reported exposure to any of the campaigns, the following proportions gave affirmative responses to 5 statements about their reactions: (see table below) *Group differences in reactions to anti-crystal meth campaigns*	**Limitations identified by the author** Response rate: 84.4% of individuals approached during the 2 recruitment events consented to participate. Study power: Power calculation not reported. Large sample size and high response rate. Campaign materials featured white men and were mostly disseminated in a white neighbourhood; may explain why campaign appeared less effective among non-white men. Some potential unintended consequences observed – 11.9% participants reported that campaigns triggered urge to use crystal meth or use it more. Large sample including men from all 5 boroughs of NYC. However, all participants had paid to attend an LGB events; not clear how those who did not attend the events may have differed in their reactions to the campaigns. Statement 4 is phrased in a way that makes it unclear whether respondents wanted to talk to

These ads made me…	% agree
1. Think about not starting to use crystal or cutting down on my use	58.4%
2. Glad someone was doing something about crystal use in the gay community	75.9%
3. Want to start using crystal or to use crystal more	11.9%
4. Want to talk to my friends/partner about their use of crystal	38.7%
5. Want to get help to stop using crystal or avoid starting to use	36.1%

Study details	Population	Intervention/comparator	Results	Notes
This study was part of the wider Sex and Love v3.0 Project which was supported by the Hunter College Center for HIV Educational Studies and Training (CHEST).	reported recent use with sex (6.9% of the total sample). No significant differences in crystal meth use were found in relation to ethnicity, education or employment status. However, HIV positive men were significantly more likely to report lifetime use, recent use, and recent use with sex. Men who earned more than $80,000 annually were also more likely than those earning under $80,000 to report using crystal meth. **Inclusion criteria** None explicitly stated although it appears that for data to be included in this paper's analyses, participants were: • gay or bisexual men • aged 18 or over • resident in a specific geographical area as determined by their zip code **Exclusion criteria** None stated	research team hosted a booth and each person who passed by the booth was actively approached by outreach staff trained in survey administration and working with LGB community. The confidential survey took 15-20 minutes to complete. Respondents were asked to mark "yes" or "no" in response to an item assessing whether they'd seen any of the 3 anti-crystal meth campaigns. Because all of the campaigns were disseminated simultaneously, the survey did not assess reactions to each individual campaign. Those who answered "yes" were then asked a further 5 questions(see 'Results') about their reactions to the advertisements. These survey items were developed based on information gathered from gay press reports on community reactions to the campaigns. Responses were coded on Likert-type scale ranging from 1, *strongly disagree*, to 4, *strongly agree.*	*in New York City* White participants were significantly more likely to agree with statement 1 ("Think about not starting to use crystal or cutting down on my use") and statement 2 ("Glad someone was doing something about crystal use in the gay community") than non-white respondents. HIV negative men were also more likely to agree with statements 1 & 2 than HIV positive men as were men who indicated they were not 'barebackers' (someone who practices unprotected sex, primarily anal sex). Among men who reported ever using crystal meth, those who had not used it recently, or not used it recently with sex, were more likely to agree with statement 2 while men who reported recent use with sex were more likely to agree with statement 3 ("Want to start using crystal or to use crystal more"). Among the whole sample, non-White men were more likely to agree with statement 4 ("Want to talk to my friends/partner about their use of crystal"). Men who did not identify as 'barebackers' were more likely to agree with statement 5 ("Want to get help to stop using crystal or avoid starting to use"). **Analyses** Univariate statistics were calculated to summarise the sample's responses to the crystal meth campaigns. Chi-squared tests were used to assess any differences between subgroups within the sample. Authors state that there were no differences in key variables between the 2 recruitment events; data were therefore combined for all analyses. Complete surveys were obtained from 1214 gay and bisexual men over the age of 18. The analyses conducted for this study were based on 80% (n=971) of the sample who provided zip codes for specific areas of interest to the researchers (New York City, northeast New Jersey, Long Island or Westchester/Rockland counties).	friends/partners about the positive or negative aspects of crystal use. **Limitations identified by the review team** Not possible to analyse whether participants' responses varied according to which campaign/s they'd seen. Multiple statistical tests conducted – risk that some statistically significant differences between subgroups may have occurred by chance. Multivariate analyses not conducted; confounders not controlled for. **Other comments** Those who consented and completed the survey were provided with a free movie voucher as an incentive. The whole survey assessed a broad range of sexual behaviours, history of sexually transmitted infections, substance use, physical health and wellbeing. The authors chose specific scales from the survey for the analyses reported in this particular paper.

Norberg et al. (2014)

Study details

Full citation

Norberg et al. (2014)

Quality score

+

Study type
RCT

Location and setting
Australia

Study aims
To determine if a single-session of motivational enhancement therapy could instil greater commitment to change and reduce ecstasy use and related problems more so than an education-only intervention and whether motivational enhancement therapy sessions delivered with

Population

Number of participants
n=174

Participant characteristics

	E-check up	Control
Mean age	23.27	23.99
Male	63%	67%
Drinkers	98%	99%
Opiate users	13%	14%
Cannabis users	77%	81%
Cocaine users	49%	55%
Stimulant users	48%	56%
Sedative users	26%	27%
Tobacco users	68%	69%
Mean number of ecstasy pills in 90 days	13.28	14.93

Intervention/comparator

Both intervention and comparator delivered by 1 of 7 individuals – 2 doctoral level clinical psychologists, 3 recently registered psychologists, 2 clinical psychology students. 14 hours of training and fortnightly supervision provided.

Intervention

E Check-up (n=89)

1 x 50 minute session.

Motivational interviewing combined with personalised feedback and education (Motivational enhancement therapy). Goal was to motivate participants to reduce ecstasy use. Therapists reviewed 'Ecstasy: Facts and Fiction' booklet and provided participants with structured feedback to baseline assessment results using a Personal Feedback Report. Booklet covers history and consequences of ecstasy use, methods of harm reduction. Feedback report included problem severity, ecstasy use patterns, motivation to reduce use, risk perception, acknowledging high-risk situations, confidence in resisting use, options for social

Results

Intervention: E check-up (n=89)

Control: Education only (n=85)

Outcomes
Participant satisfaction

Participant satisfaction was higher among those receiving E Check-up (M=26.33, 95% CI=25.42, 27.25) than those assigned to the education-only control (M=24.45, 95% CI=23.60, 25.31, d=0.50, p=0.004).
Credibility and Expectancy Questionnaire (CEQ) scores

	E check-up M [95% CI]	Education only M [95% CI]	Cohen's *d* [95% CI]	*p*
Credibility	7.80 [7.44, 8.16]	7.56 [7.15, 7.97]	0.09 [-0.21, 0.39]	0.39
Predicted success	4.45 [4.02, 4.88]	3.90 [3.43, 4.38]	0.18 [-0.12, 0.48]	0.09
Confidence in recommending	7.24 [6.72, 7.75]	7.82 [7.39, 8.24]	0.19 [-0.11, 0.49]	0.09
Predicted % reduction in ecstasy use	37.87 [30.52, 45.21]	34.68 [27.27, 42.09]	0.07 [0.07, -0.23]*	0.55

*NOTE: Potential error in reporting of size and direction of confidence interval

No statistically significant between-group differences in participant ratings of credibility and expectancy for their assigned intervention. On average, participants thought the programmes were logical [not clear which survey item measured this] and that they would recommend them to friends. However, participants only felt the interventions would be modestly successful and that they would help them decrease their ecstasy use by a third.

