

Evidence Profile 4.0: Promoting 2SLGBTQI+ Health Equity

Recommendation 4.0 Evidence Profile (Quantitative)

Recommendation Question: Should clinical groups for health conditions be recommended for 2SLGBTQI+ communities?

Recommendation 4.0: The expert panel suggests health-service organizations implement specialized 2SLGBTQI+ clinical groups for health promotion and chronic disease prevention and management.

Population: 2SLGBTQI+ persons across the lifespan

Intervention: 2SLGBTQI+ clinical groups for health conditions (could be professional or peer-led)

Comparison: No clinical groups for health conditions

Outcomes: Social support and/or sense of belonging [Critical], Mental health problems (including depression, anxiety, suicidality) [Critical], Self-care/self-management [Important], Patient-provider therapeutic relationships [Important; not found within this literature], Number of visits to ER, inpatient care or hospitalizations [Important; not found within this literature]

Setting: health service organizations (community health, primary care, out-patient clinics)

Bibliography: 48106, 48319, 48892, 49066, 49382, 49465, 49524, 49755, 49824, 49858, 50051, 50145, 50333, 50899, 51081, 51513, 51767, 52086, 53502, 54397, 54408, 60121, 61840, 8, 46, 99, 103, 4262

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
Mental health outcomes measured with: A variety of validated and non-validated tools were used to measure this outcome. Refer to footnote ^p													
4	RCT	Very serious ^a	Serious ^b	Not serious	Not serious	Not detected					4 RCTs examined the impact of a variety of group-based sexual health interventions on mental health with mixed results. 2 RCT studies suggest a positive direction of effect and 2 suggest a null effect.	⊕○○○ Very Low	

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							49824: United States	<p>49824: 2 intervention arms:</p> <p>1. Telephone Coping Effectiveness Training (tele-CET) with MSM: twelve 90-minute sessions of telephone-administered coping effectiveness group training.</p> <p>2. Telephone Supportive-Expressive Group Therapy + standard of care (SOC) with MSM: twelve 90 minute group sessions: SOC participants received no active treatment but had access to community-based support services commonly available to people living with HIV such as support</p>	n= 118	n= 121	<p>The Tele-CET vs. SOC did not demonstrate improvement in GDS scores in MSM immediately post intervention, or 4 and 8 months following the delivery of the intervention. The tele-SEGT vs. SOC did demonstrate improvements in the GDS score of MSM immediately following the intervention, but not at 4 or 8 months post intervention.</p>		49824: Heckman et al. (2014)

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							60121: United States	groups, 12-step programs and individual therapy. 60121: Immediate Treatment Condition "Poz Talk" group received an intervention that promotes sexual health and stress management among HIV-infected MSM. After completing the intervention workshops, all men were invited to participate in supportive group	4 months 13.15 (0.77) 8 months 13.83 (0.70) Tele-CET vs SOC (B P D) Post-intervention - 2.39 .03 0.44 4 months: -1.59 .13 8 months: -1.45 .13 n= 39 Perceived stress score: mean (SE) Immediate treatment: 25.1 (1.0) Delayed treatment: 28.1 (.88) F statistic (1, 67)=5.0	n= 40	Compared to the delayed treatment condition, intervention group participants' perceived stress levels improved following the group intervention.		60121: Brown, Vanable, Bostwick, et al., 2019

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							8: Canada	<p>sessions ("Poz Talk") led by the intervention facilitators.</p> <p>Delayed Treatment Comparison Group</p> <p>The comparison group received the intervention, but was randomized to a "delayed" treatment group that serves as the comparison group. The time delay was 3months.</p> <p>GPS (Gay Poz Sex), a community-based and peer-delivered sexual health promotion intervention for gay and bisexual men (GBM) living with HIV.</p> <p>This study compared GPS to treatment as usual (TAU) in the community, which we defined as referrals to mental health and sexual</p>	n= 89	n= 94	Depression (CES-D) scores demonstrated no differences between the intervention and comparison group.	8:	Hart et al., 2021

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							46: United States	health services already found at local community-based organizations and clinics. 46: HIV risk reduction intervention for at-risk urban MSM who regularly attend private sex events. The group intervention consisted of four consecutive weekly sessions each lasting 2 h in duration and facilitated by a trained peer interventionist.	±13.43 Time OR 0.03 (-3.55, 3.61) Group OR -0.97 (-2.53, 0.60) Time x group OR -0.33 (-1.19, 0.52) n=8 Depression scores (CES-D): Intervention: mean (SD): baseline 20.88 (7.92) post intervention 20.00 (10.53) mean change - 0.88 (- 2.77, 1.02) Anxiety scores: (Beck Anxiety Inventory) Intervention baseline 10.38 (12.38) post 6.13 (7.63) mean change - 4.25 (- 7.29, - 1.21)	n=6 Depression scores (CES-D): Control baseline 17.67 (6.17) post 16.67 (7.38) mean change - 1.00 (- 4.02, 2.02). Control: baseline 8.83 (10.94) post 6.50 (8.06) mean change - 2.33 (- 9.69, 5.02)	Depression scores (CES-D) did not improve following participation in the HIV risk reduction group-based intervention for MSM and attend private parties. Anxiety scores improved slightly following participation in the HIV risk reduction group intervention. AUDIT scores (alcohol and substance use) did not improve following participation in the HIV risk reduction group intervention.	46: Mimiaga et al., 2019

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									AUDIT scores: Intervention baseline 3.25 (4.31) post 4.17 (2.92) mean change - 0.25 (- 1.19, 0.69)	AUDIT scores: Control baseline 4.33 (2.67) post 3.00 (3.46) mean change - 0.17 (2.54, 2.21).			
8	Quasi-experimental	Very serious ^c	Serious ^d	Not serious	Not serious	Not detected	<u>48892</u> : United States	48892: Lifeskills for Men: Adapted from Lifeskills (for transgender women) to address the unique HIV and STI prevention needs of young transgender MSM (age 18-29). A group-based gender-affirmative HIV and STI	n=17 Transgender adaptation and integration measure score (TG-AIM) Mean (SD) Baseline 17.9 (4.65) Follow-up 20.2 (3.41)	NA	8 quasi experimental studies identified mixed results. 6 quasi-experimental studies did not demonstrate improvement across measures of depression, 1 study using self-reporting of stimulant use reported less stimulant use following the intervention and 1 study reported a positive direction of effect for depression. The TG-AIM scores increased; the Brief Symptom Inventory scores (less distress) and the Substance Use scores (less frequent) decreased, following the delivery of the group-based intervention.	⊕○○○ Very Low	<u>48892</u> : Reisner, White Hughto, et al., 2016

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							49066: United States	prevention intervention for young adult trans MSM. 49066: see above	Brief Symptom Inventory Baseline 19.4 (8.85) Follow-up 17.5 (10.33) Substance use Mean substance use (0–4) Baseline 1.1 (1.16) Follow-up 0.8 (0.81) Polydrug (2 or more drugs) Baseline 29.4 (5/17) Follow-up 23.5 (4/17) Any drug use Baseline 64.7 (11/17) Follow-up 58.8 (10/17) Fisher's 0.99 n=59 CES-D (Depression) Mean (SD; n) β (95% CI) Baseline 16.0 (10.2; 47)	NA	Overall, the CES-D (depression symptoms) scores demonstrated a positive trend following the delivery of the group-based intervention.		49066: Hart et al., 2016

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							<p><u>49465:</u> Canada</p>	<p>49465: Queer Women Conversations (QWC) intervention: Weekend retreat consisting of six consecutive sessions tailored for LBQ women. Sessions covered a range of topics addressing behavioral and social-structural determinants of HIV/STI risk, including STI information, safer sex negotiation skills, and addressing sexual stigma.</p>	<p>Post-intervention 13.5 (11.1; 45)</p> <p>Follow-up 13.3 (10.6; 48) B -2.54 (-5.67, 0.59)</p> <p>n=44 Depression (Patient Health Questionnaire-2 [PHQ-2]); B (95% CI) Pre to post 0.134 (- 0.209 0.478) pre to follow-up - 0.292 (- 0.646 0.061) 0.105</p> <p>n=70</p>	<p>NA</p>	<p>Summary: Post intervention scores following the delivery of the QWC intervention, PHQ-2 scores were slightly lower (less depressed).</p>	<p><u>49465:</u> Logie, Lacombe-Duncan, Weaver, et al., 2015</p>	<p><u>49755:</u> Lyons, Tilmon &</p>
							<p><u>49755:</u></p>			<p>NA</p>			

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							United States	49755: C-TALK intervention 10-session small group intervention targeting MSM stimulant users. The educational modules were designed to encourage group-based discussion about dissociating drug use and sex. Weekly sessions focused on increasing understanding of sex/stimulant synergy, increasing understanding of subgroup dynamics, and increasing positive social interactions without stimulant use.	Self-reported stimulant use (n=53, those with 3 months of follow-up) Any use Baseline: 96% 12 weeks: 63% Heavy use (> once per week) Baseline: 34% 12 weeks: 6%		Self-reported stimulant use declined 12 weeks post-intervention, indicating a positive direction of effect.		Fontaine, 2014
							<u>50899</u> : United States	50899 Seeking Safety Group Therapy Intervention: Seeking Safety is a cognitive-behavioral therapy program to	n=7 PTSD Checklist-Civilian (PCL-C) measure: Mean (SD) Pre 55.4 (15.5); Post 45.7 (15.3)	NA	PTSD symptoms decreased following participation in the intervention; and alcohol use and drug use also decreased after participation in the intervention.		<u>50899</u> : Empson et al., 2017

