



Chemsex and its risk factors associated with human immunodeficiency virus among men who have sex with men in Hong Kong

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Abstract

We were intrigued by Hanum *et al*, who published a study on the prevalence of human immunodeficiency virus (HIV) in homosexual, bisexual, and other men who have sex with men at sexual health clinics in England and the relationship between baseline variables and future HIV occurrence. Chemically-enhanced sexual experience (chemsex) is becoming a global phenomenon. There are increasing medical and academic concerns about chemsex, where substances are used to boost sexual satisfaction, which is prevalent in groups, especially among homosexuals. Lesbians, gays, bisexuals, transgenders, and queers have become increasingly visible, valued, and committed community. However, chemsex requires urgent attention.

Key Words: Men who have sex with men; Methamphetamine; Application of novel psychoactive substances; Drug abuse; Lesbians, gays, bisexuals, transgenders; Chemsex

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Core Tip: The human immunodeficiency virus/acquired immunodeficiency syndrome epidemic and substance abuse have become global concerns in Hong Kong and everywhere else. It is our opinion that chem-sex exposes the risk factor and affects the men who have sex with men (MSM) subset of homosexual men and other MSM.

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TO THE EDITOR

In Hong Kong, men who have sex with men (MSM) have coined the phrase “chemfun” to describe having sex while high on drugs such as methamphetamine and γ -hydroxybutyric acid (GHB). It is also called chemsex or sexualized drug usage elsewhere[1]. Since time immemorial, MSM have used drugs to enhance the experience of sex, regardless of sexual orientation. Public concern has only recently surfaced, however, as we have seen some of the serious ramifications of this habit. Resurging sexually transmitted infections, including human immunodeficiency virus (HIV) and hepatitis C, addiction-related social and mental health issues, and overdose fatalities, are all part of the problem[2].

Chemsex involves various complicated relationships between sexual and drug-use behaviors[1,3]. It may include two or more people and may take place at sex-on-premises establishments such as saunas or clubs. However, it is most often seen in private settings such as houses or leased rooms. Because methamphetamine has a longer half-life than other stimulants such as cocaine, chemsex sometimes lasts for a lengthy period of time, such as 10-12 h or even several days. Individuals exhibit various chemsex patterns and frequencies. They may opt to discontinue after their first experience of usage, prolong, or increase the intensity or frequency of their usage at various stages in their life. In the United Kingdom, approximately 20% of HIV-negative MSM surveyed in sexual health clinics and 30% of sexually active HIV-positive men recently had chemsex[4].

According to the recommended HIV/acquired immunodeficiency syndrome (AIDS) Strategies for Hong Kong by the Hong Kong Advisory Council on AIDS (2022), chemsex is now a slang term used by homosexual men and other MSMs to describe sex involving psychotropic substances, typically methamphetamine and GHB, to improve sex lives. In the HIV and AIDS Response indicator Survey (HARIS) 2020, 8.6% of MSM participants admitted engaging in chemsex over the last half year, a small increase from 7.3% in HARIS 2018[5]. According to this report, poppers, ice, and GHB were the most popular drugs. Usually, chemsex users have a better understanding of health issues than those who do not. This may be due to the greater perceived danger of contracting HIV among MSM. Specifically, chemsex participants revealed higher levels of HIV testing and pre-exposure prophylaxis (PrEP) use than non-chemsex participants.

There is a risk of developing addiction to psychotropic chemicals used in chemsex. This includes symptoms such as high cravings, psychological problems such as impatience, and trouble managing the dosage. A person’s genetic or biological susceptibility, the type of drugs taken, and the frequency, duration, and method of administration all play a role in the likelihood of acquiring this problem. Epidemiological research shows that those with a history of drug use disorders have a 2-5 times greater chance of having psychiatric problems, including depression. It is possible that both mental health issues and drug use come from shared risk factors including a history of trauma and underprivileged upbringing.

Depending on the chemsex behavior, protective or behavioral risk factors may be identified. This study examined the prevalence of condom usage among important demographics in Hong Kong. Among MSM, condom use for sexual activity with ordinary partners was relatively low. The prevalence of persistent condom usage among MSM is inadequate and far below the objective. MSM may use condoms arbitrarily based on the sex partner/activity[1,6]. Recently, the use of PrEP has increased, which may be partially responsible for the decline in condom usage[7]. In 2019, there was a near-successful effort to reduce sharing of needles with other individuals among persons who inject drugs (PWID); however, there was a resurgence of this trend in 2020. The frontline non-government organization in Hong Kong stated that the coronavirus disease 2019 pandemic had caused the majority of PWID to remain at home, and pharmacies to shut down due to insufficient needle supplies[8].

