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**Title:** ‘Slam sex’ - sexualised injecting drug use (‘SIDU’) - A scoping review

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## **‘Slam sex’ - sexualised injecting drug use (‘SIDU’) - A scoping review**

Sexualised injecting drug use (‘SIDU’) is a phenomenon associated with a wide array of high-risk injecting and sex-related practices. This review establishes what is known about Men who have Sex with Men (MSM) and SIDU to assess implications for health care and policy. The Levac, Colquhoun & O’Brien, (2010) scoping review methodology was employed for the purposes of the search. Characteristics of MSM for ‘SIDU’ appear to include being on anti-retroviral treatment and urban residency with drivers being challenging social taboos; a search for intimacy; convenience of administration; relationship breakdown and increased restrictions in clubs and saunas. Attraction for use appears to be enhancement or prolongation of sexual experiences/ pleasure; intimacy and the facilitation of a range of potentially ‘unsafe’ sexual activity. Traditional services are ill-equipped to address ‘SIDU’ because of a lack of knowledge of practices, lack of associated vocabulary and a failure to integrate sexual health with drug services. For effective responses these issues need to be addressed.

**Keywords:** Sexualised injecting drug use; ‘SIDU’; MSM; service responses; scoping review

### **Introduction**

Sexualised injecting drug use (‘SIDU’) – colloquially known as “slamming” - amongst men who have sex with men (MSM) is a phenomenon associated with high-risk injecting and high risk sex-related practices within the broader environment of what in the UK is called “Chemsex” and in the USA is called “Party and Play” - PnP. Two recent reviews (Edmundson et al., 2018 and Maxwell et al., 2019) have found that there is a paucity of event level data on ‘SIDU’, with only one Dutch study (Knoops et al., 2015) focused on the phenomenon of ‘SIDU’ in particular. This paper, therefore, is a review of the extant literature on the topic to address this gap. The review establishes what is known about MSM’s ‘SIDU’ in order to assess implications for health and drug services in terms of future uptake and policy development.

MSM engaging in SIDU are considered a specific high risk drug using group (EMCDDA, 2017) and may considered a subpopulation of sexualised drug users (Domínguez et al., 2018).

“Chemsex” or PnP may be defined as *“intentional sex under the influence of psychoactive drugs, mostly among men who have sex with men”* (McCall et al., 2015, h5790.). ‘SIDU’ is the injection of psychoactive substances within this context and may be considered a relatively recent phenomenon (Bourne et al., 2014). Drugs that are “slammed” include methamphetamine; mephedrone; more rarely ketamine; 3,4 methylene dioxymethamphetamine (MDMA) and or other drugs (Marillier et al., 2017; David Stuart & Weymann, 2015). These drugs may be referred to as novel psychoactive substances (NPS) which can be defined as *“substances that have recently become popular/available, constituting a reason of current/potential public health concern”* (Schifano et al., 2015:pg.31).

## **Methods**

Scoping reviews are an increasingly common method for exploring broad topics (Pham et al., 2014). They allow for the mapping of the available extant literature (including “grey” literature) of previously under-researched topics (Arksey & O’Malley, 2005). This study used the iterative six step method developed by Levac et al., (2010). The six steps are: (1) identifying the research question; (2) identifying relevant studies; (3) study selection; (4) charting the data; (5) collating, summarizing and reporting the results and (6) an international expert advisory consultation exercise on initial findings with a view to establishing the credibility of these in light of the literature found and any gaps in the literature that have not been discovered.

The research question for the review was, *“What is known about sexual injecting drug use (SIDU) in the context of ‘chemsex’ and men who have sex with men (MSM)?”*.

An exploratory search was implemented in April, 2019 in the National Documentation Centre for Drugs and Library catalogue in the Republic of Ireland. This catalogues all drug pertinent

research papers, news and policy documents. This exercise led to a more comprehensive search of Pubmed and Google Scholar [Table 1: Search Terms]. The searches on all databases were limited to ‘Humans’, the English language and publications within a timeframe of 2009 to 2019. Identified papers’ references were also examined for undiscovered extant literature such as ‘grey’ literature.

Eligibility criteria centred on whether studies considered the practices, health implications and service utilisation of MSM engaging in injecting drug use of NPS during ‘chemsex’. Review papers which did not include ‘new’ information were excluded. The title and abstract of each citation were screened for relevance to these parameters by the lead author; where doubt remained papers were further reviewed by co-authors (Levac et al., 2010). Studies that did not include the parameters were excluded at this stage.

Mendeley™ software was used to compile all relevant papers and all duplicates were removed. Subsequently, this list was forwarded to an Expert Advisory Group of “chemsex” researchers and experts to identify other pertinent and previously undiscovered papers for inclusion.

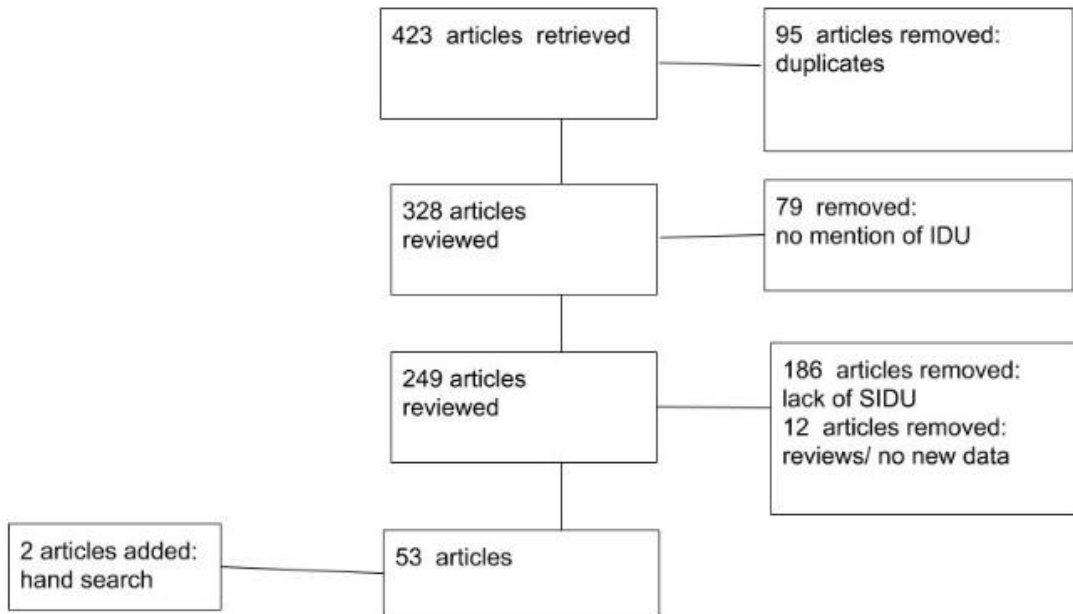
## **Results**

Four Hundred and Twenty-Three papers were retrieved through the database search (Figure: 1). After duplicates were removed (n=95), 328 papers were screened for intravenous drug use (IDU) leading to the removal of 79 papers. Papers which correlated injecting of known chemsex drugs with ‘SIDU’ were also excluded, leading to the removal of a further 186 papers. 12 review papers which did not provide any new data were excluded. Two further papers meeting the inclusion criteria were identified through a hand search, yielding a total of 53 papers for critical appraisal.

**Table 1 Search Terms**

<b>Drug Terms</b>	<b>Injecting Terms</b>	<b>SDU Related Terms</b>	<b>English language papers Retrieved</b>
3-MMC OR 4-MEC OR 4-FA OR cocaine OR methamphetamine OR tina OR ketamine OR GHB OR GBL OR mephedrone OR meph OR methoxetamine OR MDMA OR cathinone*	injecting OR slamming OR “people who inject drugs” OR “intravenous drug use”	chemsex OR slamsex OR “party n play” OR PnP OR “sexualised drug use*”	Google Scholar: 403 Pubmed: 11

**Figure 1: Search Strategy**



Specific information including author, year of publication, methodology and study location were noted. Data was broken down thematically into: “SIDU Profile and Catalysts”; “Health Harms”; “Service Responses” and “Service Utilisation”.

### ***‘SIDU’ Profile and Catalysts***

SIDU is reported in several countries including the United Kingdom; United States; Australia; France; Spain; Portugal; Thailand; Ireland; Czech Republic; Germany; Denmark; Finland and Greece (Glynn et al., 2018; Guadamuz & Boonmongkon, 2018; Lea et al., 2016; Wendel, 2011; Hopwood et al., 2018). Reported prevalence figures for MSM engaging in ‘SIDU’ range between 1-50% (Bourne et al., 2015; Elliot, Singh, Tyebally, Gedela, & Nelson, 2017; Frankis & Clutterbuck, 2017; Frankis, Flowers, McDaid, & Bourne, 2018; Power et al., 2018; Ray et al., 2017; Molina et al., 2018). In a study recruited through UK health clinics, Pufall et al., (2018) found that a minority of MSM reported engaging in SIDU: 10.1% (any drug); 4% (multiple drugs); 6.7% (methamphetamine); 0.4% (GHB/GBL); ketamine (1.1%) and mephedrone (6.6%). In a cross-sectional survey of Australian MSM, Hopwood et al., (2015) found that 90% of those injecting reported engaging in SIDU. The drugs injected may vary according to local context (Giraudon, Jeremias, & Mohammed, 2018) and the drugs thought to be injected may vary in purity and can contain close chemical analogues - that is compounds having a structure similar to that of another compound, but different from it in respect to a certain component in order to either bypass drug laws or to input cheaper compounds to maximise profits - rather than the substance expected by the user (Marillier et al., 2017).

The term “slamming” may be used by individuals to distinguish recreational injecting from traditional social perceptions associated with injecting of opioids and other drugs in the broader drug injecting population (Bourne et al., 2014a; Gilbert et al., 2013; Knoop et al., 2015). In

London, Moncrieff (2014) reports that 'SIDU' started to occur as MSM moved from licenced gay venues and clubs, - a move prompted by increased security enforcement against recreational drug use - to private parties - a move that was facilitated through the use of geospatial mobile applications such as Grindr™; Scruff™; Hornet™ and Jack'd™. Ahmed et al (2016) reports that a population of MSM from South London boroughs reports SIDU being virtually absent from licensed venues due to the stigmatisation associated with this behaviour and the practicality of injecting in a venue with restrictions. Suspected SIDU is reported in a sauna in Barcelona (Dávila, 2016). In South Africa there have been calls for 'safe' consumption sites to be established in MSM sex related venues (Levy, 2019).

MSM engaging in 'slamsex' operate in different networks within chemsex scenes (Knoops et al., 2015). In this regard, 'SIDU' is motivated by the excitement associated with crossing a social taboo line (Ralphs et al., 2017) as this relates to a behaviour (injecting) that maybe stigmatised, fetishized and carry risks (both social and health)(Van Hout, Crowley, O'Dea, & Clarke, 2018; Wharton, 2017). In the United Kingdom, the practice is reportedly becoming less stigmatised and more normalised within the MSM community(Gourlay et al., 2017). 'SIDU' may be an opportunity to increase intimacy between sexual partners (Hunt, 2012) and a minority within the 'SIDU' scene may share injecting equipment as the "*ultimate form of connectedness*" (Knoops et al., 2015:pg31).

Several studies report that "'SIDU'" facilitates, enhances and/or prolongs sexual experiences (Deimal et al., 2016; Amaro, 2016; Weatherburn, 2016;Garfein, Metzner, Cuevas, Bousman, & Patterson, 2010; Hunt, 2012). Sexual liberation and self-medication for low sex drives can be a motivating factor for "'SIDU'"(Milhet et al., 2019; Souleymanov, 2018; Weatherburn et al., 2017; Deimel et al., 2016). Amaro (2016) reports that many MSM initiate "'SIDU'" after



the breakdown of previous relationships. Conversely, “SIDU” may facilitate romantic experiences and become a component of forming relationships with other MSM who ‘slam’ (ibid.). In a Scottish survey of six MSM who reported engaging in SIDU, two reported SIDU during 50-100% of all sexual encounters (Macleod et al., 2016).

Some male sex workers may engage in “SIDU” to facilitate more extreme sexual practices motivated by the opportunity to earn more money from clients (Knoops et al., 2015). Weatherburn et al. (2016) report a case where ‘SIDU’ allowed a MSM to “*get horny*” despite no longer having a sex drive. Indeed, in that case the respondent reported that “*It’s one of the reasons why I started using chems*” (pg. 2).

“SIDU” can lower inhibitions and can increase stamina and performance (Dolengevich-Segal Rodríguez-Salgado and Sánchez-Mateos, 2016). Some ‘SIDU’s inject vasodilators directly into their penises to facilitate erections during chemsex sessions (Knoops et al., 2015). The injecting use of crystal methamphetamine has been reported to facilitate movement from active to passive sexual roles (Knoops et al., 2015), it is unclear as to what extent the injecting behaviour itself promotes this sexual role change in comparison to other routes of methamphetamine administration.

Moving towards ‘SIDU’ from other forms of administration may serve practical purposes as injecting may limit the amount of time required with non-injecting administration of a drug (for example, smoking methamphetamine) and speeding up the time of the impact of the effect of the drug (Hopwood et al., 2018; Hunt, 2012). It may also decrease side effects from administering the drug in other ways - for example, cold-like symptoms from snorting (ibid.).

### ***‘SIDU’ Practices***

Those engaging in ‘SIDU’ may identify themselves on dating apps through ideograms such as syringes and suggestive phrases such as “getting to the point”( Bourne et al., 2014; Gogarty & Fairman, 2015; Guadamuz & Boonmongkon, 2018; Knoops et al., 2015) . They may also connect with fellow ‘SIDU’s through online forums and porn sites devoted to ‘SIDU’ and may inject communally whilst online (Bakker & Knoops, 2018; Frederick, 2016; Guadamuz & Boonmongkon, 2018; Mounteney et al., 2016; Pirona et al., 2017; Wendel, 2011).

Whilst low levels of sharing of equipment are reported, MSM who engage in SIDU may lack knowledge of proper injecting technique and are reported as frequently injected by partners (Bourne et al., 2015; Philips, 2015). Stuart and Weymann (2015) describe a UK-based MSM population engaging in ‘SIDU’ a majority of whom surveyed reported not sharing needles; 23% reported never sharing; 27% reported never injecting themselves; 16% had only injected themselves and 30% had injected themselves and others. At times, MSM who engage in SIDU may be injected by trained medical professionals (Bourne et al., 2014) who are also engaging in SIDU and indeed, are often sought out for their medical skill in relation to injecting (Hopwood et al., 2018; Todd, 2016). Injecting techniques may be learnt through Youtube™ videos; engagement with harm reduction services; watching friends inject; and through training from medical professionals(Hopwood et al., 2018).

A tendency not to filter solutions, to mix in the syringe barrel and to inadequately dispose of used equipment has also been reported (Knoops et al., 2015). Some participants may withdraw their own blood, use it as a solvent for injectable drugs and inject themselves and/or others with this solution (Kirby and Dunwell, 2013). This interaction can be viewed as a power negotiation

between sexual participants which renders those with less power at a disadvantage (Javaid, 2018).

Dosing may be learnt interactionally between SIDU participants (Bjerno, 2017). In a case report, Dolengevich-Segal Rodríguez-Salgado and Sánchez-Mateos (2016) note that one participant (MSM) engaging in SIDU reported injecting 0.1-0.2mg mephedrone every hour, consuming 3-4 grams on a weekend. In some cases, MSM engaging in SIDU may stop injecting methamphetamine due to the intensity of the experience and may switch to other drugs such as 4-Methylethcathinone (4-MEC), 3-Methylmethcathinone (3-MMC), cocaine, methoxetamine (MXE) or 4-Fluoroamphetamine (4-FA) (Knoops et al., 2015).

‘SIDU’ appears to be associated with several potentially harmful drug-related practices including polydrug use; poor injection technique; injection by partners; sharing (sometimes intentionally) of equipment; people not filtering solutions; mixing in syringe barrels; using blood as a solvent; frequent redosing and prolonged use (Knoops et al., 2015; Bourne et al., 2014). ‘SIDU’ has also been associated with several potentially harmful sex-related practices to obtain sexual arousal such as fisting (Knoops et al., 2015; Stuart, 2014; Weatherburn et al., 2017).

### ***Health Harms***

Injecting and/or polydrug use may expose people who engage in ‘SIDU’ to the risk of substance use disorders (Knoops et al., 2015; Bourne et al., 2014). The sharing of equipment and using blood as a solvent exposes MSM engaging in SIDU to increased risk of human immunodeficiency virus (HIV), hepatitis C (HCV) and other blood borne viruses (BBVs)(Bourne et al., 2015; Kirby & Thornber-Dunwell, 2013; Knoops et al., 2015; Page &

Nelson, 2016; Stuart & Weymann, 2015). In an English case study, Chung et al., (2015) report that the sharing of a drug-blood mixture led to infection of a second strain of HCV in one patient. In a French cross-sectional survey, chronic HCV prevalence of 10.6% was reported in a population of MSM engaging in SIDU (Vaux et al., 2019). Further harms that may appear include abscesses; phlebitis; track marks and muscle damage (Knoops et al., 2015; Payne et al., 2017; Philips, 2015). Prolonged use may lead to delusional thoughts; paranoid ideation; hallucinations and suicidal ideation (Dolengevich-Segal Rodríguez-Salgado and Sánchez-Mateos, 2016) which can be exasperated by long sessions with little sleep and poor nutrition (Bourne et al., 2014).

In a UK study of attendees of HIV clinics, Pufall et al. (2018) found that being on anti-retroviral treatment (ART) was a predictor of engaging in 'chemsex' and that 10.1% of the HIV+ positive MSM engaged in 'slamsex'. Those engaging in 'slamsex' and/or 'chemsex' were reportedly likely to have more causal partners; unprotected anal intercourse serodiscordant unprotected anal intercourse and detectable viral load serodiscordant unprotected anal intercourse (Pufall et al., 2018). ART medication may exasperate severe organ-related toxicity associated with some drugs associated with SIDU (Bracchi et al., 2015).

When compared to a group reporting chemsex but not SIDU, MSM engaging in SIDU were found more likely to report multiple STIs including Chlamydia; Gonorrhoea and Syphilis (Pufall et al., 2018). People with HCV were found to be more likely to report to engage in SIDU in Madrid, Spain (Gonzalez-Baeza et al., 2018) and a minority of an English and Welsh population diagnosed with Shigellosis also reported engaging in SIDU (Gilbart et al., 2013). HCV infection may occur from both injection and sexual practices (González-Baeza et al., 2018).

### ***Service Responses and Engagement***

Many people engaging in SIDU may not consider ‘SIDU’ risky and/or may see themselves as different when compared with other people who inject drugs (Brook et al., 2018; Stuart, 2013; Frankis and Clutterbuck, 2017; Gogarty and Fairman, 2015). As a result, it may be more appropriate to have SIDU services within existing gay-specific health services (Frankis & Clutterbuck, 2017). One well known service is 56 Dean Street in London in the United Kingdom (Stuart and Weymann, 2013).

In a Canadian review Knowles (2019) found that services should seek to open discussions within the MSM community; provide culturally competent information; talk to MSM about consent and remain sex positive. Canadian programs that include such elements include the “Let’s Talk and Test” Campaign (cabaret-style evening); “Spill the Tea” Campaign (safer partying kits including injecting equipment; lube, condoms and gloves; snorting kits; methamphetamine pipes); AIDS Community of Toronto “Spunk Support” Groups (six week program which includes motivational interviewing; cognitive behavioural therapy and other components); AIDS Community Care Montreal’s “Kontak” program (safer partying kits; an available outreach worker and the holding of workshops) and Gay Men’s Sexual Health Alliance of Ontario (GMSH) “Party and Play Your Way” which is producing colour coded injecting packets to reduce the likelihood of sharing equipment modelled from the Gay Men’s Health Collective’s “Pic Pacs” (ibid.).

In a Scottish commentary, Frankis and Clutterbuck (2017) suggest a highly personalised approach is required which seeks to minimise biomedical harms. Such measures should include:

*“frequent regular STI testing; for HIV-negative men, HIV testing; and for HIV-negative chemsex users who struggle with condom use and safer injecting practices, access to*

*postexposure prophylaxis and information on and support with PrEP (whether funded or self-sourced)” (ibid.pg.1.)*

The importance of integrated services and use of chemsex slang during interactions has been stressed by several authors (Bakker & Knoop, 2018; David Stuart & Weymann, 2015). A number of specialised services have been developed within sexual health services, online and physical peer outreach (Bakker & Knoop, 2018; Stuart & Weymann, 2015; Mowlabocus et al., 2016; Hugo et al., 2018; Mowlabocus et al., 2016 ).

The United Kingdom-based Chemsex Care Support Plan TM is an online motivational interviewing-based intervention which can be used by MSM engaging in ‘SIDU’ directly or with a practitioner (O’Reilly, 2018; Stuart & Weymann, 2015). This tool is widely utilised in over a dozen languages (<https://www.davidstuart.org/care-plan>) and may be useful in cases where information on ‘SIDU’ is not volunteered and may elicit discussion around the topic (O’Reilly, 2018).

As has been discussed previously, several interventions centre on community engagement such as cabaret-style events, outreach work and workshops (Knowles, 2019). Anova Health Institute utilises peer support workers to engage with MSM engaging in ‘SIDU’ in Cape Town, South Africa (Hugo et al., 2018). MSM engaging in SIDU can also be reached through online outreach (Mowlabocus, Haslop, & Dasgupta, 2016).

There is widespread acceptance that non specialised services for people who inject drugs and standard sexual health services are relatively unsuitable for people who engage in ‘SIDU’ (Bakker & Knoop, 2018; Bourne et al., 2014a; Knoop et al., 2015; Stuart & Weymann, 2015). Knoop et al. (2015) reports that a Dutch population of MSM engaging in ‘SIDU’ “ *did not*

*know local needle exchange programmes even existed, let alone how they worked, where they were and when they opened”*(pg. 59). Those who did know, did not use them out of fear of being branded “*a junkie*” (ibid). Knoops et al. also recounts a case where a ‘SIDU’ registered at a local drug-treatment clinic and:

*“found myself having to give an introductory course on crystal meth. She [ the drug worker] knew nothing about crystal meth. She didn’t know you could inject the drug nor did she know its street name. She even asked if tina was my ex-girlfriend’s name. I’d had just about enough by then. It had been a complete let down. I went straight back to using.”* (ibid).

## **Discussion**

‘SIDU’ is an under researched and under reported phenomenon amongst MSM populations. ‘SIDU’ by MSM, based upon the above review, should be considered a distinct phenomenon within chemsex populations since, it may be argued, both reinforcers for engaging in the behaviour and consequences are distinct from other forms drug taking. An unintended consequence of enforcement of drug restrictions in licenced venues and premises (arguably in response to pressure from both law enforcement and broader public health agendas) may have contributed to a transition to private parties which may facilitate the engagement of MSM in ‘SIDU’ (Moncrieff, 2014).

The underground nature with which SIDU amongst MSM is associated and the extreme sexualised injecting it can lead to make those who engage with the practices a ‘hard to reach’ population in relation to harm reduction initiatives. As we have indicated some attempts, mostly in Canada, have been made to engage with this population, however data as to success in such engagement is weak. Furthermore, the nature of the engagement, such as the provision of syringes and latex gloves for the purpose of public protection through the promotion of safer

extreme sexual practices may be publicly controversial and may discourage mainstream statutory public health bodies from providing the specialist service that is needed.

In this context, the initiation into 'SIDU' may be a 'line in the sand' (Smith & Tasker, 2017; Wharton, 2017) which exposes MSM to greater physical and mental health harms that cannot be addressed by health services because of the stigmatised nature of the practices within wider society (sexualised injecting and extreme sexual behaviour). Yet such a stigmatised group could pose a health risk to the wider MSM population if their practices are not addressed through specialised public health response that does not alienate them.

Traditional services for PWID appear to be ill suited for people engaging in 'SIDU' (Stuart, 2016). Central to effective services, the literature scoping review seems to indicate, is to develop an individualised sex positive led approach characterised by cultural competence which integrates with other sexual health related and addiction services (Bakker & Knoops, 2018; Frankis & Clutterbuck, 2017; Knowles, 2019).

### **Limitations**

Several studies were excluded as they conflated reported injection of chemsex drugs with 'SIDU'. The reported injection of chemsex drugs may be indicative of 'SIDU' but such drugs may be injected in other contexts and their inclusion could have led to the contamination of the review with the injection by MSM of chemsex drugs in other contexts.



## Conclusions

Future studies of MSM engaging in chemsex should report specifically on the engagement in ‘SIDU’. Care should be taken not to conflate reported injecting drug use with ‘SIDU’ as ‘SIDU’ is associated with differing practices, risks and service needs. Law enforcement should be cognizant of the potential influence of policing licenced premises on increased prevalence of ‘SIDU’ in private parties.

**Table 3: Study Type and Country**

Amaro (2016)	Ethnographic research	France
Bakker & Knoops ( 2018)	Commentary	Netherlands
Bourne et al (2015)	In depth interviews	England
Bourne et al (2014)	In depth interviews	UK
Bjerno (2017)	Semi-structured interviews	Denmark
Bracchi et al., (2015)	Commentary	United Kingdom
Chung et al., (2015)	Case Report	United Kingdom
Dolengevich-Segal et al., (2016)	Case report	Spain
Deimel et al (2016)	In-depth interviews	Germany
Dávila ( 2016)	Ethnographic study	Spain
Frankis et al. , 2018	Cross sectional online survey	Scotland
Frankis and Clutterbuck (2017)	Commentary	United Kingdom
Frederick (2016)	Ethnography/critical discourse analysis	England
Gilbart et al. (2013)	Semistructured in-depth quantitative interviews	England
Giraudon et al., (2018)	Commentary	England

Gogarty and Fairman	Documentary film	United Kingdom
Gonzalez-Baeza et al., 2018	Online survey	Spain
Gourlay et al., (2017)	In-depth interviews	England
Guadamuz and Boonmongkon (2018)	Narrative interviews	Thailand
Glynn et al. (2018)	Survey	Ireland
Hopwood et al (2018)	Semi-structured in-depth interviews	Australia
Hunt (2012)	In-depth interviews	United States
Javaid (2018)	Critical analysis	Ireland
Kirby and Dunwell (2013)	Correspondence	England
Knoops et al., (2015)	Mixed Methods	Netherlands
Knowles (2019)	Commentary	Canada
Marillier et al., (2017)	Mixed Methods	France
Macleod et al., (2015)	Mixed Methods	Scotland
Milhet et al., (2019)	In-depth interviews	France
Moncrieff (2014)	Scoping Study	England
Mouteney et al (2016)	Mixed Methods	Portugal
Mowlabocus et al., (2016)	Commentary	England
O'Reilly (2018)	Case Study	Australia
Page and Nelson (2016)	Commentary	England
Payne et al., (2016)	In-depth semistructured interviews	Australia
Power et al., (2018)	Cross sectional survey	Australia
Pufall et al., (2018)	Cross sectional survey	England
Molina et al., (2018)	Double-blind randomised combined prevention trial	France and Canada
Ralphs, Gray and Norton (2017)	Mixed Methods	England
Stuart (2014)	Tool kit	England

Stuart (2014)	Guide	England
Stuart and Weymann 2015	Mixed Methods	England
Stuart (2016)	Commentary	England
Souleymanov (2018)	Discourse Analysis	Canada
Todd (2016)	Book	England
Vaux et al., (2019)	Cross-sectional survey	France
Wendel et al (2011)	Mixed methods: respondent driven sampling, social actor theory	United States
Wharton (2017)	Book	England
Weatherburn et al (2016)	Qualitative semi structured interviews	England
Van Hout et al (2019)	Interpretative Phenomenological Analysis	Ireland

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