Analysis
The 8 item Client Satisfaction Questionnaire (CSQ-8) was used

Notes

Included in review 1

Limitations identified by the authors

Loss to follow up: E-check-up= 70/89 at 4 week follow up, Education only= 79/85 at 4 week follow up. Participants lost to follow up were significantly younger, less educated and more likely to be Australian born. Little's test suggests missing follow-up data were missing completely at random.

Study power: 140 participants needed to detect small or medium between-group effects with 80% power.

Limitations identified by the review team
It is unclear how missing data were addressed.

Participant satisfaction measured on an 8 item scale yet only mean satisfaction reported.

Comprehensive reporting of CEQ scores; these seem less relevant as they measure participants' views before they actually receive their intervention.

<table>
<tr><th>Study details</th><th>Population</th><th>Intervention/comparator</th><th>Results</th><th>Notes</th></tr>
<tr>
<td>higher treatment fidelity are associated with better outcomes. Secondary objective was to assess participants' satisfaction with their assigned interventions.

Length of follow up
24 weeks

Source of funding
Funded by the National Health and Medical Research Council/Project Grant (630570).</td>
<td><table><tr><td>Mean days of ecstasy use in 90 days</td><td>6.37</td><td>7.19</td></tr><tr><td>Mean SDS score</td><td>2.46</td><td>2.46</td></tr></table>
Education group had greater proportion of Australian-born and full-time employed participants.

Inclusion criteria

Fluent in English

Over 16 years

Used ecstasy at least 3 different times in past 90 days (originally 6 times in 90 days, but updated 7 months into recruitment)

Exclusion criteria
Met criteria for moderate to severe substance dependence for another drug (excluding cannabis and tobacco)

Received substance use treatment in last 90 days

Obvious medical, cognitive, or psychological impairment that would interfere with participation.</td>
<td>support for reducing use, psychological distress, willingness to experience emotional distress, commitment and action. Therapists created change plans with participants who reported interest in reducing ecstasy use. Participants who remained uninterested were encouraged to monitor use to avoid increases. All participants provided with self-monitoring diary to track use and given booklet and feedback form to take home.

Comparator
MI-informed education only (n=85)

Length of session unclear, possibly 15 minutes.

15-page ecstasy booklet 'Ecstasy: Facts and Fiction' to review with therapist. Questions answered within 15 minutes in an MI-consistent manner. Therapists used core interviewing skills, e.g. open ended questions and using reflection. Therapists developed a strong therapeutic alliance by listening to concerns, avoiding arguments, and prescribing change to clients; encouraged not to evoke change talk or plan for change. Participants allowed to keep booklet.</td>
<td>to measure how much participants valued their assigned interventions at 4 weeks post-baseline. Scores ranged from 8-32 with higher scores indicating greater satisfaction. Authors state that CSQ-8 has demonstrated excellent reliability and moderate predictive validity. At the 4-week follow-up, the CSQ-8 achieved an alpha of 0.84.

The 4 item version of the Credibility and Expectancy Questionnaire (CEQ) was used to measure participants' acceptance of the intervention rationale immediately after their allocation was revealed (and before the intervention commenced). 3 items were rated on an 11-point scale from 1 (not at all) to 10 (very) and assess how credible the intervention is, how successful the intervention will be at reducing ecstasy use, and how confident participants would be in recommending the intervention to a friend. The 4th item measures how much ecstasy use will reduce as a result of the intervention on a scale of 0-100%. Authors state that the CEQ has adequate test-retest validity.

Between-group differences in participant satisfaction were analysed ANOVA techniques. Baseline characteristics that differed across interventions or study sites were included as covariates.</td>
<td>Other comments
When ecstasy was not taken in pill form, assumed following equivalent to 1 pill: 1 capsule, 0.25 grams of powder, 1.25 lines, and 1 pinch.

Randomised using simple randomisation on a website. Each allocation concealed in a sealed, opaque envelope. Envelopes not opened until baseline assessment was completed. Research assistants were blind to treatment allocation.

Participants received $25, $35, $40 and $40 for baseline, 4, 16, and 24 week follow ups respectively. Enrolled participants received $25 for each referral who completed a baseline assessment.

Recruitment from Jan 2010 to Oct 2011. Final follow-up assessment in April 2012. Print and online adverts on help-seeking and social networking sites, flyers and brochures in drug, health and mental health organisations and university campuses, pubs, cars, festivals and music venues.</td>
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</table>

Rudzinski et al. (2012)

Study details	Population	Research parameters	Results	Notes
Full citation Rudzinksi et al. (2012) [linked to Fischer et al. 2013, included in review 1] **Quality score** ++ **Study type** Mixed methods (RCT + qualitative interviews) **Location and setting** Toronto, Canada **Aim of the study** To explore the qualitative experiences of young,	**Number of participants** Main RCT [Fischer et al. 2013]: n= 134 Qualitative sub-study: **n=112** • oral brief intervention on cannabis use (CBI-O): n=23 • written brief intervention on cannabis use (CBI-W): n=39 • oral brief intervention on general health (HBI-O): n=21 • written brief intervention on general health (HBI-W): n=29 **Participant characteristics** 77 (68.8%) participants in follow-up sample	**Data collection** In-person, interviewer-administered interviews were conducted 3 months after completion of the BI sessions. Interviews included open-ended questions exploring participants' experiences, perceptions and reflections on the BIs they received. **Method of analysis** Analyses guided by rational action theory. Responses to qualitative questions were audio recorded and transcribed. Transcripts were manually reviewed, hand-coded and analysed	**Key themes** _Experiences of cannabis BIs_ 69.4% (CBI-O=18, CBI-W=25) of the analysis sample believed they had undergone changes regarding their cannabis use. 48.4% felt they underwent changes in their actions around cannabis use and 22.6% reported that they underwent developments in their thinking/attitude about cannabis use. In contrast, almost two thirds of those who claimed "no change" felt that the information presented by the intervention was already known to them or did not concern them. Among those who reported changes, 15 (CBI-W=5, CBI-O=10) participants mentioned that they believed they had reduced their cannabis use to some degree since undergoing the BI. Changes toward moderation occurred due to setting cannabis use goals, restricting particular times for use, and removing oneself from use situations: *"I have changed my behavior* [sic] *slightly; I've tried to reduce the amount. […] Especially I've tried to reduce daily smoking and […] I pretty much try my best not to smoke during weekdays […] and only smoke on weekends. […] Inconsistently... but it's improving so I'm just reducing the amount"* Other participants reported that some of the concrete and simple suggestions provided by the psychologist delivering the CBI-O (e.g. "maybe you should wait a few hours longer in the day before you smoke" or "maybe you should give yourself a non-smoking day") made behaviour change seem possible: *"Just knowing that there are [...] like sort of an approved of idea or something made me feel like [...] I could take smaller steps in […] a helpful way"* Beyond simply reducing their use, more than half of respondents started engaging in what were perceived to be healthier smoking practices suggested by the BIs. Safer use techniques (e.g. bongs, vaporisers, and edible cannabis) were mentioned by several participants. 41.9% (CBI-W = 16, CBI-O = 10) reported that they had learned about the risks of deep inhalation/breath-holding and tried to avoid its extensive use: *"Well it made me cut back I only smoked cannabis after that probably 12 days out of like the 3 months I guess that it had been, and I stopped […] using deep inhalation techniques because I was told they were bad for you"*	**Limitations identified by author** 84.3% of participants in main trial went on to participate in 3 month follow-up interviews. No significant differences in retention rates between BI groups. Those with negative BI experiences may have been less likely to attend follow-up interview. Feedback data collected face-to-face 3 months after interventions – may have created potential for recall problems and social desirability bias. Findings specific to a distinct sub-population of