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							51081: United States	address co-occurring substance use and PTSD. 12-session Seeking Safety program was pilot tested with a group of transgender women living with HIV who reported substance use and a history of violence. 51081: SE (Somatic Experiencing) Informed Transgender Support and Healing Group Therapy 10 (1/week) consecutive 90 minute sessions of SE based group treatment to assist participants identifying as transgender/gende	% Change -17.50% Short Version Michigan Alcohol Screening Test (MAST) Mean (SD) Pre 7.1 (4.9); Post 5.4 (4.5) % Change -23.90% Drug Abuse Screening Test (DAST-20): DAST (SD) Pre 6.4 (6.9) Post 2.0 (2.9) % Change -68.80% n=8 Depression measures: Pretest Mean (SD) PHQ-9: 8.57 +/- 5.1 PHQ-15: 10.71 +/- 4.83 GAD-7: 7.4 +/- 4.9 WHOQoLBREF -PsychQoL 41.86 +/- 20 Posttest Mean (SD) PHQ-9: 7 +/- 6.85 (p=0.2)	NA	Measures of depression: PHQ-9 did not improve following the delivery of the intervention. PHQ-15 score and GAD-7 (anxiety score) did improve following delivery of the intervention WHOQoL-BREF scores improved with an outlier score included. With the outlier removed, there is a trend demonstrating a reduction in depression symptoms and somatic	51081: Briggs, Hayes & Changaris, 2018

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								r non-conforming, experiencing gender dysphoria to develop: an increased awareness in resources, skills, and abilities, increased skills for affect management, increased skills for nervous system regulation, increased capacity for tolerance of "being in their bodies" and managing "real life" situations related to confrontations, microaggressions, increased resiliency, and a decrease of negative symptoms: depression, anxiety and feelings of social isolation.	PHQ-15: 9.2 +/- 5.3 (p=0.18) GAD-7: 6.86 +/- 4.12 (p=0.41) WHOQoLBREF-PsychQoL 58.29 +/- 25.9. One extreme outlier was present in initial data, following consensus the researchers decided to exclude this participant's data. One participant was lost to follow up, final n=6 n=6 data Pretest PHQ-9 7 +/- 3.4 PHQ-15 9.5 +/- 3.98 GAD-7 7 +/- 5.3 Posttest PHQ-9 4.3 +/- 2.4 PHQ-15 7.33 +/- 2.36		symptoms after participating in the group-based intervention.		
								54397: Healthy Weight in Lesbian and Bisexual Women (HWLB) n=266 Quality of Life Measures:		n=67	Summary: Although the 10% improvement in mental		54397: McElroy et al. (2016)

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							54397: United States	Intervention using tailored approaches. 12 weekly group-based support meetings (2 sites did 16 weeks) delivering a variety of education on nutrition and physical activity. 5 programs: 1. Doing it For Ourselves (DIFO): 12 week intervention (Program Component: Mindfulness approach) 2. Living Out, Living Actively (LOLA): 16 week intervention, 2 locations single-arm, 1 location with a 3-arm RCT. (Program component: pedometer use and gym membership). 3. Making Our Vitality Evident (MOVE): 12 week intervention. (Program component:	Goal was a 10% increase in MCS scores from baseline. Pedometer component: % who achieved: 25.6 RR (95% CI): 0.75 (0.40-1.37) Gym component: % who achieved: 33.3 RR (95% CI): 0.97 (0.60-1.57) Mindfulness component: % who achieved; 39.4 RR (95% CI): 1.15 (0.78-1.68)	Comparison group: % who achieved: 34.3 RR (95% CI): 1.0 Reference	component score from baseline for all individuals was the goal, the scores improved across the intervention participants and sites, with a proportion of the participants achieving the goal of a 10% improvement.		

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							4262: Thailand	<p>pedometer use and gym membership).</p> <p>4. Strong, Healthy, Energized (SHE): 12 week intervention. (Program component: pedometer use).</p> <p>5. Women's Health and Mindfulness (WHAM): 12 week intervention. (Program component: Mindfulness approach).</p> <p>4262: Each Cognitive Behavioral Group Therapy (CBGT)-A session in the clinical group program was divided into three phases. The first phase entailed a review of the previous session and a brief introduction and psychoeducation on the topic to be</p>	n=23 Depressive symptoms (CES-D-10) mean SD Treatment Pre-test 9.48 5.24 Post-test 6.70 3.59	n=23 Depressive symptoms (CES-D-10) mean SD Control Pre-test 10.52 4.41 Post-test 11.22 4.34	CBGT using Art as a medium demonstrated a positive direction of effect (depressive symptoms decreased)		4262: Sahassanon et al. (2019)

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								introduced. In the second phase, the session's main topic—which could be a cognitive or behavioral skill relevant to depressive mood and medication adherence—was addressed in detail, with skill practice applied when appropriate. Finally, in the last phase, homework assignments were given for skill practice and generalization. Opportunity for involving art work in the process was taken wherever possible and relevant. Comparison group: The non-intervention control group followed the same process, except they did not participate in the CBGT-A, although they still retained					

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								contact with the HIV organizational services. After completing the post-period measures, they received a booklet about ways to deal with depression and to increase adherence.					
<p>Self-care/self-management outcomes measured with: A wide range of validated and non-validated tools were used to measure self-care and self-management across the included studies. See footnotes.</p>													

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								<p>to sexual safety among YTW that included basic HIV related information, transmission modes and related risks. Also, content included motivation to protect oneself and the promotion of behavioral skills (condom use and partner communication) through an empowerment-based approach. Measures conducted at baseline, 4, 8 and 12 months following intervention delivery.</p> <p>Standard of care HIV/sexually transmitted infections testing and counseling.</p> <p>48319: HINTS Intervention Internet-based group sessions for</p>	<p>Month 4 1.22 (0.22) Month 8 0.66 (0.12) Month 12 0.71 (0.13)</p> <p>n=85 Behavioral skills:</p>	<p>Month 4 2.10 (0.47) Month 8 1.09 (0.25) Month 12 1.40 (0.32)</p> <p>n=85</p>	<p>condomless sex acts (2.26 [0.40] at baseline vs 1.22 [0.22] at 4 months) compared with the SOC group (2.69 [0.59] at baseline vs 2.10 [0.47] at 4 months) (risk ratio [RR], 0.69; 95% CI, 0.60-0.80</p> <p>Baseline to 12 months: The Life Skills group had a 39.8% greater reduction at the 12-month follow-up visit compared with the SOC group (0.71 [0.13] vs 1.40 [0.32]; RR, 0.60; 95% CI, 0.50-0.72;</p> <p>Directions of effect: Behavioral skills: Null Sexual behavior</p>		Mimiaga (2018)

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								MSM living with HIV. Facilitators presenting information on sexual risk behavior, motivational skills, and behavioral strategies related to a specific topic relevant to online partner seeking and HIV transmission risk reduction. Online interactive polls were included throughout each session to assess participants' experiences and stimulate discussion. At the end of each session, participants were given an assignment to apply discussion topics to their own online experiences between sessions, in order to promote continuity and engagement. The Healthy Living comparison	Behavior: Efficacy M SD Baseline: 7.03 2.3 6 months: 7.08 2.5 Sexual behavior: Condomless anal sex (CAS) All partners M SD Baseline 9.34 16.4 6 months 6.40 14.8 Serodiscordant results: CAS – HIV-/unknown M SD Baseline 3.70 6.33 6 months 1.54 4.1 CAS – HIV+ M SD Baseline 7.17 16.0 6 months 4.86 13.4	Behavioral skills: Behavior: Efficacy M SD Baseline: 7.03 2.3 6 months: 7.08 2.5 Sexual behavior: Condomless anal sex (CAS) – All partners M SD Baseline 9.34 16.4 6 months 6.40 14.8 CAS – HIV-/unknown M SD Baseline 3.70 6.33 6 months 1.54 4.1	Risk behavior all partners: null CAS-All partners Self-reported CAS was lower in both the intervention and control groups at 6 months Risk behavior with serodiscordant (HIV-/unknown): Positive Risk behavior with serodiscordant HIV-/unknown: Self-reported CAS with HIV-/unknown partners was lower in both the intervention and control groups at 6 months. Risk behavior with seroconcordant (HIV+): positive Risk behavior serodiscordant HIV+: Self-reported CAS with HIV+ partners was lower in both the intervention and control groups at 6 months.		48319: Cruess et al. (2018)

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							49382: United States	condition followed the same format as HINTS,; but sessions were tailored to address nonsexual health-related topics relevant to individuals living with HIV and addressed the topics of (a) nutrition and healthy eating, (b) portion control, (c) exercise and staying active, (d) stress reduction to maintain health. 49382: MyPEEPS Intervention: Male Youth Pursuing Empowerment, Education and Prevention around Sexuality (MyPEEPS) is a group-level intervention to reduce sexual risk behaviors among young MSM aged 16–20. The MyPEEPS	n=58 Adapted ARBA scores: Unprotected anal sex Unadjusted no. (%) or mean (SD) Baseline: 19 (33.3) 6 week: 9 (21.4) 12 week 11 (25.6) Sex under the influence of alcohol/drugs	CAS – HIV+ MSD Baseline 7.17 16.0 6 months 4.86 13.4 n=43 Adapted ARBA scores: Unprotected anal sex Unadjusted no. (%) or mean (SD) Baseline: 16 (37.2)	Direction of effect: Overall null Unprotected anal sex: Null Sex under the influence of alcohol/drugs: Positive Unprotected sex under the influence of alcohol/drugs: Null Self-efficacy for safer sex: Null Unprotected anal sex: Self-reported scores were lower (greater safer sex self-efficacy) in both the intervention and control groups. Effect estimates OR (95% CI)		49382: Hidalgo et al (2015)

