**Littoral spaces of performance: findings from a systematic review and re-analysis of qualitative studies on men who have sex with men, substance use and social venues**

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**Abstract**

Substance use occurs at higher rates in men who have sex with men (MSM) than the general population, and as a whole is quantitatively linked to sexual risk behaviour. However, quantitative studies cannot meaningfully account for meanings, agency and role of social venue in shaping substance use, especially as regards sexual outcomes. To develop new theoretical constructs linking social venues and substance use in MSM, we systematically reviewed relevant qualitative studies and re-analysed them using a dimensional analysis method of grounded theory. The dimensional analysis yielded an organising dimension of ‘littoral spaces’ in order to understand the meaning of MSM’s substance use in relation to the social venue. This space is characterised as different from everyday life, through the altering of social boundaries; defined by its illegal qualities; and described as ‘tribal’ and ‘ritual’. Substance use behaviours are embedded as performative regimes within these littoral spaces. Interventions for this population do not adequately account for the role of space in substance use behaviours. Harm reduction interventions, and interventions taking an approach focused on ‘durable’ planning for an entire evening, might offer improved effects.

**Keywords:** systematic review; substance use; men who have sex with men; sexual risk behaviour; social venues

**Introduction**

Men who have sex with men (MSM) continue to be the group at highest risk for HIV transmission in much of the West and worldwide and a group that reports high rates of substance use. According surveillance reports, the prevalence of both diagnosed and undiagnosed HIV in UK MSM is estimated to be about 4.7% as compared to about 0.15% in the general UK population (Aghaizu, Brown, Nardone, Gill, & Delpech, 2013). Though estimates of prevalence of substance use vary considerably, substance use among MSM generally is higher than in the population at large (Vosburgh, Mansergh, Sullivan, & Purcell, 2012). Quantitative evidence from systematic reviews suggests that substance use in MSM is associated with HIV transmission (Drumright, Patterson, & Strathdee, 2006) and more specifically with sexual risk behaviour (Vosburgh et al., 2012). But quantitative studies cannot tell us about meanings and contexts of this substance use, nor can it adequately describe the role of agency in substance use behaviours. Emerging qualitative evidence suggests that substance use, particularly in urban sexual contexts and social venues, is intimately linked to sexual risk behaviour in MSM (Bourne, Reid, Hickson, Torres Rueda, & Weatherburn, 2014).

MSM report a variety of motivations for engaging in drug use, with references to the importance of different social settings regularly surfacing in researchers’ reports on these motivations. Here, we define ‘social venues’ as those places—both concrete and socially constructed—in which people meet for face-to-face social contact. For example, a ‘private’ location such as a motel room would not be included, but the concrete locations of a club, café or bar, or the socially constructed places of a circuit party, would be considered social venues.

Several psychosocial hypotheses have been developed to understand how substance use is implicated in sexual risk. For example, in ‘cognitive escape’, substance use is a mechanism by which MSM can escape the rigorous norms governing gay sexuality in order to engage more freely in risky sexual behaviours (McKirnan, Ostrow, & Hope, 1996; McKirnan, Vanable, Ostrow, & Hope, 2001). Put otherwise, substance use helps MSM to engage in risky sex that they would otherwise not engage in while sober. In another important theoretical perspective, conflict about unprotected sex moderates the relationship between expectancies about the benefits of sex under the influence of substances and sexual risk behaviour, suggesting that MSM with high levels of conflict about unprotected sex who also anticipate that sex under the influence would be especially pleasurable may have especially high levels of sexual risk after substance use (Wells, Golub, & Parsons, 2011; Wells, Starks, Parsons, & Golub, 2014). Yet while these hypotheses enjoy some quantitative support from cross-sectional studies of person-level sexual risk behaviour (Horvath, Beadness, & Bowen, 2006; McKirnan, Houston, & Tolou-Shams, 2007), they do not specifically account for the role of social venue in shaping substance use and sexual outcomes in MSM. Though sociologists and anthropologists have considered the role of context in shaping drug use generally (Duff, 2007; Rhodes, 2002, 2009), that role has been inadequately theorised and poorly studied across social venues for MSM specifically.