high frequency cannabis users who participated in newly-developed brief interventions **Source of funding** This work was supported by funding from the Canadian Institutes of Health Research (CIHR), Catalyst Grant #211803.	were male; aged 18-27 years (M=20.5, median=20). 71 (63.4%) had used cannabis for 5+ years. 30 (26.8%) were daily cannabis users, 59 (52.7%) had used cannabis on 16-29 days in past 30 days. No significant differences in key demographic or drug use characteristics between groups. **Inclusion criteria** For main RCT: • 18-28 years of age • active full-time university enrolment • active cannabis user for at least 1 year • cannabis use on at least 12 of the past 30 days **Exclusion criteria** None stated	according to emerging themes and issues. The experimental CBI-O and CBI-W groups were the main analysis sample (n=62). Systematic, comparative data analysis began with "open coding" involving examining, comparing, labelling, and categorising the data into concepts. This was followed by "axial coding" whereby the data was reassembled into groupings based on identified patterns. "Selective coding" was then conducted by identifying central phenomena in the data in order to develop propositions and themes.	*"The one new piece information that was in it* [CBI-W pamphlet] *was with respect to deep inhalation […] and the fact that that doesn't actually make you any more high but it is a bit more bad for you. So I kinda figured there's no gained utility from doing that so I won't do it anymore"* Several participants reflected that the interventions had raised their awareness of the dangers of dual use of cannabis and tobacco: *"One thing that stood out to me […] was how mixing the pot and the tobacco is like even kinda worse. […] So I take a lot of what I call poppers, which is like a little bit of cigarette and then the weed on top. And I started taking a lot less of them"* Several individuals who received a cannabis BI (n = 7) reported passing on some of the content of the intervention to their friends and fellow cannabis smokers. Another effect of the experimental BIs was that the process helped participants reflect on the true extent of their use. 5 individuals [CBI-W = 5] described that the BI process alerted them to their high levels of cannabis use. Coming explicitly face-to-face with this reality was disconcerting, yet also served as a catalyst for behavioural change in some: *"I didn't think I smoked as much as I actually do. I thought it was more rare but then when I actually put it down on the calendar it sort of was more black and white… like wow I do smoke quite often […] before then I usually would have weed on me and now I just don't carry it. So if I don't have it I won't smoke it kind of thing"* <u>*Perceptions regarding the format and content of cannabis BIs*</u> Most respondents (85.5%, CBI-W = 30, CBI-O = 23) thought the BIs were helpful for them or could be useful for others. All 23 participants who received a CBI-O intervention stated that they saw the measure as definitely helpful. Across both BI groups, participants provided various reasons for enjoying the interventions, such as: it was short, convenient, informative, straightforward, unbiased, nonthreatening, non-patronising, and non-judgmental: *"I think really again just having the facts and numbers right in front of you. You can hear a million times that it's bad for you but seeing numbers and how it actually affects you and the fact that this is documented I think it really brings it home, to me at least. And I think it could be very beneficial to other people as well"* However, for some, the BIs were not believed to be effective. Half of the sample provided suggestions to make the intervention more efficient, in terms of both content and format. Many of those who received a CBI-W expressed a desire for a more interactive, 'attention grabbing' format to present the information, stressing the importance of being able to ask questions, as well as calling into question the utility of using printed pamphlets: *"Personally I kinda feel like booklets are outdated and the message would be more effectively […] put*	high-frequency cannabis users **Limitations identified by review team** Sample included participants who had received the 2 control interventions (general health BIs as opposed to a cannabis-specific BIs); these findings not reported. **Other comments** Participants for the main RCT recruited via 'mass postering' on 2 university campuses between October 2009 and March 2010. Participants received $20 for completing the baseline assessment and $30 for the follow-up interview.

			out there if it was sort of different kinds of social media. You know if people had like little short You Tube clips—this is just what I think—you know what I mean, or magazine ads or subway ads I feel like those kinds of things are more effective because fliers are so easy to throw away. It's easier not to read them then to read them and unless they have some kind of cool graphic I mean it's just another flier like a "don't do drugs" flier" The most common suggestion for improvement involved tailoring the information to the particular individual receiving the BI, by providing specific, individualised, and concrete advice. Several respondents suggested changing the language used to present the information. Specifically, the pamphlet was criticised for being too formal, using language that people who smoke cannabis do not use: "*It was just kind of like a […] old teacher kinda lecturing about things they don't understand. […] It just didn't seem like something worth paying attention to"* Instead, the following were proposed: *"Maybe present the same information but change up the tone a little bit. Make it seem like it was a real person writing it, maybe someone who's been through it*" "*Someone […] who had like stopped using cannabis was there to talk about it as like an example*"	

Shrier et al. (2014)