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								<p>intervention consists of 6 modular, interactive, group sessions (2 h each), delivered twice weekly for 3 weeks.</p> <p>Time-matched control Group-level intervention also focused on HIV risk reduction, and comprised 5–10 young MSM. The control relied entirely on a lecture format led by one facilitator and thus was largely didactic. Although the lecture slideshow content was not tailored to sexual situations pertaining to male–male sex, it did feature information on HIV/STI transmission and effective condom use.</p>	<p>Unadjusted no. (%) or mean (SD) Baseline: 10 (17.5) 6 week: 5 (11.9) 12 week 5 (11.6)</p> <p>Unprotected sex under the influence of alcohol/drugs Unadjusted no. (%) or mean (SD) Baseline: 7 (12.3) 6 week: 2 (4.8) 12 week 2 (4.7)</p> <p>Self-efficacy for safer sex Unadjusted no. (%) or mean (SD) Baseline: 45.0 (3.7) 6 week: 46.6 (3.5) 12 week: n/a</p>	<p>6 week: 7 (21.2) 12 week 8 (25.8) Sex under the influence of alcohol/drugs Unadjusted no. (%) or mean (SD) Baseline: 12 (27.9) 6 week: 8 (24.2) 12 week 9 (29.0)</p> <p>Unprotected sex under the influence of alcohol/drugs Unadjusted no. (%) or mean (SD) Baseline: 7 (16.3) 6 week: 4 (12.1) 12 week 6 (19.4)</p> <p>Self-efficacy for safer sex</p>	<p>6 weeks vs baseline: 1.09 (0.35–3.41) 12-week vs baseline: 1.06 (0.36–3.10) Overall: 1.11 (0.42–2.91)</p> <p>Sex under the influence of alcohol/drugs: Self-reported scores were lower (greater safer sex self-efficacy) in both the intervention and control groups. Effect estimates OR (95% CI) 6 weeks vs baseline: 0.55 (0.15–2.04) 12-week vs baseline: 0.35 (0.10–1.19) Overall: 0.35 (0.12–0.99) p<0.05</p> <p>Unprotected sex under the influence of alcohol/drugs: Self-reported scores were lower (greater safer sex self-efficacy) in both the intervention and control groups. Effect estimates OR (95% CI) 6 weeks vs baseline: 0.33 (0.04–2.43) 12-week vs baseline: 0.21 (0.04–1.13) Overall: 0.23 (0.05–1.15)</p> <p>Self-efficacy for safe sex: Effect estimates OR (95% CI)</p>		

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							49524: Peru	<p>49524: HOPE Intervention</p> <p>Within each intervention group, peer leaders would attempt to interact with participants about the importance of HIV prevention and testing. During each week of the intervention, peer leaders in the intervention groups sent Facebook messages, chats, and wall posts. In addition to general conversation, peer leaders were instructed to communicate about HIV prevention and testing. Facebook groups were analyzed as clusters to account</p>	<p>n=278</p> <p>Requested HIV test 31% (77/252)</p> <p>Models OR (95% CI) p value: Unadjusted 2.96 (1.62–5.41) 0.0003 Adjusted1 2.69 (1.42– 5.08) 0.001 Adjusted2 2.79 (1.42– 5.72) 0.003</p> <p>Tested for HIV 17% (43/252)</p> <p>Models OR (95% CI) p value; Unadjusted 2.61 (1.58– 4.30) <0.0001 Adjusted1 2.83 (1.72– 4.64) <0.0001</p>	<p>Unadjusted no. (%) or mean (SD) Baseline: 45.3 (4.3) 6 week: 45.5 (4.7) 12 week: n/a</p> <p>n=278</p> <p>Requested HIV test 15% (36/246)</p> <p>Tested for HIV 7% (16/246)</p>	<p>6 weeks vs baseline: 1.17 (-0.51–2.86) 12-week data not measured</p> <p>Direction of effect: Requested HIV test: positive Tested for HIV: positive Risk behaviors: Null</p>		49524: Young et al. (2015)

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							50051: United States	<p>for intracluster correlations.</p> <p>Control Facebook Group Participants in control groups received enhanced (incorporating social media) standard of care. Standard care in Peru is provided by local community clinics and government organizations offering HIV prevention and testing services for public use. Enhanced standard of care was provided by allowing participants to join an online community.</p> <p>50051: TWM (thrive with me) intervention for GB HIV+ men.</p>	<p>Adjusted 2.261 (1.55– 4.38) <0.003</p> <p>Risk Behavior The mean change score of self-reported engagement in receptive anal sex from baseline to follow-up seemed to be lower in the intervention group than in the control group (data not shown).</p> <p>n=66</p> <p>Intervention group: Total sample % ART Taken (past 30 days) n mean SD</p>	n=57	<p>Direction of effect (ART adherence): Null</p> <p>Participants in the intervention arm did not improve across each of the three adherence</p>	50051: Horvath et al. (2013)

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								<p>8 weeks duration with 3 main components: First, the TWM homepage consisted of an interface for participants to asynchronously interact with one other by posting messages and replying to other participants' messages. Second, a medication adherence page allowed participants to input (or update) their current antiretroviral medications, and indicate the dosing and frequency of administration. The third major component of the intervention was intervention content addressing issues about living with HIV.</p> <p>Control condition:</p>	<p>Baseline 65 84.0 25.8 Follow-up 58 85.3 24.8</p> <p>% ART taken within 2 h of scheduled dose (past 30 days) n mean SD Baseline 64 75.4 30.7 Follow-up 57 79.4 29.7</p> <p>% ART taken correctly with food (past 30 days) n mean SD Baseline 64 71.9 31.9 Follow-up 57 79.5 29.5 t 0.51 p-val 0.61</p>	<p>Total sample % ART Taken (past 30 days) n, mean (SD) Baseline 57, 86.8 (18.9) Follow-up 52, 83.6 (29.1) % ART taken within 2 h of scheduled dose (past 30 days) n mean SD Baseline 57, 76.4 (28.2) Follow-up 52, 74.3 (29.7) % ART taken correctly with food (past 30 days) n, mean SD Baseline 5,7 79.8 (30.1) Follow-up 52, 76.4 (33.6)</p>	<p>measures, while adherence scores for men in the control arm decreased over time.</p>		

Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							51513:	<p>During the intervention period, those randomized to the null control condition were not asked to participate in any activities; however, they were sent one interim e-mail message reminding them of the upcoming follow-up survey.</p> <p>51513: HOLA en Grupos Behavioral HIV Prevention Intervention: To increase condom use and HIV testing among Hispanic/Latino Gay, Bisexual and other MSM. 4-4 hour Spanish-language interactive sessions delivered by trained interventionists. Intervention group: Intervention grounded in social cognitive theory,</p>	<p>n=152</p> <p>Consistent Condom Use and HIV Testing: Past 3-month at follow-up among MSM reporting sex with men or women: Intervention: Yes 69 No 37 AOR [95% CI] 4.12 (2.16, 7.87) Past 6-month at follow-up among MSM reporting sex with men or women: Intervention: Yes 114 No 40</p>	<p>n=152</p> <p>Consistent Condom Use and HIV Testing: Past 3-month at follow-up among MSM reporting sex with men or women: Comparison: Yes 40 No 71 Past 6-month at follow-up among MSM reporting sex</p>	<p>Direction of effect: Consistent condom use: positive HIV Testing: positive Psychosocial factors: positive</p>	51513: Rhodes et al. (2013)

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								empowerment education, and traditional Hispanic/Latino cultural values. 4 sessions: (1) HIV and STI facts; (2) activities on protecting one's self and one's partner from HIV and STI's through learning and practicing new skills; (3) learning how cultural values and the local context can affect sexual health; (4) review of sessions 1, 2 and 3. Comparison group: 4-4 hour Spanish-language general health education delivered on prostate, lung, and colorectal cancers; diabetes; high cholesterol; cardiovascular disease and alcohol misuse. Interactive and included didactic learning, DVDs,	(AOR [95% CI] 13.84 (7.56, 25.33) Past 3-month at follow-up among MSM reporting sex with men only: Intervention: Yes 61 No 34 (AOR [95% CI] 3.94 (1.94, 8.00) Past 6-month at follow-up among MSM reporting sex with men only: Intervention: Yes 98 No 35 (AOR [95% CI] 14.90 (7.63, 29.11) Psychosocial Factors at 6 month follow up: HIV knowledge (adjusted mean, 95% CI): Intervention group: 16.3 (16.0, 16.6)	with men or women: Comparison: Yes 27 No 107 Past 3-month at follow-up among MSM reporting sex with men only: Comparison: Yes 34 No 60 Past 6-month at follow-up among MSM reporting sex with men only: Comparison: Yes 21 No 90 Psychosocial Factors at 6 month follow-up: HIV knowledge (adjusted mean, 95% CI):			

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								and facilitated group discussions.	Difference of adjusted mean (SE): 2.5(0.20). STI knowledge Intervention group: 12.1 (11.7, 12.5) Difference of adjusted mean (SE): 2.6 (0.24) Condom use skills Intervention group: 17.1 (16.7, 17.5) Difference of adjusted mean (SE): 2.5 (0.22) Condom use efficacy Intervention group: 86.3 (84.1, 88.6) Difference of adjusted mean (SE): 9.4 (1.33) Condom use expectancies Intervention group: Difference of adjusted mean (SE): 8.9 (1.34) Condom use intentions Intervention group:	Comparison group: 13.8 (13.5, 14.1) STI knowledge Comparison group: 9.5 (9.1, 9.9) Condom use skills Comparison group: 14.6 (14.3, 15.0) Condom use efficacy Comparison group: 76.9 (74.7, 79.2) Condom use expectancies Comparison group: 80.7 (78.5, 83.0) Condon use intentions Comparison group: 14.5 (13.8, 15.2) Sexual communication Comparison group: 3.6 (2.9, 4.2)			

Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							52086: Russia and Hungary	<p>52086: Social Network HIV risk-reduction Intervention for MSM</p> <p>Data collected from 2007-2012. Network leaders were trained and guided to convey HIV prevention advice to other network members.</p> <p>Within country, pairs of networks were randomly allocated to the intervention and comparison</p>	<p>Difference of adjusted mean (SE): 2.4 (0.41), Sexual communication Intervention group: Difference of adjusted mean (SE): 1.1 (0.41)</p> <p>Networks: 9</p> <p>Participants: 339</p> <p>Unprotected Anal Intercourse (UAI) (% estimated mean):</p> <p>3 month follow-up: 38% (32-46)</p> <p>12 month follow-up: 43% (33-51)</p>	<p>Networks: 9</p> <p>Participants: 287</p> <p>UAI (% estimated mean):</p> <p>3 month follow-up: 57% (49-63)</p>	<p>Direction of effect: Positive. Fewer participants engaged in UAI following participation in the clinical group.</p>	52086: Amirkhanian et al. (2015)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								<p>condition after all members completed baseline assessments and HIV/STD testing, with equal numbers of networks in each country assigned to each condition. All participants completed self-administered behavioral questionnaires 3 months after the intervention and both behavioral assessment and repeat HIV/STD testing at 12-month follow-up.</p> <p>Network leaders give personal HIV risk-reduction advice to their friends. The intervention was delivered in 5 weekly 3-hour group sessions attended by 5-11 leaders, followed by 4 booster sessions spaced</p>	<p>% engaging in UAI with non-main partners: Baseline: 18% (12-26) 3 month follow-up: 8% (5-13) 12 month follow-up: 9% (5-15)</p> <p>Mean % UAI: Baseline: 39.4 (33.4-45.3) 3 month follow-up: 27.0% (20.8-33.1) 12 month follow-up: 31.0% (24.9-37.2)</p> <p>% UAI with multiple partners: Baseline: 14% (33.4-45.3Z) 3 month follow-up: 2% (1-6) 12 month follow-up: 5% (3-10)</p> <p>Total # of UAI acts with all partners:</p>	<p>12 month follow-up: 56% (49-63)</p> <p>% engaging in UAI with non-main partners: Baseline: 23% (16-32) 3 month follow-up: 21% (14-30) 12 month follow-up: 21% (14-30)</p> <p>Mean % UAI: Baseline: 39.0 (33.0-45.0) 3 month follow-up: 42.9 (36.7-49.2) 12 month follow-up: 40.4 (34.1-46.7)</p> <p>% UAI with multiple partners: Baseline: 19% (12-18)</p>			

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								<p>over the next 3 months.</p> <p>18 'seeds' identified from community venues (bars, private parties, cruising locations) invited the participation of their MSM friends who, in turn, invited their own MSM friends into the study, a process that continued outward until eighteen three-ring sociocentric networks enrolled 10 networks enrolled in Russia, 8 in Hungary (overall mean size=35, n=626)</p> <p>Russia: 10 networks (n=254) Hungary: 8 networks (n=372)</p> <p>Comparison Group: Standard HIV/STD testing/counseling. Each participant received an</p>	<p>Baseline: 11.8 (9.1-15.4) 3 month follow-up: 7.2 (5.2-10.0) 12 month follow-up: 9.6 (7.2-12.9)</p> <p>Total # of anal intercourse acts with all partners: Baseline: 23.8 (19.1-29.7) 3 month follow-up: 18.2 (14.3-23.1) 12 month follow-up: 20.0 (15.8-25.3)</p> <p>Total # of partners: Baseline: 4.6 (3.0-7.1) 3 month follow-up: 3.8 (2.4-5.9) 12 month follow-up: 4.4 (2.8-6.8)</p>	<p>3 month follow-up: 17% (10-26) 12 month follow-up: 13% (8-22)</p> <p>Total # of UAI acts with all partners: Baseline: 11.9 (9.1-15.6) 3 month follow-up: 12.6 (9.6-16.5) 12 month follow-up: 11.2 (8.5-14.9)</p> <p>Total # of anal intercourse acts with all partners: Baseline: 21.0 (16.7-26.5) 3 month follow-up: 19.3 (15.2-24.7) 12 month follow-up:</p>			

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							54408:	individual risk-reduction counseling session lasting approximately 20 min in conjunction with HIV/STD testing upon study entry. The session covered behaviors that confer HIV risk, behavior changes to reduce risk, and strategies to make risk-reduction steps. 40 females enrolled in the study and their data was excluded. 54408: DiSH Intervention for Black MSM Teams of two trained facilitators conducted five two-hour group sessions over two weeks. In each session, participants jointly prepared healthy, low-cost meals with simple appliances that accommodated a	n=142 Sexual Risk Behaviors With most recent partner Unprotected insertive anal intercourse (UIA) n (%) Baseline Intervention: 60 (46.9) Control: 59 (45.7) 3 month follow-up: Intervention: 33 (25.8)	20.8 (16.4-26.4) Total # of partners: Baseline: 45 (2.9-7.0) 3 month follow-up: 36 (2.3-5.7) 12 month follow-up: 42 (2.7-6.7)	Direction of effect: All sexual risk behavioral measures: Null Sexual risk behaviors with most recent partner for (UIA): both the intervention and control group reduced the occurrence of UIA with their most recent partner in the previous 3 months, but the reduction in UIA was not statistically significant.		54408: Koblin et al. (2012)

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
								range of living environments. In subsequent sessions, participants continued to cook, eat and engage with each other over a range of nutrition and HIV-related health topics. Participants discussed obstacles to change regarding food and sex, feelings of self-worth, remorse/shame, and benefits/ramifications of disclosing sexual identity and HIV serostatus. They explored HIV risk-reduction decision making and condom use and what leads to overeating or unsafe sex. The men also examined environmental determinants of health behavior, including the size/quality of	Control: 34 (26.2) Unprotected receptive anal intercourse (URA) n (%) Baseline Intervention: 50 (39.1) Control: 51 (39.5) 3 month follow-up: Intervention: 31 (24.2) Control: 30 (23.1) USDUIA n (%) Baseline Intervention: 26 (20.6) Control: 29 (27.7) 3 month follow-up: Intervention: 10 (7.8) Control: 8 (6.3) USDURA n (%) Baseline Intervention: 22 (17.5) Control: 30 (23.4)			

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
								support networks, the impact of drug/alcohol use on health and decision making and developed strategies to grow support communities. The final session focused promoting commitment to change including proximal goal setting, utilizing friends for support, and self-evaluation of progress toward goals, strategy refinement, and self-rewards.	3 month follow-up: Intervention: 10 (7.8) Control: 13 (10.2)			
								UA with ETOH or drug use by partner or participant n (%) Baseline Intervention: 60 (47.2) Control: 69 (53.5)	3 month follow-up: Intervention: 29 (22.7) Control: 34 (26.4)			
								Comparison group: Following randomization, control group participants did not receive/attend intervention group sessions	WITH ANY PARTNER UIA n (%) Baseline Intervention: 89 (69.5) Control: 90 (69.8)			
									3 month follow-up: Intervention: 56 (39.4)			

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									Control: 51 (36.2)				
									URA n (%) Baseline Intervention: 76 (59.4) Control: 70 (54.3) 3 month follow-up: Intervention: 50 (35.2) Control: 42 (29.8)				
									USDUIA n (%) Baseline Intervention: 60 (47.6) Control: 53 (41.4) 3 month follow-up: Intervention: 23 (18.3) Control: 22 (17.3)				
									USDURA n (%) Baseline Intervention: 46 (36.5) Control: 38 (29.7) 3 month follow-up:				

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							60121: United States	60121: See above	Intervention: 21 (17.1) Control: 20 (15,8) n=39 n=71 for this analysis Between-subject ANCOVAs were performed: HIV Transmission Knowledge adjusted mean, (SE) Immediate treatment: 13.8 (.36) Delayed treatment: 11.7 (.31) F statistic (1, 68)=18.7 Effect size: .22 Condom Attitudes Immediate treatment: 23.0 (536)	n=40	Direction of effect: Mixed HIV Transmission Knowledge: Positive Condom Attitudes: Null Sexual Behavior Intentions: Null Unprotected Sexual Behaviors, last 3 months: Null Unprotected anal sex: Null Unprotected anal or oral sex: Positive Self-efficacy to disclose HIV status: Positive Participants in the immediate group demonstrated greater: (a) HIV transmission knowledge; (b) intentions to refuse unprotected sex; and (c) self-efficacy to disclose their HIV serostatus to partners. For the sexual behavior outcomes, those in the immediate group reported fewer unprotected oral or anal sex encounters; however, there was no difference between		60121: Brown, Vanable, Bostwick & Carey, 2019)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									Delayed treatment: 23.2 (.46) F statistic (1, 68) =1.2 Effect size: .002 Intention to refuse unprotected sex Immediate treatment: 3.4 (.16) Delayed treatment: 3.0 (.14) F statistic (1, 68) =3.9 Effect size: .06 Sexual Behavior Intentions: past 3 months Unprotected anal sex Immediate treatment: .18 (.05) Delayed treatment: .27 (.05) F statistic (1, 67) =1.7 Effect size: .02 Unprotected anal or oral sex		conditions for frequency of unprotected anal sex in the past 3 months.		