This qualitative metasynthesis contributes to filling this gap by systematically reviewing qualitative evidence on MSM that addresses the link between substance use and social venues, and relates this link to sexual behaviours and experiences. Guided by an interpretive, meta-ethnographic approach to synthesising the results of qualitative studies (Noblit & Hare, 1988), this qualitative metasynthesis uses an innovative method drawn from grounded theory and draws on a conceptual framework informed by critical sociology to better understand the connections between substance use, social venues and sexual outcomes as they relate to MSM specifically.

**Conceptual framework**

 Though grounded theory methods emphasise the importance of conceptual frameworks ‘emerging’ to match the data as expressed, we present the conceptual framework here for clarity. Three key ‘building blocks’ from critical sociology shaped this metasynthesis: liminality, space and performance. The idea of liminality was revived by Turner (1969) as he extended Van Gennep’s (1909) work to contextualise liminality in the idea of ‘communitas’, or the most fundamental ties holding a group of people together. In Turner’s analysis, liminality is a type of ‘communitas’ in which social boundaries dissolve, the group becomes homogeneous and all partake in the liminal experience together on the path towards a transformation of identity. Turner (1969) describes the liminal process as one of being ‘betwixt and between’ different stages or experiences of life. Additionally, the idea of ‘space’ is used in our analysis as developed by De Certeau (2011), and later Slavin (2004), to represent the union of physical place, people in the place and their interactions with the place. Slavin (2004) nuances De Certeau’s (2011) interpretation by defining ‘space’ as unstable through its ‘multivocality’, or confluence of different perspectives and meanings, and constant change. This analysis frames the practice of space, and the space’s instability, through evolving experiences and possibilities defined by how participants’ meanings evolve as they engage each other and the place.

 Finally, two complementary conceptions of ‘performance’ informed this analysis. First, Goffman (1959) notes that the person uses ‘assemblages of sign-equipment’ (Goffman, 1959, p. 33)—or the surroundings, tools, and other implements, as available—together with verbal communication and behaviour to present a cohesive ‘front’ to the spectator. Goffman calls the person’s use of sign-equipment and emotional ‘front’ in the context of the developing performance the ‘dramatic realisation’ (Goffman, 1959, p. 38). Deviation from the archetypes guiding this performance can damage the credibility of the person’s competence in fulfilling the role.

 Second, Butler offered a definition of performance and its complement, ‘performativity’, that focused on the social construction of sex and gender. Butler characterises performativity as an expression in the hope of fulfilling a certain goal: as regards gender, the idea that ‘anticipation will conjure its object’ (Butler, 1999, p. xv). As Butler (2009) later summarised performativity, whereas performance might be considered the enactment, the nature of performativity as a process connects that ‘enactment’ with its anticipated conclusion—as Butler originally posited, the achievement of a specific gender identity. The converse of this is the situation in which the inability to perform is to be in a situation of ‘precarity’, in which vulnerability to sanction and marginalisation is high (Butler, 2009).

**Methods**

We included studies a) reporting qualitative data b) from MSM exclusively, or presented separately, c) that explored substance use, the experiences of MSM, and venues in which MSM meet socially—for example, gay circuit parties, bathhouses, or dance clubs, or any combination thereof. Specifically, this meant that studies examining substance use in the context of a focus on social venues were included, and likewise, studies including content on social venues in the context of a focus on drug use were included as well. We excluded studies if they discussed only nicotine use or anabolic steroid use.

Database searches focused on articles published in scholarly journals and dissertations, with books and grey literature identified through hand-searching. Searches were conducted on a variety of databases and using a variety of strategies. Unusually for a systematic review, we searched databases covering the arts and humanities to ensure maximum coverage of studies.

 In October 2012, we searched MEDLINE, Embase, PsycINFO, CINAHL, ERIC, Sociological Abstracts, ASSIA, ISI Web of Science, ProQuest Dissertations and Theses, and JSTOR. We also hand-searched three journals from the first online issue, including pre-publication articles. These journals were *Culture, Health, & Sexuality*, *Journal of Homosexuality*, and *Journal of Drug Issues*. Reference lists of included studies were reviewed for sources, including books and grey literature. Moreover, key authors were emailed for any potentially missed studies.