Study details	Population	Intervention/comparator	Results	Notes
Full citation Shrier et al. (2014) **Quality score** + **Study type** Uncontrolled before and after study **Location and setting** Northeast USA **Study aims** To evaluate the feasibility and acceptability of the MOMENT intervention among youth who use marijuana frequently and to explore	**Number of participants** n=22 **Participant characteristics** 19 (70%) females. Median age 19 years (range 15 to 24). 12 (44%) black ethnicity. 10 (37%) Hispanic ethnicity. 22 (82%) in school. Median age at first marijuana use=14 years (range 4 to 17). Median age began using marijuana at least once a week=15 years (range 4 to 18). Median age began using marijuana at least 3 times a week=16 years (range 5 to 20). Median current marijuana use per	**Intervention** 6 clinic visits and 3 periods of mobile momentary reports and daily diaries. Motivational sessions by trained counsellor. Participants given personal digital assistant (PDA) to complete momentary reports (prompted by PDA) about current desire to use marijuana, companionship, location, affective states, and use of marijuana since previous signal 4-6 times a day at random times. PDA also promoted daily diary completion on marijuana use in previous 24 hours and motivation to reduce marijuana use. PDA delivered messages during weeks 2 to 4 if reported top 3 trigger for use in momentary report or in daily diaries. Messages used empathetic language with input from motivational interviewing counsellors Baseline (weeks 0 to 1) • Week 0 - Visit 1 –computer based assessment and timeline follow-back calendar). • Weeks 0 to 1 - Daily diaries and momentary reports. Intervention (weeks 1 to 4) • Week 1 - Visit 2 – 1 hour motivational therapy (marijuana use history, discrepancies between use and goals, motivation for reducing	**Intervention:** MOMENT **Control:** None **Outcomes** *Intervention acceptability* Participants reported that the audio computer-assisted self-interview (ACASI), timeline follow-back (TLFB), and mobile device were easy to use and the instructions and questions were clear and understandable (item means = 1.0-1.5 out of 5, with the exception of 2.4 for follow-up TLFB ease of use). Participants reported that they read the mobile messages and the messages motivated them not to use (item means = 1.2-2.2). Participants indicated that they felt comfortable with participation and found the study interesting, motivating, and helpful (item means 1.0-2.0). They tended to be neutral or disagree that study was burdensome (item means = 2.3 to 3.8). Authors state that free text comments were favourable and gave one example: "*I became more aware of what triggers my urge to smoke and how often they lead to me actually doing it."* **Analysis** Feedback on study burden and utility was solicited at the end of the intervention phase and at the final study visit. There were 23 items on each assessment (with participants rating their agreement with statements from 1, *Strongly agree*, to 5, *Strongly*	**Included in review 1** **Limitations identified by the author** No comparator group. Small number of participants. Loss to follow up: attrition occurred early in the study – 8 (36%) participants dropped out between baseline and 4 weeks, only 14 (63%) completed study. There were no significant differences between those that returned for all study visits and those who dropped out in age, sex, or baseline diagnosis of marijuana dependence, average marijuana use, 30-day percent days abstinent, or POSIT (problem orientated screening instrument for teenagers) score. Not clear if sample is representative of other populations as most of the participants were female and three reported first marijuana use at a very young age (under 8 years). Study power: not reported but authors mention 'small number of participants'. **Limitations identified by the review team** 27 youth enrolled during recruitment phase yet only 22 participants completed the visit and mobile baseline assessments – not clear why attrition occurred at this stage or if the 5 lost

Study details	Population	Intervention/comparator	Results	Notes
efficacy of the MOMENT intervention to reduce marijuana use. **Length of follow up** 17 weeks **Source of funding** Funded by a Boston Children's Hospital Clinical Research Program grant to lead author.	week=6 (range 3 to 100). 21 (78%) tried to stop using marijuana. 4 (15%) treated for alcohol or drug problem. **Inclusion criteria** 15 to 24 years old. Using marijuana 3 times a week or more. **Exclusion criteria** None stated.	use, social and emotional triggers and managing triggers) and feedback. • Week 2 - Visit 3 – 1 hour motivational therapy (plan for reducing use, self-efficacy, coping strategies) and personalised feedback. • Weeks 2 to 4 - Daily diaries, momentary reports and messages. • Week 4 - Visit 4 - timeline follow-back calendar and feedback. Follow-up (weeks 16 to 17) • Week 16 - Visit 5 - computer based assessment and timeline follow-back calendar. • Weeks 16 to 17 - Daily diaries and momentary reports. • Week 17 - Visit 6 – feedback. **Comparator** No comparator.	*disagree*). There was also a separate question on the participants' opinion of the overall usefulness of the intervention (1, *Poor,* to 4, *Excellent*). There was also the opportunity to provide free text comments. Univariate statistics were used to summarise the feedback responses. 22 participants completed the visit and baseline assessments. 16 participants completed the full intervention (2 MET sessions, 2 weeks of mobile assessments with messaging).	participants differed from those who did undertake the baseline assessment. **Other comments** Patients referred from adolescent clinics, self-referred, or contacted for having previously expressed an interest in participating in clinical research. Participants compensated for travel and up to $280 in gift cards based on proportion of activities completed.

Tait et al. (2015)

Study details	Population	Intervention/ comparator	Results	Notes
Full citation Tait et al. (2015) **Quality score** + **Study type** RCT **Location and setting** Australia **Study aims** To evaluate the effectiveness of 'breakingtheice', a web-delivered intervention for users of amphetamine type stimulants (ATS) **Length of follow up** 6 months **Source of funding** Study funded by The Commonwealth of Australia,	**Number of participants** n=160 (Intervention: n=81 Control: n=79) **Participant characteristics** 121 (75.6%) participants were male, mean age was 22.4 years (SD=6.3). 18 (11.3%) participants reported using ATS daily or almost daily. 15 (9.4%) participants reported previous treatment for ATS use; 23 (14.4%) reported ever injecting drugs. Baseline characteristics were similar on all measures except for 'actual help seeking' in which the intervention group had significantly lower levels than the control group (mean 0.3 vs 0.8). **Inclusion criteria** • Resident in Australia • Aged 18 or older • Reported use of ATS (meth/ amphetamine, ecstasy, non-medical use of prescription	All participants were screened and enrolled via the free study website. **Intervention** The intervention consisted of 3 web-delivered, fully automated modules. Time needed/taken to complete modules not reported. Based on MI and CBT principles and adapted from a face-to-face intervention evaluated in amphetamine users Module 1: key problem areas ATS use impacts on – relationships, health, finances, work/study, legal issues, mental health. Feature 4 characters with different storylines. Participants generate maps of interconnections between problems. [information from Tait, 2012, as cited in Tait 2015] Module 2: pros and cons of use, rating importance on a 1-10 scale using a 'decisional balance approach'. Participants anticipate good and bad outcomes from changing use. [information from Tait, 2012, as cited in Tait 2015] Module 3: behavioural change including setting goals, actions	**Intervention:** Web delivered intervention (n=81) **Control:** Waiting list (n=79) **Outcomes** *Intervention acceptability* Authors stated that participants' free-text responses identified the use of fictional case stories as an engaging approach. Authors stated that the main criticisms of the intervention included the assumption that people wanted to change their behaviour and the lack of information on benefits of drug use (e.g. the use of ATS to control the symptoms of Attention Deficit Hyperactivity Disorder). The most frequently cited negative reactions to the intervention were concerns about privacy (16/35; 46%) and boredom (7/35; 20%). Most participants (22/35; 63%) indicated that the intervention had reduced their adverse drug effects. The majority of participants (30/35; 86%) indicated that they would recommend the site, 86% (30/35) endorsed internet delivery, 91% (32/35) rated the site as easy to use, and 91% (32/25) were satisfied with the programme. **Analysis** Outcome data were self-reported at 3 and 6 months. Satisfaction was reported via a feedback survey which included free text fields	**Included in review 1** **Limitations identified by the author** Loss to follow up: 38/81 (47%) intervention participants and 41/79 (52%) control participants completed follow-up surveys at 6 months. Retention was not significantly associated with group allocation. A substantial minority (37%) in the intervention group failed to complete even the first module. Study power: Authors determined sample size of 60 people required to evaluate ATS use at a power of 0.8 to detect a medium effect size (e.g. *d*=0.5). 80 people per group were recruited to allow for 20% attrition. Participants required to have internet access so may have excluded the most severely disadvantaged ATS users. Although the feedback on the site was generally positive, authors acknowledge that the comments only represent a small proportion of the intervention group; they anticipate that those lost to follow-up would be likely to have more negative opinions. **Limitations identified by the review team** There is a potential discrepancy in the reporting of follow-up rates. It is initially stated that 38/81 (47%) of intervention group participants completed follow-up surveys at 6 months but the authors then report later that 35/81 (43%) provided feedback at 6