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
									Immediate treatment: .51 (.09) Delayed treatment: .76 (.08) F statistic (1, 67) =4.7 Effect size: .07 Self-efficacy to disclose HIV status Immediate treatment: 15.7 (.82) Delayed treatment: 12.5 (.72) F statistic (1, 68) =8.7 Effect size: .11 Coping self-efficacy Immediate treatment: 105.8 (3.8) Delayed treatment: 90.1 (3.3) F statistic (1, 68)=9.6 Effect size: .12			

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							8: Canada	8: See above	N=89 Sexual Behaviors: Serodiscordant condomless anal sex (SDCAS) (% , yes) TAU arm Baseline 59.57 3M 49.38 6M 48.00 Intervention arm baseline 68.54 post 50.00 6M 39.29 Group OR 1.03 (0.57, 1.88) Time OR 0.60*** (0.45, 0.79) Timex group OR 0.76** (0.65, 0.89) SDCAS-Casual (% , yes) TAU Baseline 53.19 3M 41.98 6M 42.67 Intervention Baseline 62.92 3M 46.55 6M 35.71 Group OR 1.19 (0.62, 2.28) Time OR 0.61*** (0.46, 0.80)	N= 94	Direction of effect: positive There was a greater drop in CAS in the intervention arm compared with the control arm		8: Hart et al. (2021)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							46: United States	46: See above	Group x Time OR 0.78** (0.66, 0.92) N=8 Sexual risk behaviours # of acts of UAS at a private sex event. Intervention baseline 2.50 (4.98) post 0.75 (1.34) mean change - 0.88 (- 1.88, 0.13) Control baseline 0.67 (0.98) post 0.17 (0.39) mean change - 0.25 (- 0.50, 0.003)	N=6	Direction of effect: positive There was a greater drop in CAS in the intervention arm compared with the control arm		46: Mimiaga et al. (2019)
							99: United States	99: Men in Life Environments (MILE) Intervention It is comprised of six 2-h small-group sessions held over 3 weeks and facilitated by two	n=100 Any condomless sex (with all genders) intervention baseline n=100 100% fu n= 92 48% Control baseline n=112	n=112	Direction of effect: null (A decline in condomless anal sex was observed over time in both groups)		99: Harawa et al. (2028)

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
								<p>African American men. The two sessions focus each sequentially on past, present, and future, encouraging participants to assess how the choices that they have made in the past and the historical and present contexts of their families and communities' result in their circumstances in the present, to determine their current HIV and other health risks, and to plan for the future in ways that can lead to healthier lives for themselves and others.</p> <p>Comparison group: Both groups were offered services that included individual assessment to determine immediate and long-term service needs, and condoms at release. Services</p>	100% follow-up n=99 34%			

Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							<p><u>103:</u> United States</p>	<p>for this group included: one-on one counseling, access to emergency shelters, clothing, transit tokens, guidance on making appointments to arrange social security, hygiene kits and referral to substance use support.</p> <p>103: Sheroes Intervention: a peer-led group-level intervention for transgender women of any HIV status emphasizing empowerment and gender affirmation to reduce HIV risk behaviors and increase social support. Sheroes is 5 weekly group sessions; topics include sexuality, communication, gender transition, and coping skills.</p>	<p>n=24</p> <p>Condomless sex partners</p> <p>Baseline score (SE): 4.60 (1.55)</p> <p>3 months 1.91 (0.86)</p> <p>6 months 1.15 (0.56)</p>	<p>n=23</p> <p>Condomless sex partners</p> <p>Baseline score (SE) 3.39 (1.16)</p> <p>3 months 1.62 (0.76)</p> <p>6 months 1.91 (0.86)</p> <p>6 months 1.57 (0.82)</p>	<p>Direction of effect: Positive</p> <p>Participants with negative or unknown HIV status both reported some reduction in their total number of sex partners in both the intervention and control groups.</p> <p>Participants living with HIV, both the control and intervention groups reduced their total number of sex partners; this change was sustained at 6 months for Sheroes participants but not for the control group.</p>	<p><u>103:</u> Sevelius et al. (2020)</p>

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
								<p>Comparison: Participants in the control group watched a standardized set of movies that were deemed by our Community Advisory Board to be of interest but without content that overlapped with the Sheroes intervention. A brief facilitated discussion followed each movie night session, again with careful attention to avoid content that overlapped with the intervention.</p>				

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
11							48892: United States	48892: see above.	17 Sexual risk behaviors Mean (SD) Mean (SD) Number of sexual partners in past 4 months Baseline 4.76 (5.29) Follow-up 4.18 (3.70) Unprotected anal or vaginal sex with male % (n) % (n) Yes Baseline 41.2 (7/17) Follow-up 41.2 (7/17) No	No comparison	<p>Additional single arm studies (pre/post design) identified: 11 studies examined a range of sexual health interventions to improve participant self-care/self-management. A majority 10 studies had a positive direction of effect.</p> <p>Direction of effect: Condom self-efficacy: positive Other risk behaviors: null</p> <p>Overall, the Lifeskills intervention reduced HIV and STI-related risk behaviors, however this reduction was not statistically significant.</p>		48892: Reisner et al. (2016)

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
									Baseline 58.8 (10/17) Follow-up 58.8 (10/17) UVS—past 4 months Yes Baseline 70.6 (12/17) Follow-up 58.8 (10/17) No Baseline 29.4 (5/17) Follow-up 41.2 (7/17) UAS—past 4 months Yes Baseline 41.2 (7/17) Follow-up 29.4 (5/17) No Baseline 58.8 (10/17) Follow-up 70.6 (12/17) UAS—past 4 months Yes Baseline 76.5 (13/17) Follow-up 64.7 (11/17) No			

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							49066: Canada	49066: see above	Baseline 23.5 (4/17) Follow-up 35.3 (6/17) Condom self-efficacy Baseline 22,1 (4.02) Follow-up 23.5 (4.19) 59 SCTC (Social cognitive theory constructs)–self efficacy) mean (SD; n) B (95% CI) Baseline 2.7 (0.7; 50) Post-intervention 3.1 (0.6; 52) B 0.35 (0.17, 0.53) Follow-up 3.1 (0.6; 50) B0.39 (0.23, 0.54) Sexual behavior CAS with all status partners, regular/casual	No comparison	Direction of effect: Self-efficacy: Positive Sexual behavior (CAS): Positive	49066: Hart et al. (2016)

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							49465: Canada	49465: See above	Baseline YES 44 (84.6) NO 8 (15.4) Post-intervention YES 34 (65.4) NO 18 (34.6) OR (95% CI) 0.37 (0.19, 0.72) Follow-up YES 30 (57.7) NO 22 (42.3) OR (95% CI) 0.29 (0.14, 0.59)	44	NA	Direction of effect: Sexual behavior Stimulant use during sex: Positive UAI: Null UAI while using stimulants: Positive Drug use self-efficacy: Null Significant declines were seen between baseline and follow-up in both stimulant use and UAI while using stimulants. Small reductions in UAI and drug use self-efficacy were observed at 12 week follow-up, but these were not statistically significant.	49465: Logie, Lacombe-Duncan, Weaver, Navia & Este (2015)

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							49755: United States	49755: see above	Pre to post 1.624 (0.648 2.600) Pre to follow-up 1.521 (0.513 2.529) General safer sex self-efficacy B (95%CI) Pre to post 1.700 (0.344 3.056) 0.014 pre to follow-up 1.339 (- 0.048 2.726) n=70 Sexual behavior (n=53, those with 3 months of follow-up) Stimulant use during sex Baseline: 74% 12 week: 60% UAI Baseline: 81% 12 week: 79% p-val: ns UAI while using stimulants Baseline: 71% 12 week: 47%	NA	Sexual behaviour improved from baseline to 12 weeks follow-up as demonstrated by stimulant used during sex and unprotected anal sex.	49755: Lyons, Tilmon & Fontaine (2014)

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							50145: Australia	50145: Peer Education Workshop (PEW) The PEWs consisted of four to six sessions of about 2.5 hours of workshop content, one evening per week. The core modules covering HIV and sexual health information were essentially the same in each PEW, whereas the remaining content varied. Workshops focused on gay life in Sydney, relationships, sexual techniques, using sex-on-premises venues, and anal health and pleasure. Some PEWs were open only to men 29 years and under	Drug use self-efficacy Baseline: 2.7 12 week: 2.6 399 Complete SHCS scale Mean (SD) scores before 24.7 (4.3) after 27.4 (2.4)	No comparison	Direction of effect: Sexual health capacity: Positive	50145: Bavinton, Gray & Prestage, 2013

Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							50333: United States	(youth workshops) while others were open to all gay men aged 18 years or above (all-ages workshops). 50333: Life Skills intervention The study team implemented the final intervention curriculum with six cohorts of six to ten participants. In addition to the six intervention sessions, participants were expected to engage in at least one and up to five non-incentivized individual sessions with either of the two group facilitators. The primary purpose of the individual sessions was to provide participants with a personally tailored plan to reduce HIV risk behaviors. Facilitators of the intervention groups	n= 51 Number of male anal sex partners (mean) Baseline 4.3 3 months 3.5 Z -1.049 Number of times had unprotected anal sex (mean) Baseline 1.5 3 months 1.0 Z -1.294 Number of main male sex partners Baseline 3.12 3 months 1.40 Z -1.991 Number of casual male sex partners Baseline 1.30 3 months 1.05 Z -0.983	No comparison	Direction of effect: Number of male anal sex partners: Null Number of times had unprotected anal sex: Null Number of main male sex partners: Positive Number of casual male sex partners: Null Number of commercial sex partners: Null Number of URAI episodes with main partners: Null Number of URAI episodes with casual partners: Null Number of URAI episodes with commercial partners: Null The observed reductions in outcome measures suggest that participation in the intervention may reduce HIV-related risk behaviors.	50333: Garofalo et al. (2012)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							51767: Vietnam	<p>were transgender-identified peers. The groups met twice a week for 3 weeks, with each meeting lasting approximately two and a half hours.</p> <p>51767: Men's Small Group (MSG) Behavioral Intervention in Sexual Risk Reduction for MSM</p>	<p>Number of commercial sex partners Baseline 0.26 3 months 0.23 Z -0.086</p> <p>Number of URAI episodes with main partners Baseline 1.00 3 months 0.50 Z -1.407</p> <p>Number of URAI episodes with casual partners Baseline 0.50 3 months 0.25 Z -1.725</p> <p>Number of URAI episodes with commercial partners Baseline 0.46 3 months 1.0 Z -1.342.</p> <p>n=100</p> <p>Condomless Sex Acts (#): Baseline: 6.32 3 month follow-up: 2.06</p>	NA	<p>Direction of effect: Condomless Sex Acts: positive Knowledge: positive Self-efficacy: positive Skills Behavior: null</p> <p>Attendance across 4 module</p>	51767: Mimiaga et al. (2016)	

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
								4 participants/group 4 intervention modules conducted 1/week for 4 consecutive weeks. Module 1-personal goals and motivations, concept of sexual risk limits; Module 2-supporting and undermining risk limits and risk reduction; Module 3-sexual triggers-environment, drugs/alcohol, and feelings; Module 4-sexual partners, communication and HIV/STI disclosure. Using scripted interactive discussions and activities, the MSG seeks to build skills that promote active sexual decision making, sexual communication and the management of factors that affect individual sexual	[Coefficient - 1.12, 95% CI - 1.25, -0.99 6 month follow-up: 2.49 [Coefficient - 0.93, 95% CI - 1.05, -0.81 Attendance influenced results, where those who attended all 4 sessions had a greater rate of change in condomless sex acts versus those who did not attend all 4 modules. Secondary Outcomes: Knowledge and self-efficacy significantly improved from baseline. Behavioral Skills did not change significantly from baseline to 3 or 6 months		intervention: 87% 81 attended all 4 sessions, 5 attended 3 and 5 attended 2 and 9 attended no sessions.	

Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							53502: USA	<p>risk behaviors such as mood, substance use, and the environment. Intervention delivered by 2 peer facilitators (Vietnamese and MSM).</p> <p>53502: The Last Drag Intervention: 7-2 hour sessions delivered over 6 weeks. Sessions were held in the evening hours and led by the same (2) group facilitators. Homework was assigned after each session.</p> <p>Week 1/Session 1: Orientation and pre-test, distribute participant manual</p> <p>Week 2/Session 2: Plan to quit smoking: process and tools</p> <p>Week 3/Session 3: Quit night</p> <p>Week 3/Session 4: Becoming a nonsmoker and developing peer support</p>	following intervention	NA	<p>Direction of effect: Positive</p> <p>Nearly 60% of participants were smoke-free at the end of the intervention and 36% remained smoke-free by six months post-intervention.</p>	53502: Eliason, Dibble, Gordon & Soliz (2012)

Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
							54397: United States	(done 48 hours after the day participants quit) Week 4/Session 5: Staying smoke-free: Short-term strategies Week 5/Session 6: Staying smoke-free: Long-term strategies Week 6/Session 7: Post-test and celebration.	baseline: [11.6, p<.001] NRT 34% (# cigarettes smoked at baseline: [20.8, p<.001] Pharmacology (Changpix, Bupropion)= 23% Other (accupuncture, hypnosis): 9%.	N= 67	54397: Overall direction of effect is null. An increase in fruit and vegetable consumption, the # of minutes of physical activity, and the intensity of physical activity was observed across the interventions and comparison groups with some proportion of the participants achieving the anticipated improvements. A decrease in sugar sweetened beverage consumption, alcohol consumption, body weight and weight-to-height ratio was observed across the interventions and groups also,	54397: McElroy et al. (2016)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									RR (95% CI): 0.97 (0.65-1.45) Mindfulness component (n=160) % who achieved: 54.5 RR (95% CI): 1.26 (0.92-1.72) Sugar-sweetened beverage consumption Pedometer component: % who achieved: 34.5 RR (95% CI): 1.21 (0.62-2.37) Gym component: % who achieved: 37.5 RR (95% CI): 1.31 (0.72-2.39) Mindfulness component: % who achieved: 40.7 RR (95% CI): 1.43 (0.863-2.35) Alcohol consumption Pedometer component:	Comparison group: % who achieved: 28.6 RR (95% CI): 1.0 Reference Comparison group: % who achieved: 36.8 RR (95% CI): 1.0 Reference	with some proportion of the participants meeting the anticipated reductions.		

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									% who achieved: 41.7 RR (95% CI): 1.13 (0.46-2.80) Gym component: % who achieved: 41.4 RR (95% CI): 1.12 (0.54-2.35) p=0.758 Mindfulness component: % who achieved: 41.3 RR (95% CI): 1.12 (0.56-2.23) Physical Activity: Pedometer component: % who achieved: 69.8 RR (95% CI): 1.67 (1.18-2.36) Gym component: % who achieved: 47.6 RR (95% CI): 1.14 (0.78-1.67) Mindfulness component: % who achieved: 57.9 RR (95% CI): 1.38 (1.01-1.89)	Comparison group: % who achieved: 41.8 RR (95% CI): 1.0 Reference			

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									Increased level of physical activity: Increased level of physical activity: Pedometer component: % who achieved: 59.5 RR (95% CI): 2.10 (1.27-3.49) Gym component: % who achieved: 34.0 RR (95% CI): 1.20 (0.68-2.13) Mindfulness component: % who achieved: 33.3 RR (95% CI): 1.18 (0.72-1.92) Weight decrease: Pedometer component: % who achieved: 18.0 RR (95% CI): 1.01 (0.43-2.40) Gym component: % who achieved: 12.9	Comparison Group: % who achieved: 28.3 RR (95% CI): 1.0 Reference Comparison Group: % who achieved: 17.7 RR (95% CI): 1.0 Reference			

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference	
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control				
							61840: United States	61840: Strong Healthy Energized (SHE) Intervention: The SHE program	RR (95% CI): 0.73 (0.31-1.69) Mindfulness component: % who achieved: 21.1 RR (95% CI): 1.19 (0.64-2.20) Waist circumference to height: Pedometer component: % who achieved: 23.7 RR (95% CI): 1.16 (0.51-2.63) Gym component: % who achieved: 38.7 RR (95% CI): 1.89 (0.97-3.68) Mindfulness component: % who achieved: 24.5 RR (95% CI): (0.61-2.35) n= 35 Waist Circumference:	Comparison Group: RR (95% CI): 1.0 Reference	NA	Direction of effect: Positive 61840: Waist circumference, FitBit pedometer (# of steps) and sugar-sweetened		61840: Tomisek, Flinn, Balsky, Gruman & Rizer (2017)

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Quality assessment							Study details		No. of participants		Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control		
								targeted lesbian and bisexual women age 60 and older. The SHE program was delivered over 12 sessions, and was bookended with data collection appointments to provide participants with a sense of their health before and after participation. During these appointments, researchers collected data through surveys and health measures. The program included weekly group sessions addressing physical activity and nutrition in the older female population.	Mean baseline circumference: 43.0 inches; mean follow-up circumference: 41.4 inches. This 1.6-inch average decrease equates to a 3.7% overall reduction across the group Average weekly steps: Baseline # of steps: 5,367 Follow-up # of steps: 7,025 Fruit/veg intake: Baseline: 40.5% consume 3-4/day Follow-up: 48.6% consume 3-4/day Sugar sweetened beverage intake: Baseline: 35.1% do not drink any daily Follow-up:		<p>beverage intake all reported a positive direction of effect (based on descriptive data only).</p> <p>Fruit and vegetable consumption had a null effect, although overall participants increased their daily portion intake.</p> <p>Almost three-quarters (72.7%) of participants saw a waist circumference reduction, while 24.2% saw slight increases, and 3.0% maintained the same waist circumference.</p>	

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									59.4% do not drink any daily Waist-to-height ratio Average baseline waist-to-height ratio Highest tertile 0.769 Mid 0.6357 Lowest 0.5701 Average change in waist-to-height ratio Highest tertile: -0.039 Mid: -0.010 Lowest: -0.007 Percent change in waist-to-height ratio Highest tertile: -5.02% Mid: -1.63% Lowest: -.127% Weight Weight increments- N - % 5.00 or more pounds gained- 6-17.1% 3.00-4.99 gained-4-11.4%				

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							4262: Thailand	4262: See above	1.00–2.99 gained-3-8.6% Less than 1 pound gained-0-0% 0 to 0.99 pounds lost-1-2.9% 1.00 to 2.99 lost-6-17.1% 3.00 to 4.99 lost-3-8.6% 5.00 or more lost-12-34.3%	NA	Direction of effect: positive (Antiretroviral medication adherence improved in the treatment group)		4262: Sahassanon et al. (2019)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									in comparison, post-treatment antiretroviral medication adherence scores were not statistically different between the groups: $t(44) = 1.44, p = .079$.				
Social support outcomes measured with: a variety of validated and non-validated psychosocial measures across the included studies. See footnote for details on specific measures.													
3	RCT	Very serious ^h	Not serious	Not serious	Serious ⁱ	Suspected: 1 study data from 2008-2009 with no protocol and multiple results reported	54408: United States	54408: see above	142 Psychosocial measures (mean, SD) Social isolation (lower score, less isolation): Baseline Intervention group: 2.03 (0.65) Control group: 1.97 (0.73) 3 month follow-up: Intervention group: 1.91(0.69)	141 (see intervention column for comparison group scores)	Directin of effect: Positive All psychosocial measures improved in the intervention group following the DiSH intervention. Social isolation scores were lower (less isolation) in the intervention group following the delivery of the DiSH. Sexual self-efficacy scores were higher (higher self-efficacy) in the intervention group after participating in DiSH intervention, but not statistically significant.	Very Low ⊕○○○	54408: Koblin et al. (2012)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									Control group: 1.81 (0.66) p=0.62 Sexual self-efficacy (higher score=higher self-efficacy): Baseline Intervention group: 3.31 (1.06) Control group: 3.34 (0.97) 3 month follow-up: Intervention group: 3.58 (0.93) Control group: 3.64 (0.94) p=0.90 Condom attitudes (lower score=better condom attitudes) Baseline Intervention group: 2.73 (1.01) Control group: 2.64 (0.92) 3 month follow-up Intervention group: 2.39 (0.93)		Condom attitudes scores were lower (better condom attitudes) in the intervention group following the DiSH intervention, but not statistically significant. Condom intentions scores improved (better intentions) in the intervention group following the DiSH intervention, but were not statistically significant. Psychological distress scores were lower (less distress) in the intervention group following the DiSH intervention, but not statistically significant.		

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									Control group: 2.44 (0.89) p=0.15 Condom intentions (higher score=better intentions) Baseline Intervention group: 3.50 (1.29) Control group: 3.45 (1.17) 3 month follow-up Intervention group: 3.86 (1.25) Control group: 3.91 (1.15) p=0.85 Psychological distress (lower score=less distress) Baseline Intervention group: 2.03 (0.71) Control group: 1.88 (0.79) 3 month follow-up Intervention group: 1.83 (0.76)				

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							60121:	60121: see above	Control group: 1.73 (0.74) p=0.20 n=39 n=71 for this analysis Between-subject ANCOVAs were performed Social support (18-item social provisions scale) Immediate treatment 57.9 (.96) Delayed treatment 56.4 (.85) F (1, 68) = 1.4 p-val .25 effect size .02	n=40	Direction of effect: Null Between subjects' analyses examining intervention efficacy demonstrates higher social support scores (more social support) in the immediate treatment group in comparison to the delayed treatment group. These higher (improved) scores are not statistically significant.		60121: Brown, Vanable, Bostwick & Carey (2019)
							103: United States	103: See above	n=24 Social support mean score (SE) Control, intervention Baseline 0.28 (0.09), 0.28 (0.08)	n=23	Direction of effect: null between groups (positive over time- social support increased over time)		103: Sevelius et al. (2020)

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									3 months 0.36 (0.10), 0.35 (0.10) 6 months 0.40 (0.14), 0.57 (0.13)				
2	Quasi experimental	Very serious ⁱ	Serious ^k	Not serious	Serious ^l	Not detected	49465: Canada	49465: see above	n=44 Total social support (Social Provisions Scale) B (95% CI) p val Pre to post - 3.912 (- 8.293 0.469) 0.080 pre to follow up - 1.449 (- 5.836 2.939) 0.518 Social support (attachment) pre to post - 0.431 (- 1.183 0.321) 0.261 pre to follow-up 0.317 (- 0.456 1.091) 0.422 Social support (social integration) pre to post - 0.771 (- 1.706 0.163) 0.106 pre to follow-up	No comparison	Total Social support: overall Null 6 sub-scales measured: Attachment: Null Social integration: Null Reassurance of worth: Null Reliable alliance: Positive (pre to post); Null (pre to follow-up) Guidance: Positive (pre to post); Null (pre to follow-up) Opportunity for nurturance: Null	Very Low ⊕○○○	49465: Logie, Lacombe-Duncan, Weaver, Navia & Este (2015)

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
									- 0.368 (- 1.301 0.564) 0.439 Social support (reassurance of worth) pre to post - 0.597 (- 1.336 0.141) 0.113 pre to follow up 0.134 (- 0.627 0.895) 0.730 Social support (reliable alliance) pre to post - 1.024 (- 1.872 - 0.177) 0.018 pre to follow-up 0.302 (- 1.164 0.561) 0.493 Social support (guidance) pre to post - 1.017 (- 1.999 - 0.034) 0.042 pre to follow-up - 0.463 (- 1.480 0.554) 0.372 Social support (opportunity for nurturance) pre to post - 0.552 (- 1.425 0.321) 0.215 pre to follow-up - 0.198 (- 1.105 0.709) 0.669				

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Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
							49755:	49755: see above	Community connectedness B (95% CI) p val pre to post 1.283 (0.356 2.209) 0.007 pre to follow-up 0.271 (- 0.666 1.207) 0.571	N=70 No comparison	Direction of effect: Positive		49755: Lyons, Tilmon & Fontaine (2014)

Explanations

- a. Two of the included studies were rated with a high risk of bias and two were rated with some concerns. Reasons included deviations from intended interventions. We downgraded by 1.5
- b. There was diversity in the reported results, with 2 studies reporting a positive direction of effect and 2 reporting a null effect. There was also diversity in how the mental health outcome was measured (a stress scale and a depression scale). We downgraded by 1.0.
- c. From the 8 included studies, 5 were rated with a critical risk of bias and 3 studies were rated with a serious risk of bias using the ROBINS tool. Reasons for downgrading included deviation from intended interventions, measurement of outcome, missing data and reporting bias. We downgraded by 2.0.
- d. There was some diversity in the results, 6 of the 8 studies reported a null effect and 2 studies reported a positive direction of effect with the outcome self-reported. There was diversity in how the mental health outcome was measured. We downgraded by 1.0.
- e. One systematic review included 15 individual studies. An additional 23 studies (13 RCT and 10 quasi-experimental) were identified.

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- f. The SR is high quality according to ROBIS. However, the individual studies varied in their risk of bias with scores ranging from 2 out of a possible 9 to 9 out of 9.
- g. There was considerable heterogeneity (I-squared value 74.5%) identified. Review states heterogeneity likely to due variety of study designs and settings (also examined in subgroup analysis).
- h. Two studies were rated with a high risk of bias and 1 with some concerns. Reasons for downgrading include concerns with randomization and deviation from intended intervention. We downgraded by 2.0.
- i. The total sample size in the 3 included studies was less than 400 participants. We downgraded by 1.0.
- j. Of the 2 included studies, 1 was rated with a critical risk of bias and 1 was rated with a serious risk of bias using the ROB INS-tool. Reasons for downgrading were confounding and deviations from intended interventions. We downgraded by 2.0.
- k. There was diversity in the reported results in the 2 included studies. One study reported a positive direction of effect with statistical significance and the other study reported a positive direction of effect immediately following intervention delivery, but null effects at longer follow-up. We downgraded by 0.5.
- l. The total sample size in the 2 included studies was less than 400 participants. We downgraded by 1.0.

Measurement of outcomes:

Mental Health

Geriatric Depression Scale (GDS) [no depression 0-9; mild 10-20; and severe depression 21-30]; A 10-item Perceived Stress Scale measures the level of stress associated with everyday life. This scale assessed the degree to which participants had experienced stress during the past month and a summed score across items was calculated; higher scores represented greater perceived stress levels; 10-item Transgender Adaptation and Integration Measure (TG-AIM), adapted for young transgender men and assessed how often (never, rarely, occasionally, frequently) participants had experienced a variety of mental health and social outcomes and where a higher mean TG-AIM score indicates greater gender identity adaptation and integration; 18-item Brief Symptom Inventory assessed psychological distress and psychiatric disorders. On a scale from 0 (not at all) to 4 (extremely), participants were asked to indicate how much they felt distressed by symptoms in the past 7 days including with higher scores indicating greater distress in the past week; Substance use was assessed by asking participants to indicate how frequently they had used drugs (marijuana, cocaine, crack, heroin, ecstasy, GHB, LSD, crystal methamphetamine, amphetamine, poppers, other drugs) in the past 4 months. Binge drinking was also assessed; Center for Epidemiologic Studies Depression Scale (CES-D), a 20-item scale developed to assess depressive symptoms in the general population, where total scores range from 0 to 60, and higher total scores denote higher depressive symptomology; Depression measured using the Patient Health Questionnaire (PHQ), where higher scores reflect greater magnitude of depression; Veterans RAND 12-item (VR-12) questionnaire that measures both physical component score (PCS) and mental component score (MCS); general health, physical functioning, role limitations due to physical problems, bodily pain, general health perceptions, energy/vitality, social functioning, role limitations due to emotional problems, mental health and overall health perception; The PTSD Checklist-Civilian Version (PCL-C) 17-item tool shown to be valid, reliable, and concordant with clinician-administered diagnostic assessments in a range of populations. This measure maps to DSM criteria for PTSD and yields both a continuous symptom score (range 17-85), and dichotomous diagnoses (cut-off score of 45) The GAD (Generalized Anxiety Disorder Scale)-7 (GAD) was used to measure anxiety symptoms where a higher score >10 reflects higher levels of anxiety; The WHOQoL-BREF (WHO Quality of Life abbreviated tool) (has psychological component) was used to measure quality of life, where higher scores reflect higher quality of life; The Veterans RAND 12-item (VR-12) quality of life measure was used (mental component) where a higher score represents higher quality of life; The Beck Anxiety Inventory (BAI) was used to assess physiologic and cognitive symptoms of anxiety, Participants were asked to rate how much they had been bothered by each of the 21 anxiety-related symptoms over the past week on a 4-point scale ranging from 0 to 3. Items were summed to obtain a total score ranging from 0 to 63, indicating the severity of anxiety; The 10-item AUDIT (Alcohol Use Disorder Identification Test) questionnaire was used where a score of 8 or more indicated probable alcohol dependence; The CES-D-10 was used to measure the frequency with which they experienced depressive psychological and behavioral symptoms in the previous week that are described in 10 statements, using a four-point scale. A higher CES-D-10 score indicates higher depressive symptoms, whereas a lower score indicate slower depressive symptoms;