 Search strings were based on a systematic review on risk reduction interventions for substance-using MSM (Melendez-Torres & Bonell, 2014), developed using expert consultation (K. Underhill, personal communication, 21 September 2012) and include a set of terms specifying the population, a set of terms including substance use, a set of terms indicating possible venues or social settings for substance use, and a set of terms to flag concepts associated with qualitative research designs and related epistemologies. Specific search strings can be found in Online Information 1.

Abstracts generated from database searches were exported to Mendeley (Mendeley Ltd & Glyph & Cog LLC, 2014) and deduplicated. Titles and abstracts of studies were screened for eligibility by the first reviewer to include studies reporting both qualitative data relating to substance use by MSM and referring to venues in which MSM meet socially. Subsequently, the first reviewer accessed full-text articles to assess studies for inclusion, with audits by the second reviewer.

 A data extraction form previously piloted on a subset of included studies was used to collect relevant study-level information and to critically appraise included studies. Critical appraisal was based on the EPPI-Centre tool for appraising qualitative research for systematic reviews (Thomas & Harden, 2008). Studies were not excluded based on quality, but flagged for sensitivity analysis. Many of the studies were multiple reports stemming from the same project. In order to present a coherent critical appraisal of both the research done and the research reported, studies arising from the same project (e.g. a dissertation then published as multiple articles) were critically appraised both together and separately.

 **Analysis.** The sections labelled ‘findings’ or ‘results’ in each study were extracted for analysis. Several studies were purposively sampled for open coding based on geographic diversity of population, diversity of drug use studied, variety in qualitative analysis method, and high rigour. First, both of us, working independently, generated an initial list of detailed codes. These lists were then checked for compatibility and merged to form a provisional coding scheme.

 We then analysed the data using dimensional analysis, a variant of grounded theory that emphasises the role that dimensions emerging through analysis play in the phenomenon under investigation (Kools, McCarthy, Durham, & Robrecht, 1996; Schatzman, 1991). Data from each study were analysed line-by-line, with attention to the emerging dimensions and their properties. In this analytic method, dimensions are the ways in which properties are connected to the overarching, theoretically saturated building blocks of the emergent grounded theory. Towards the conclusion of the analysis, emerging dimensions were ‘sensitivity analysed’ to test whether sources appraised as having low trustworthiness were substantially responsible for the development of any dimensions or properties of those dimensions (Finfgeld-Connett, 2010; Sandelowski & Barroso, 2007), and the grounded theory was verified against the data for rigour and explanatory power.

**Results**

 After de-duplication, 4,629 titles and abstracts were identified (see Figure 1). Initial screening of titles and abstracts led to exclusion of 4,566 records, with 63 records remaining. For each of the 63 records, multiple attempts were made to access full-text articles, but we were unable to access four of them and thus these are labelled as ‘awaiting classification’. Articles were read and re-read, leading to a final inclusion set of 19 records identified. Reviewing the bibliographies of the 19 included records led to identification of seven additional records. In total, we identified 26 reports encompassing 18 projects. See Online Table 1 (Online Information 2) for characteristics of included studies. All projects were undertaken in major urban areas, with most in the United States and Canada. Five projects originated in Australia. Data were collected between 1991 and 2007. Most projects did not specify a particular substance use focus, though three used the flexible, poorly specified term ‘club drugs’ to describe the substance use of interest. Projects specifying particular populations of interest were generally geared towards ethnically diverse groups, such as Latino MSM.

 Critical appraisal is documented in Online Table 2 (Online Information 2). As a group, projects were of variable quality. Data analysis was problematic, with many studies mentioning only notionally the method used. The best studies on this criterion elaborated how researchers left an auditable methodological trail, including specifics of analytic method and coding mechanisms. Studies scoring poorly on this criterion generally did not elaborate sufficiently on the strategies used. Across most projects, strong points included breadth and depth of findings, and the use of data to support findings. