



“Chemsex” and High-Risk Sexual Behaviours in HIV-Positive Men Who Have Sex With Men

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BACKGROUND

- In the UK, HIV incidence remains high among men who have sex with men (MSM)¹.
- “Chemsex” refers to the use of drugs to increase sexual disinhibition and arousal. If drugs are injected it is referred to as “slamsex”
- Chemsex and slamsex may contribute to the transmission of HIV and other sexually transmitted infections (STIs)
- Typical drugs used for both chemsex and slamsex include MCAT, GHB/GBL, crystal meth, and ketamine
- Despite the recent rise in chemsex among MSM, little is known about the population engaging in it, particularly among HIV+ MSM

OBJECTIVES

We use self-reported behavioural data from HIV positive MSM linked to their clinical viral load (VL) records to:

1. Describe HIV positive MSM who engage in chemsex/slamsex
2. Determine associations between chemsex/slamsex and sexual risk behaviours, a recent STI diagnosis, and having ever been diagnosed with hepatitis C

METHODS

- Positive Voices is a cross-sectional, computer-assisted self-interview (CASI) behavioural and health needs survey. People living with HIV were recruited through a representative sample of 30 HIV clinics in England and Wales between May - November 2014
- Participants (N=777; MSM n=532) self-reported sexual behaviours, ingesting and injecting drug use during sex, and STI diagnoses over the previous year
- Nationally weighted population prevalence estimates (with 95% CIs) of chemsex and slamsex use among sexually active MSM (n=392) were calculated
- Demographics were compared using the chi-square statistic. Multivariable regressions, based on a directed acyclic graph (Figure 1), were used to examine associations

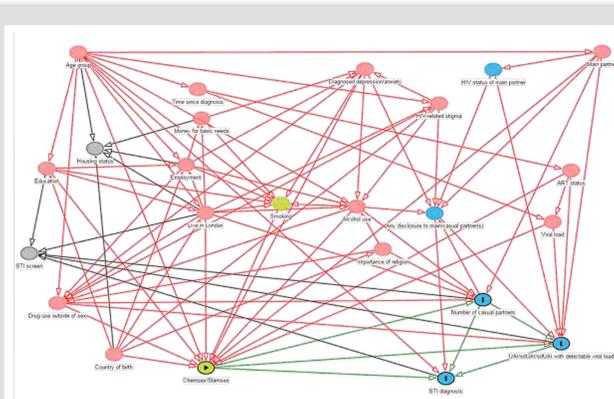


Figure 1. Causal diagram (directed acyclic graph) used to determine variables to adjust for in multivariable regressions

RESULTS

Who is engaging in chemsex?

- 105 (29%) of 392 sexually active MSM engaged in chemsex in the previous year, and 35 (10%) in slamsex (Figure 2)
- Compared to other sexually active MSM, MSM who engaged in chemsex were more likely to:
 - Be mostly aged 35-44 (33%) and 45-54 (35%), as opposed to 18-34 (20.1%) and 55+ (18.9%) (p=0.01)
 - Live in London (37% vs 17%, p=0.004)
 - Have been diagnosed with depression or anxiety (38% vs. 24%, p=0.01)
 - Be current smokers (39% vs. 24%, p<0.001)
 - Use drugs outside of sex (44% vs. 13%, p<0.001)
- Similarly, those participating in slamsex were more likely to:
 - Live in London (13% vs. 6%, p=0.046)
 - Be on ART (19% vs. 9%, p=0.049)
- There were no associations with region of birth, education level, employment, having a main partner, binge drinking, or VL

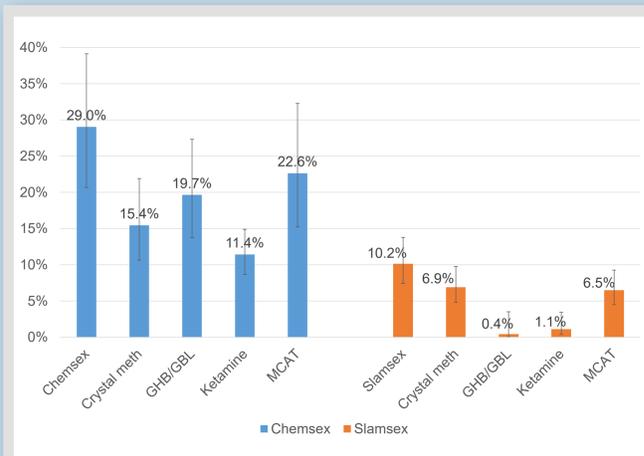


Figure 2. Adjusted percentage of sexually active HIV-positive MSM engaging in chemsex and slamsex and drug used (n=387)

Is there an association between chemsex and sexual behaviours with a risk of onwards HIV transmission?

- In the previous year, among the 392 sexually active MSM:
 - 77% had unprotected (condomless) anal sex (UAI)
 - 46% had sero-discordant UAI (sdUAI) and
 - 9.2% had sdUAI with a VL \geq 50 copies/mL
- Chemsex was associated with increased: (Figure 3)
 - UAI (aOR 6.0, CI:2.9-12.5)
 - sdUAI (aOR 2.9, CI:1.2-6.8)
 - sdUAI with a detectable VL (aOR 7.4, CI: 3.0-18.1)
 - average number of partners in the past year (Mean: 30.3 vs. 9.5; Adjusted difference: +15.5, 95% CI:12.5-18.5)
- Slamsex was associated with increased odds of UAI (aOR 6.3, CI:1.01-39) (Figure 3)