Self-care/self-management

AIDS Risk Behavior Assessment (ARBA) tool adapted for young trans women and MSM, where lower scores indicate greater safer sex self-efficacy. Change in the number of condomless anal or vaginal sex acts at baseline; Behavioral skills were assessed using a series of vignettes with content specific to meeting sex partners online. Participants were asked to vividly imagine each story and rate their confidence in their ability to engage safety skills using a scale from 0 (Cannot do at all) to 10 (Certain can do); Sexual Behavior At baseline and 6-month follow-up, participants self-reported their total number of male sex partners during the past 6 months and how many of those partners they met online. Participants reported male sex partner serostatus (HIV-positive vs. HIV-negative/unknown) and the number of times they had condomless anal sex (CAS) with partners in each serostatus category. CAS with partners living with HIV (seroconcordant) was measured to assess extent of serosorting as an outcome measure, while CAS with partners without HIV or whose HIV-status was unknown (serodiscordant) was measured to assess HIV transmission risk behavior as an outcome measure; Self-Efficacy for Safer Sex The 10-item Self-efficacy for Safer Sex scale (SSS) (a=0.72) was used to assess self-efficacy in practicing condom use and safer sex communication with a partner; ART adherence: Three primary self-reported adherence outcomes were assessed for the purpose of this study at baseline, post-intervention and 1-month follow-up: (a) The percentage of time ART was correctly taken as prescribed in the past 30 days; (b) The percentage of time ART was taken within 2 h of the scheduled dose in the past 30 days; and (c) The percentage of time ART was taken correctly with food in the past 30 days; Condom-Use Skills Checklist (Adapted); Condom Use Self-Efficacy Scale; Health-Protective Sexual Communication Measure; Changes in

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Sexual Behavior that included: 1) Unprotected Anal Intercourse (UAI) and 2) HIV/STD testing; . Sexual Risk Behavior: occurrence of unprotected insertive (UIA) or receptive (URA) anal intercourse (# of male partners, UIA or URA); condom use; unknown or serodiscordant unprotected insertive (USDUIA) or receptive (USDURA) anal intercourse with most recent partner and any partner (condom use and alcohol/drug use); alcohol/drug use in conjunction with sex were asked for most recent partner and other partners by partner HIV serostatus; HIV transmission knowledge using a 23-item measure assessed HIV knowledge, including factors that impact HIV transmission risk to uninfected partners, where higher scores were indicative of greater HIV transmission knowledge; Condom attitudes using a 5-item measure; responses across items were summed; higher scores were indicative of more favorable condom attitudes; Sexual behavior intentions using a single-item adapted from Carey et al.; participants then indicated their intentions to refuse sex if the partner would not use a condom by selecting one of the following response options: "definitely no", "probably no", "probably yes", or "definitely yes." Higher scores were indicative of greater intentions to refuse; Unprotected sexual activity; Self-report measure that assesses the frequency that participants engaged in a) unprotected oral sex and b) unprotected anal sex during the past 3 months with a steady partner and/or non-steady partners; Self-efficacy to disclose HIV status; a 3-item measure where responses across the three items were summed such that higher scores represented greater self-efficacy to disclose one's HIV serostatus to partners; Coping self-efficacy using a 15-item scale that assessed self confidence in performing coping behaviors when faced with life challenge; with higher scores indicating greater coping self-efficacy; Unprotected anal intercourse where UAI was measured as continuous (e.g., frequency) or categorical variable (e.g., proportion) in the included studies. 17. The AIDS-Risk Behavior Assessment (ARBA) A computerized self-interview designed specifically for use with adolescents, was used to assess participants' sexual behaviors; Social cognitive theory constructs (SCTC) questionnaire used to assess participants' degree of self-efficacy to engage in sexual risk reduction behaviors; Safer Sexual Practices among Lesbian Women Scale (modified) was used to assess frequency of sexual risk practices; Condom Use Self-Efficacy Scale referred to as barrier use self efficacy to enhance appropriateness for LBQ women, and the Safer Sex Self-Efficacy Scale, which assesses general safer sex self-efficacy; Sexual behavior: measured on a 19-item checklist of the characteristics of a sexual encounter, including receptive and insertive UAI; Sexual health capacity Scale (SHCS): a five-item scale measuring self-perceived HIV and sexual health knowledge and one item related to self-efficacy in negotiating condom use; HIV sexual risk behaviors :this sexual behavior assessment used a 3-month recall period and inquired about unprotected sex with multiple types of partners (i.e., main, casual, and commercial) as well as sex under the influence of drugs and alcohol (# of URAI and anal sex episodes; Frequency count of Condomless Sex Acts: male partner (receptive or insertive) without a condom within previous 3 months; HIV Knowledge: A measure used previously in Vietnam research using true/false questions; Self-Efficacy: 5-item assessment tool adapted. 27. Behavior Skills: A 10-question behavioral skills measure adapted. HIV medication adherence was measured using a Visual Analogue Scale (VAS), where the higher the score, the higher the medication adherence.

Social support

Psychosocial measures: Social isolation; 7-item measure (lower score, less isolation), Sexual self-efficacy: 7-item (higher score, higher self-efficacy), Condom attitudes; 5-item (lower score, better condom attitudes), Condom intentions; 1-item (higher score, better intentions), Psychological distress; 10-item (lower score, less distress) measured at baseline and 3 months following intervention; Social Support Scale: The 18-item Social Provisions Scale assesses one's degree of social support (higher scores indicate greater social support), measured at baseline, following the intervention and at 3 months. 3. Social support using the Social Provisions Scale; measures the degree to which an individual perceives their social relationships to provide support, scale range 4-16 (higher score reflects higher perception of perceived social relationships); measured at baseline and 6 weeks following intervention. 4. Connection to LGBQ communities Assessed using the Community Connectedness Scale at baseline, post intervention and 6 weeks following the intervention. 5. Social and Emotional Loneliness Scale for Adults (SELSA): an 11- item measure that yields separate scores for romantic and friendship-related loneliness; The Social Support Questionnaire (SSQ-6), using a 6 point likert scale and where increased scores reflect increased social support.

Evidence Profile (Qualitative)

Recommendation Question: Are clinical groups for health conditions effective in providing care to 2SLGBTQI+ communities?

Recommendation 4.0: The expert panel suggests health-service organizations implement specialized 2SLGBTQI+ clinical groups for health promotion and chronic disease prevention and management

Aim: To explore the experiences of 2SLGBTQI+ persons participating in clinical groups.

Bibliography: 48780, 55809, 58502, 132, Taylor & Bryson (2016)

Finding: Participants in a variety of 2SLGBTQI+ clinical groups' experienced social support through information and knowledge sharing, peer networks, as well as decreased isolation and a sense of community.							
Studies contributing to the Finding	Included study designs	CERQual Assessment				Overall CERQual Assessment of Confidence	Explanation of Judgement
		Assessment of Methodological Limitations	Assessment of Relevance	Assessment of Coherence	Assessment of Adequacy of Data		
48780: Capistrant et al., 2016 55809: Batist, Brown, Scheibe, et al., 2013 58502: Eliason, 2015	48780: 1 on 1 semi-structured telephone interviews with Thematic analysis 55809: Thematic analysis using a framework approach Focus groups 58502: Content Analysis Focus groups and follow-up surveys	Moderate methodological limitations (details of data collection [two studies] and data analysis [three studies] not well described	No concerns about relevance (three studies were conducted in the United States/Canada and one in South Africa)	No concerns about coherence (the data is descriptive; but the patterns in the data were clear)	No concerns (5 studies offer relatively rich data)	Moderate confidence	The finding was graded as moderate confidence because of, moderate concerns regarding methodological limitations, and no concerns regarding relevance, coherence and adequacy of data.

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<p>Taylor & Bryson (2016) (hand searched)</p> <p>132: Barry et al., 2018</p>	<p>Taylor & Bryson 92016) Semi-structured interviews with Thematic analysis</p> <p>132: online conversations and a resiliency framework guided theme development</p>						
<p>Finding: Participants in two studies reported increased health awareness and knowledge after participating in clinical groups. Participants in an HIV prevention study reported the benefits of group participation including information and access to HIV prevention strategies. Participants in a healthy weight study reported the benefits of group participation in physical activity and intuitive eating habits.</p>							
<p>55809: Batist, Brown, Scheibe, et al., 2013</p> <p>58502: Eliason, 2015</p>	<p>55809: Thematic analysis using a framework approach</p> <p>Focus groups</p> <p>58502: Content Analysis</p> <p>Focus groups and follow-up surveys</p>	<p>Moderate methodological limitations (limited details of data analysis for both studies)</p>	<p>No concerns about relevance</p>	<p>No concerns about coherence</p>	<p>Serious concerns (data very thin in one study)</p>	<p>Low confidence</p>	<p>The finding was graded as low confidence because of, moderate concerns regarding methodological limitations, serious concerns about adequacy of data and no concerns regarding relevance and coherence.</p>