Majority of the data regarding the mental health repercussions of chemsex come from studies of drug use among homosexual males, regardless of the context of usage. Being part of a sexual minority group increases the risk of developing a mental illness by around 2-3 times than that of heterosexual colleagues. The total prevalence of mental illnesses among sexual minority groups associated with drug use disorders was significantly greater. A recent Australian study discovered that 20%-30% of an online sample of homosexual males tested positive for mild anxiety or depression. A greater prevalence of mental disorders was associated with earlier cannabis and methamphetamine use. Moreover, almost half of these males (46%) had signs of depression. Depression is often characterized by persistent poor mood, loss of interest in formerly enjoyable activities, changes in sleeping habits and food, and, in extreme cases, a sense of regret, despair, and suicidal ideation[9,10]. Methamphetamine can cause psychosis with characteristics comparable to those of schizophrenia[1]. According to a previous study, up to 15% of chronic methamphetamine users developed psychosis. This danger is greater for

individuals who use marijuana on a regular, chronic, or injectable basis. They are often characterized by auditory hallucinations and inability to suspend one's views in the absence of adequate proof (delusions), which are frequently persecutory in nature, as though one is being observed or plotted against. Consequently, disordered, aggressive, or self-harming behaviors may develop[6]

Over 50% of the research participants recently engaged in condomless anal intercourse, including 26 who ultimately tested positive [hazard risk (HR): 3.75, 95%CI: 1.31–10.74]. The number of sexual partners and the chances of contracting HIV have increased progressively. For instance, five of 60 males who had five to ten condom-free relationships in the preceding three months tested positive (HR: 9.60, 95%CI: 2.58–35.76)[9].

HIV infection is not linked to age, housing status, economic standing, family situation, previous HIV screening, fisting, sex toys, PrEP, tobacco use, drinking, or depressive or anxiety disorders. In an era of expanding access to rapid HIV therapy and PrEP, the findings underscore dangerous situations and behaviors[7]. The increased risk associated with drug use may reflect subsequent sexual behavior; however, transmission *via* shared needles is also a factor.

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REFERENCES

- 1 Chan ASW, Tang PMK. Application of Novel Psychoactive Substances: Chemsex and HIV/AIDS Policies Among Men Who Have Sex With Men in Hong Kong. *Front Psychiatry* 2021; **12**: 680252 [PMID: 3435329 DOI: 10.3389/fpsy.2021.680252]
- 2 Smiles C, O'Donnell A, Jackson K. Needle exchange practitioners accounts of delivering harm reduction advice for chemsex: implications for policy and practice. *Drugs: Educ, Prev Policy* 2022; 1-9 [DOI: 10.1080/09687637.2022.2027345]
- 3 Nimbi FM, Rosati F, Esposito RM, Stuart D, Simonelli C, Tambelli R. Chemsex in Italy: Experiences of Men Who Have Sex With Men Consuming Illicit Drugs to Enhance and Prolong Their Sexual Activity. *J Sex Med* 2020; **17**: 1875-1884 [PMID: 32727698 DOI: 10.1016/j.jsxm.2020.07.001]
- 4 Yan H, Peters H, Thorne C. Neonatal deaths among infants born to women living with HIV in the UK and Ireland. *AIDS* 2022; **36**: 287-296 [PMID: 34628441 DOI: 10.1097/QAD.0000000000003095]
- 5 Tam G, Lee SS. Acceptance of opt-out HIV testing in out-patient clinics in Hong Kong. *Hong Kong Med J* 2022; **28**: 86-87 [PMID: 35260500 DOI: 10.12809/hkmj209222]
- 6 Songtachalert T, Roomruangwong C, Carvalho AF, Bourin M, Maes M. Anxiety Disorders: Sex Differences in Serotonin and Tryptophan Metabolism. *Curr Top Med Chem* 2018; **18**: 1704-1715 [PMID: 30430940 DOI: 10.2174/1568026618666181115093136]
- 7 Flores Anato JL, Panagiotoglou D, Greenwald ZR, Blanchette M, Trottier C, Vaziri M, Charest L, Szabo J, Thomas R,

- Maheu-Giroux M. Chemsex and incidence of sexually transmitted infections among Canadian pre-exposure prophylaxis (PrEP) users in the l'Actuel PrEP Cohort (2013-2020). *Sex Transm Infect* 2022 [PMID: 35039437 DOI: 10.1136/sextrans-2021-055215]
- 8 **Suen YT**, Chidgey A. Disruption of HIV Service Provision and Response in Hong Kong During COVID-19: Issues of Privacy and Space. *J Int Assoc Provid AIDS Care* 2021; **20**: 23259582211059588 [PMID: 34841949 DOI: 10.1177/23259582211059588]
 - 9 **Hanum N**, Cambiano V, Sewell J, Rodger AJ, Nwokolo N, Asboe D, Gilson R, Clarke A, Miltz AR, Collins S, Delpech V, Croxford S, Phillips AN, Lampe FC; AURAH2 Study Group. Trends in HIV incidence between 2013-2019 and association of baseline factors with subsequent incident HIV among gay, bisexual, and other men who have sex with men attending sexual health clinics in England: A prospective cohort study. *PLoS Med* 2021; **18**: e1003677 [PMID: 34143781 DOI: 10.1371/journal.pmed.1003677]
 - 10 **Schmidt AJ**, Bourne A, Weatherburn P, Reid D, Marcus U, Hickson F; EMIS Network. Illicit drug use among gay and bisexual men in 44 cities: Findings from the European MSM Internet Survey (EMIS). *Int J Drug Policy* 2016; **38**: 4-12 [PMID: 27788450 DOI: 10.1016/j.drugpo.2016.09.007]



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