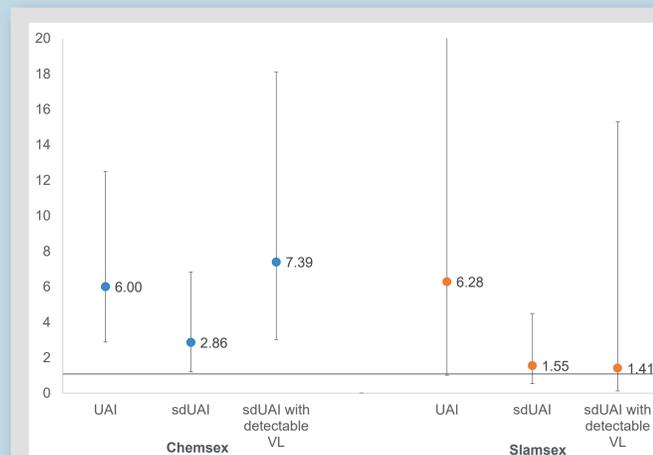


Figure 3. Adjusted odds ratios comparing the association between chemsex, slamsex, and various sexual risk behaviours

Is there an association between chemsex and STI diagnoses?

- 50% of men reported a bacterial STI diagnosis in the previous year, and 9.4% had ever been diagnosed with hepatitis C
- Chemsex was associated with an increased risk of being diagnosed with: (Figure 4)
 - any STI (AOR: 3.42, 95% CI: 1.71-6.83)
 - gonorrhoea (AOR: 2.76, 95% CI: 1.31-5.82)
 - hepatitis C (AOR: 6.26, 95% CI: 2.05-19.1)
- Slamsex was associated with increased odds of being diagnosed with: (Figure 4)
 - any STI (AOR: 3.85, 95% CI: 1.26-11.8)
 - multiple STIs (AOR: 1.82, 95% CI: 1.18-2.79)
 - chlamydia (AOR: 3.09, 95% CI: 1.11-8.62)
 - hepatitis C (AOR: 9.12, 95% CI: 2.40-34.6)

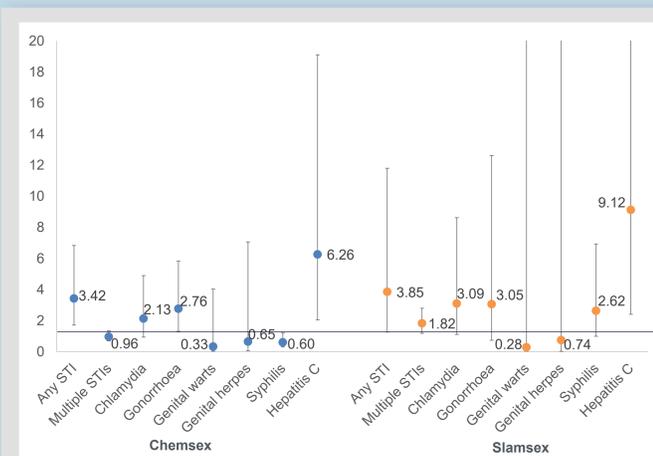


Figure 4. Adjusted odds ratios comparing the association between chemsex, slamsex, and self-reported STI diagnoses

DISCUSSION

- One in three HIV-positive MSM reported chemsex in the previous year, which was associated with risky sexual behaviours and STI diagnoses
- Chemsex, but not slamsex was associated with increased odds of sexual behaviour with a risk of onwards HIV transmission (i.e. sdUAI with a detectable VL)
- Chemsex and slamsex were associated with greatly increased odds of hepatitis C infection
- Due to the small number of MSM engaging in slamsex, the analyses were underpowered to detect differences between those engaging in slamsex and not
- Causality cannot be concluded in a cross-sectional survey. However, our results are supported by qualitative research which have found that the chemsex leads people to take risks and engage in behaviours that they would not when sober²
- Results are limited by the sample size, recall bias in self-reports, and potential non-response bias (39% response rate)

CONCLUSIONS

- These are the first nationally representative estimates of chemsex and slamsex among HIV+ MSM in the UK
- We show a clear association between chemsex and risky sexual practices
- Beyond the potential for HIV transmission, chemsex is linked to STI diagnosis including hepatitis C infection
- Interventions to address the risk of HIV and STI transmission among MSM who use drugs in a sexual context are needed
- The first full round of Positive Voices is planned for spring 2016 and will allow for repeat analyses with a larger sample

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*Positive Voices Study Group

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Clinic Teams

- Kobler Clinic - Chelsea & Westminster
- Mortimer Market Centre, UCLH
- St. Mary's Hospital, London
- St. George's Hospital, London
- Homerton University Hospital, London
- Leicester Royal Infirmary, Leicester
- Royal Hallamshire Hospital, Sheffield
- Cardiff Royal Infirmary, Cardiff
- Addenbrooke's Hospital, Cambridge
- Gloucester Royal Hospital, Gloucester
- York Teaching Hospital, York
- Royal Victoria Infirmary, Newcastle
- Kingston Hospital, Kingston
- Royal Gwent Hospital, Newport
- Queen Elizabeth Hospital, Birmingham
- North Manchester General Hospital
- Heartlands Hospitals, Birmingham
- Derriford Hospital, Plymouth
- Great Western Hospital, Swindon
- Southmead Hospital, Bristol
- The James Cook University Hospital, Middlesbrough
- Royal Bournemouth General Hospital
- Weymouth Community Hospital, Weymouth
- Manor Hospital, Walsall
- Southend University Hospital
- Norfolk & Norwich University Hospitals
- Russells Hall Hospital, Dudley
- Royal Berkshire Hospital, Reading
- Watford General Hospital, Watford
- Ipswich Hospital

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