Study details	Population	Intervention/ comparator	Results	Notes
Department of Health and Ageing. First author (RT) funded by A Curtin University Research Fellowship; 3 other authors (HC, KG, FK-L) funded by NHMRC Fellowships. None of the funders had any role in study design, data collection, analysis and interpretation, or in report preparation and submission for publication.	stimulants)in the past 3 months • Internet access **Exclusion criteria** • Currently receiving any treatment for stimulant abuse/ dependence or methadone, naltrexone or buprenorphine for a substance use disorder • Those who reported that a doctor had ever diagnosed them as having schizophrenia, schizoaffective, or bipolar disorder	on specific dates, strategies to help with cravings, refusal skills, managing a 'slip' and an action plan for high risk situations. [information from Tait, 2012, as cited in Tait 2015] **Comparator** Those in the waitlist control group underwent the same assessments as the intervention group but could not access the intervention for 6 months.	plus the 16-item Internet Intervention Adherence Questionnaire and the 16-item Satisfaction with Service measure. Of the 81 people randomised to the intervention, 35 (43%) provided feedback at 6 months (NOTE: see limitations section).	months. It may be that the second figure relates specifically to those providing feedback about satisfaction with the intervention but this is not clear. User satisfaction outcomes are not comprehensively reported; user feedback is summarised narratively and only a small amount of quantitative data are presented to show how participants responded to items on the feedback survey. **Other comments** Drug use outcomes reported in a separate evidence table for Review 1. Participants received AU$20 in vouchers for each baseline and follow-up assessment.

Walker et al. (2011)

Study details	Population	Intervention/comparator	Results	Notes
Full citation Walker et al. (2011) **Quality score** + **Study type** RCT **Location and setting** USA **Study aims** To compare the effects of a brief motivational intervention for cannabis use with a brief educational feedback control and a no-assessment control. **Length of follow up** 12 months	**Number of participants** n=310 **Participant characteristics** Mean age 15.97 (SD 1.24) years. Mean age at first use of marijuana 13.06 (SD 1.66) years. 60.6% (n=188) male. Caucasian=203 (65.5%) African American=10% 'Multiracial'=13% Asian and Pacific Islander=3% Hispanic/Latino=4% 'Other'=5% 9th or 10th grade=161 (52%) 11th or 12th grade=149 (48%) Average cannabis use= 39 days out of previous 60 days. State of change: Pre-contemplation=39% Contemplation=30% Preparation, action or maintenance=31% No significant differences in	**Intervention** Motivational Enhancement Therapy (n=103) 2 sessions of 45-50 minutes, 1 and 2 weeks after baseline assessment. Delivered by around 10 bachelor's and master's level counsellors. MI techniques used throughout. • Session1: Discussion of cannabis use, concerns about use, role of cannabis in life currently and in future, pros and cons, and self-efficacy. • Session 2: Review of personal feedback based on baseline assessment. **Comparator 1** Educational feedback (n=102) 2 sessions of 45-50 minutes, 1 and 2 weeks after baseline assessment. Delivered by around 10 bachelor's and master's level counsellors. PowerPoint presentations on current research and facts about cannabis. Counsellors avoided MI techniques. • Session 1: Presentations on cannabis basics, cannabis and the brain, and cannabis and the lungs. • Session 2: Presentations on sex and pregnancy, cannabis and	**Intervention:** Motivational enhancement therapy (MET, n=103) **Control 1:** Educational feedback control (EFC, n=102) **Control 2:** Delayed feedback (n=105) **Outcomes** *Participant satisfaction* Questionnaires completed by participants following each feedback session indicated that • 98% felt listened to • 81% felt liked • 92% felt appreciated • 96% felt respected • 89% felt understood • 83% felt comfortable with the counsellor • 74% felt cared about • 94% agreed that counsellors were not judgmental • 93% agreed that their counsellors did not use persuasion • 92% reported being satisfied with their session • 95% reported being satisfied with their counsellor There were no between-group differences in these ratings with the exception that those in the EFC were more likely to endorse the usefulness of free information about cannabis. Authors concluded that overall, these data indicate that participants felt the sessions were a positive experience and that the EFC condition controlled for nonspecific therapeutic factors. **Analysis** Counsellors trained by authors. Weekly meetings to review audiotapes of sessions, reinforce skills, discuss cases. Random review of tapes from 60 participants by 4 research	**Included in review 1** **Limitations identified by the author** Loss to follow up: 98% follow up at 3 months and 91% follow up at 12 months. No significant differences in those lost to follow up and those not. Not clear how many participants completed feedback questionnaires immediately after their sessions; assumed to be 100%. Study power: target sample size 300 for interaction at 3 months with eta-squared effect size of 0.045 and power of 0.80, assuming up to 10% attrition. **Limitations identified by the review team** Unclear whether allocation was concealed, and whether knowledge of allocated intervention was prevented during study. Data collection tool for measuring participant satisfaction not described. Methods for analysing between-group differences in satisfaction

Study details	Population	Intervention/comparator	Results	Notes
Source of funding Supported by a grant from the National Institute on Drug Abuse (ROIDA014296).	baseline characteristics between groups (including cannabis use), except significantly more females in delayed feedback group (p<0.01) and significantly less other drug use in motivational enhancement group (p<0.05). **Inclusion criteria** • Aged 14 to 19 years. • In grade 9th to 12th. • Smoked cannabis 9 or more days in the past 30 days. **Exclusion criteria** • Not fluent in English. • Thought disorder that precluded full participation. • Refused randomisation.	driving, the heart. Participants could choose additional presentations. NOTE: After the 2 motivational enhancement therapy or education control sessions, option of 4 one to one cognitive behaviour therapy sessions, each 50 minutes long, on setting goals, cannabis refusal skills, enhancing social support and increasing pleasant activities, planning for emergencies and coping with relapse. Delivered by different counsellors to the one who performed the first 2 sessions. **Comparator 2** Delayed feedback (n=105) No baseline assessment. After 3 months, could choose between intervention or education control, but were not followed thereafter.	assistants – MI delivered with high degree of fidelity and skill. CBT sessions taped and supervised, but behaviour not coded. Data collection tool for measuring participant satisfaction not described. Methods for analysing between-group differences in satisfaction scores not specified.	scores not specified. **Other comments** 619 screened, 299 ineligible, 10 chose not to participate. Recruited from 6 schools from presentations in class (37%), lunchtime recruitment tables (34%), flyers, referrals from school staff (6%), referrals by friends (19%), and adverts (3%). Randomisation by stage of change and grade using tables of randomly permutated blocks. Separate randomisation tables constructed for each school. $15 gift cards after 2 feedback sessions, $20 at 3 month follow up and $40 at 12 month follow up. 12 participants completed 12 month follow up online.

Walton et al. (2013)

Study details

Full citation

Walton et al. (2013)

Quality score

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Study type
RCT

Location and setting
Midwest of USA

Study aims
To describe outcomes from a randomised controlled trial examining the efficacy of brief interventions delivered by a computer (CBI) or therapist (TBI) among adolescents in urban

Population

Number of participants
n=328

Participant characteristics

	TBI	CBI	Control
Male	36.4%	33.0%	30.9%
African-American	65.3%	61.0%	55.5%
Hispanic	6.8%	16.2%	10.9%
Age (years)	16.3 (SD 1.4)	16.4 (SD 1.6)	16.2 (SD 1.7)

Drug use in past 3 months

All participants had used cannabis in the past 3 months. No significant differences in characteristics across intervention and control groups

	TBI	CBI	Control
Cannabis freq	3.1 (SD 1.9)	3.1 (SD 1.9)	3.2 (SD 1.9)
Cannabis consequences	91.5%	95.0%	93.6%
Number of	14.2 (SD	14.3	13.9 (SD

Intervention/ comparator

Intervention

Therapist-based brief intervention (TBI)

Research therapists trained in motivational interviewing, facilitated by computer to prompt content. Tailored feedback, summaries and open-ended questions to evoke change talk.

Computer-based brief intervention (CBI)

Interactive animated program with touch screens. Virtual buddy guided participants and provided audio feedback. Participants watched animated role-plays and asked to make a behavioural choice. If participants chose a negative behaviour, they were asked to consider the consequences in relation to their goals. Role-plays showed progression in consequences for animated characters.

Comparator

Results

Intervention 1: Therapist-based brief intervention [TBI] (n=118)

Intervention 2: Computer-based brief intervention [CBI] (n=100)

Control: Enhanced usual care (n=110)

Outcomes

User satisfaction
At post-test, 77.4% of participants rated the BIs as “liked” or “liked a lot” with no significant differences between BIs (X^2=0.329; p>0.05).

82.6% participants rated at least one section of the intervention “very or extremely helpful”. The most well-liked sections were reviewing the reasons to change cannabis use and role-plays.

Analysis
328 people were randomised, 309 received the assigned intervention/control. 228 participants were assigned to receive either TBI or CBI. User satisfaction was measured via a self-administered questionnaire following completion of the BI; it is assumed that all 218 participants receiving a BI went on to provide satisfaction data but this is not

Notes

Included in review 1

Limitations identified by the author

Loss to follow up: user satisfaction survey was completed once participants had received their assigned BI so it is assumed that all those who received an intervention went on to provide feedback; however, this is not explicitly stated.

Study power: 95 needed per group to achieve 80% power and detect a 15% difference in outcomes between TBI/CBI and control. Sample size of 199 needed to detect 10% difference in outcomes between TBI and CBI.

Computer used by therapists could have been distracting.

Limitations identified by the review team

Unclear if allocation adequately concealed.

Reporting of user satisfaction is not comprehensive – responses are not reported for every item, nor are group differences.

Other comments
Recruited April 2007 to December 2009.

Self-administered 10 min screening survey ($1 compensation). Those with cannabis use did another 25 minute baseline survey ($20 compensation). Follow-ups self-

<table>
<tr><th>Study details</th><th>Population</th><th>Intervention/ comparator</th><th>Results</th><th>Notes</th></tr>
<tr>
<td>primary care clinics.

Length of follow up
12 months

Source of funding
Supported by a grant (#DA020075) from the National Institute on Drug Abuse.</td>
<td>
<table>
<tr><td>cannabis conse-quences</td><td>15.2)</td><td>(SD 15.5)</td><td>15.0)</td></tr>
<tr><td>Other drug use</td><td>15.3%</td><td>23.0%</td><td>26.4%</td></tr>
<tr><td>Other drug freq</td><td>0.5 (SD 1.3)</td><td>0.9 (SD 3.0)</td><td>1.2 (SD 2.7)</td></tr>
<tr><td>Alcohol use</td><td>48.3%</td><td>53.0%</td><td>58.2%</td></tr>
<tr><td>Alcohol freq</td><td>0.7 (SD 0.9)</td><td>0.9 (SD 1.1)</td><td>1.0 (SD 1.1)</td></tr>
<tr><td>Cannabis DUI</td><td>21.2%</td><td>24.0%</td><td>18.2%</td></tr>
<tr><td>Cannabis DUI freq</td><td>0.4 (SD 0.9)</td><td>0.5 (SD 1.1)</td><td>0.3 (SD 0.7)</td></tr>
</table>
DUI= driving under influence

Inclusion criteria

Aged 12 to 18 years

Reporting past-year cannabis use

Exclusion criteria
No parent or guardian

Insufficient cognitive orientation to give consent

Sibling in same household in study

Did not return within 2 weeks</td>
<td>‘Enhanced usual care’ control

Brochure of warning signs of cannabis problems, resources (treatment, suicide hotlines, employment services, leisure activities), and cannabis information websites.</td>
<td>explicitly stated.

Participants rated the likeability of the BIs on a 5 point Likert scale (from 1, really didn’t like it to 5, liked it a lot) as well as the helpfulness of sections within the BI (e.g. “how use fits with others”, “reasons to change”, “role plays”, and “resources”) from 1, not at all helpful to 5, extremely helpful.</td>
<td>administered in community locations (i.e. clinics, restaurants, home) with $25, $30 and $35 remuneration, and $5 for urine sample.

Randomly assigned using computerised algorithm. Follow-up staff blinded to group.

1416 adolescents screened for this and another study. 248 (14.9%) refused randomisation: males more likely to refuse (p<0.01), Caucasians more likely to refuse than African-Americans and other races (p<0.001). 366 (25.8%) reported past year cannabis use, 328 (89.6%) enrolled in this RCT.

Drug use outcomes reported in a separate evidence table for Review 1.</td>
</tr>
</table>

Wenzel et al. (2009)

Study details	Population	Research parameters	Results	Notes
Full citation Wenzel et al. (2009) **Quality score** - **Study type** Mixed methods study (qualitative focus groups + quantitative surveys) **Location and setting** Los Angeles, USA **Aim of the study** To pilot a tripartite prevention programme	**Number of participants** n=31 **Participant characteristics** Participants were women staying in 5 different homeless shelters in Los Angeles County. Mean age 21.3 years (SD=2.2). 51.6% participants were African American, 29.0% were Hispanic/Latina, 6.4% white and 12.9% 'other' or mixed ethnicity. 7(22.6%) participants reported using drugs in the	**Data collection** An intervention called "The Power of YOU" was presented to participants in order to seek feedback on programme content and delivery. 7 focus groups (including 2 specifically on AOD use) of between 3-7 participants were held to test the 3 programme sessions (AOD, HIV risk behaviour, and IPV). Groups lasted approximately 1.5 hours and were facilitated by 2 moderators. Moderators were white women in their mid 30s to early 40s who had experience in working both with homeless women in shelter settings and also conducting such sessions. Content of focus group sessions: • Introduction to the material and the purpose of the group • Provision of graphic normative feedback on particular risk behaviours and discuss why overestimation may occur • Discussion of reasons why people may engage in AOD, triggers, and learning how to avoid triggers • Discussion of how AOD use may contribute to unsafe sex • Role plays to help with skills training and evaluation of participants' plans • Discussion of resources in the community Participants were also provided with a colour brochure containing information from the session that they could keep and use as a resource. Each group was followed by a 20-30 minute feedback session conducted by a facilitator who had not been present during the focus group. This person was an African	**Key themes** What did you like/what was comfortable about the AOD discussion group? **General statements**: *"Man we had fun"; "It was alright, it was cool"* **Moderators**: "*The way they worked, attitudes, made us feel comfortable"* **Role play**: *"Role play was good"* **Brochure**: "*Liked it", "Everything was interesting, diseases too, sex is as bad as drugs"* **Confidentiality**: *"Like that what we say won't be spread around"* **Normative information**: "*The ratings; what percent use"* *"Made me aware of how many people out of 100 use and how many don't"* *"What was really impressive was the alcohol and drugs and stuff because we all went so high in the percentages."* The authors report that women in the AOD sessions found the normative information helpful. In addition, they indicated that discussion of external and internal triggers helped them to better identify high-risk situations in which they might be more likely to use alcohol or drugs. Women enjoyed both the moderators' role playing of how to handle high-risk situations and sharing their own role-play examples. What did you not like/was uncomfortable/suggestions for change?	**Limitations identified by author** Participants self-selected; engagement and positive feedback may have been lower in a more systematic, random sample. Does not include a focus on lesbian and bisexual women who are disproportionately represented among homeless youth. **Limitations identified by review team** Findings from the feedback questionnaires are only briefly described; quantitative data are not presented in full.

Study details	Population	Research parameters	Results	Notes
targeting alcohol and other drug (AOD) use, HIV risk behaviour, and intimate partner violence (IPV) among homeless young women [linked to D'Amico et al, 2009]. **Source of funding** Study supported by a grant from the National Institute on Drug Abuse	past 6 months. 1 participant reported a current AOD problem, or needing treatment, while 6 participants (19.3%) reported ever attending AOD treatment. **Inclusion criteria** Participants: • Aged 18-25 years • Spoke and understood English **Exclusion criteria** Settings: • Domestic violence shelters • residential substance abuse treatment centres	American woman in her early 30s, again with previous experience of conducting such sessions and working with homeless women in shelters. Questions discussed in the feedback session: • How did you feel about participating in this group and talking about these issues? Was it comfortable? Uncomfortable? • What did you like/not like about this discussion? • What did you like/not like about the brochure? What changes would you make to improve it? • Were there other things that you think would have been important to talk about that you didn't get to discuss? • Would you recommend this type of discussion to a friend? Why/why not? • What do you think would encourage other women to participate in this or make them feel more comfortable? After the feedback session, participants completed 2 brief self-administered questionnaires: • satisfaction with the intervention and recall of key information • demographic information and personal experiences with AOD, HIV risk behaviour, and IPV. **Method of analysis** Satisfaction items asked participants to rate different elements of the session e.g. the extent to which the discussion was helpful, the right length etc. (from 1=completely disagree to 5=completely agree). Recall of key topics was assessed using the same scale. The personal experiences questionnaire was based on the authors' previous work with homeless women and included items related to participants' drug use in the past 6 months, current concerns about AOD problems, and previous treatment for drug use. Feedback sessions were audio-recorded and then listened	**Normative information**: *"I thought the stats were pretty low from what I was expecting, especially with the drug use"* *"Shocked at the difference"* *"Lot of people are in denial and don't admit to it"* Many women expressed initial doubts and raised questions about the normative information presented during the sessions. For example, some women expressed the belief that every homeless woman uses alcohol and drugs. Although many participants thought the proportions of other women using alcohol /drugs were not as "low" as was stated, after discussion with the moderators about how their immediate environment/ influence of their peers might shape their perceptions, they agreed that their personal estimates (e.g. 90-99%) were too high. **Suggestions for additional materials/intervention**: *"Even good for older people"* *"Go one-on-one because some people are shy"* *"Being in the streets is not a comfort zone"* *"Being in LA is not easy with all this stuff around"* Following participant feedback, the moderators demonstrated a role play first to model how women might handle a challenging situation and also to increase their comfort levels. Authors report that many women asked for specific discussion of the specific challenges of being homeless and resources for obtaining housing. Authors therefore developed a housing resource guide for women that complemented the brochure and the information discussed during the sessions."	Doesn't appear that focus group or feedback sessions were transcribed verbatim. Participants may have given more favourable feedback as they were being interviewed face-to-face rather than providing feedback anonymously. **Other comments** Participating shelters received $100 honorarium; individual participants received $30. Participants also received a resource and referral guide including information on low- and no-cost sources of health care, mental health care, and

Study details	Population	Research parameters	Results	Notes
		to by the facilitator and co-facilitator who independently took notes re: participants' responses to each question. Moderators then shared and discussed their notes with each other and the leader of the feedback session. Classic content analysis was used to guide the coding of feedback. Firstly, a range of themes were identified for each question; a cross-case analysis was then undertaken to assess the degree to which themes were shared across participants. Participant-by-theme tables were generated; themes were determined to be key if they were mentioned by several participants.	<u>Recommend to a friend?</u> [NOTE: These comments relate to the intervention as a whole, not just the session on AOD] "*Definitely*" *"People need to know about this; all my friends need to know about it"* *"Yes. There is knowledge they may not know."* The authors reported that overall feedback about the intervention content and the brochure was positive. Participants did not feel judged and they appreciated having an opportunity to discuss the issues covered by the programme. Consistent with the authors' expectation that the MI approach would be well received, respondents indicated that moderators made them feel comfortable so they wanted to participate. Participants in all 3 sessions (AOD, HIV & IPV) indicated that the intervention would be valuable for their friends. They reported that the welcoming nature of the programme and the importance of the topics would be sufficient to encourage other young women to participate. <u>Quantitative satisfaction data</u> Satisfaction scores ranged from 3.9 to 5.0, indicating agreement with statements that the discussions and group leaders were helpful, the information was useful and understandable, and the style and length of the discussions were appropriate. However, precise data are not reported for each statement. Information recall scores ranged from 4.5 to 5.0, indicating that participants agreed that key topics were discussed during each session (e.g. reasons that people may choose to use alcohol and drugs). Again, precise data for each item on the feedback survey are not reported.	other services in the area. This study also explored participants' views of prevention sessions on risky sexual behaviour and intimate partner violence. These findings are not reported here.

Wood et al. (2010)

Study details	Population	Intervention/comparator	Results	Notes
Full citation Wood et al. (2010) **Quality score** - **Study type** Mixed methods study **Location and setting** London, UK **Study aims** To develop and evaluate an educational outreach event aimed at educating users of recreational drugs and their friends on the potential for toxicity and what to do if they find someone unwell after the use of recreational	**Number of participants** First event: n=71 Second event: n=35 Final event: n=43 **Participant characteristics** Not reported **Inclusion criteria** None stated **Exclusion criteria** None stated	**Intervention** 'Drug Idle', an educational outreach concept for recreational drug users and their friends. **Initial concept** The initial concept was designed to be a 2-3 hour event during which attendees could receive information about recreational drugs and associated toxicity, and have the opportunity to ask questions to an 'expert panel' in a non-judgemental setting. The event was held in a nightclub/late-night venue that caters for men who have sex with men (MSM) and was hosted by someone well-known in the MSM club scene. The expert panel comprised clinical and analytical toxicologists, law enforcement representatives, and educational outreach support services. A representative from the nightclub where the event was held was also available to answer questions. The event comprised 3 sections: <u>Interactive quiz</u> 4 volunteers from the event attendees were selected to answer questions on a range of topics including common symptoms of recreational drug toxicity, legislation differences between various drugs, complications of 'poly' drug use, epidemiology and frequency of drug use. <u>Breakout workshops</u> 3 parallel workshops were hosted to allow attendees to interact directly with members of the expert panel: • 'How to manage an unwell individual': provided advice on how to manage someone who was unwell following recreational drug use. Included demonstration of the 'recovery position' including an opportunity for participants	**Outcomes** *Feedback on initial Drug idle concept* 9/33 (27.3%) respondents at the 1st event felt that there should be changes to the interactive quiz component to involve more of the attendees. The authors stated that there was an 'overall opinion' that the use of a 'panel' of 4 people selected from the audience was not well liked. Consequently, the interactive quiz was adapted for subsequent events so that questions were put to the whole audience by the host. The authors report that number of workshops offered was felt to be too great so this was reduced to 2 at the 2nd event: 'How to manage an unwell individual' and 'Drug-harm minimisation' were selected as these had been best attended at the 1st event. At the 2nd event, the majority of participants attended the 'How to manage an unwell individual workshop' (66.7%). Those responsible for leading the workshop on drug harm-minimisation felt that their expertise was better delivered on a 1:1 basis and not appropriate for a breakout workshop format. The finalised Drug Idle concept therefore only offered 1 workshop: 'How to manage an unwell individual'. *Feedback on finalised Drug Idle concept* 100% of those completing feedback forms felt that the interactive quiz, workshops, and 'ask the panel anything' sessions were useful. The authors state that there were no suggestions to change the format of the finalised Drug Idle concept. *Overall evaluation*	**Limitations identified by the author** 42/71 (59%) attendees completed feedback forms at the first event; 15/35 (42.9%) provided feedback at second event, 34/43 (79.1%) gave feedback on the final event. Not all participants answered all of the survey items. Participants not followed up to assess if Drug Idle had brought about long-term changes in knowledge about recreational drug use. **Limitations identified by the review team**

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drugs. **Length of follow up** N/A **Source of funding** Study part-funded by a grant from the UK Department of Health. Authors acknowledge the event sponsors who provided financial assistance with event advertising and promotion, and prizes for the interactive quizzes.		to practice. • 'Drug harm-minimisation': provided information on poly-drug use and how to minimise potential complications of drug use • 'Door searches and personal security': educated participants on the types of drug searches that are permitted prior to entry into nightclubs/late night venues and also how to ensure personal safety when leaving venues late at night under the influence of alcohol and/or drugs. 'Ask the panel anything' session Unstructured session in which attendees were given the opportunity to ask the expert panel any question related to recreational drugs. **Final concept** Information gained from feedback after the 1st 2 events (see 'Results' section) was used to alter and adapt the concept. The finalised concept had the same general format as the first 2 events: Interactive quiz The host posed randomly selected questions to all members of the audience with prizes provided by sponsors for correct answers Breakout workshop 'How to manage an unwell individual' session focused on demonstrating and practising the recovery position and advice on when to call for help. Ask the panel anything session **Comparator** N/A	Of the 85 participants who answered the item relating to the overall evaluation of the Drug idle concept, 100% felt the event was useful. 75 attendees answered the item regarding the duration of the event: 72 (96.0%) felt the duration was appropriate, 2 (2.7%) felt that it was too long, and 1 (1.3%) felt that it was too short. 85 (98.8%) reported that they would recommend future events to friends, while 1 (1.2%) respondent indicated that they would not recommend to friends because it would potentially identify them as a recreational drug user. 100% of the 81 attendees who responded to the item about the interactive quiz felt that the quiz questions were appropriate. 56/57 (98.2%) felt comfortable asking questions during the 'Ask the panel anything' session. **Analysis** Throughout the development of Drug Idle, data were collected using an anonymous questionnaire. The following items were measured to determine the effectiveness of the concept: • Was the Drug Idle event useful? • Was the duration of the event appropriate in length? • Were the questions in the interactive quiz appropriate? • Did they feel comfortable asking questions in the 'Ask the panel anything' session? • Would they recommend a future event to a friend? It is not clear how these items were measured (e.g. dichotomous yes/no responses) nor if there was the opportunity to provide 'free text' feedback comments.	No description of participant characteristics. No description of sampling or recruitment methods. **Other comments** Prizes were offered during the interactive quiz component of the intervention but these prizes are not described.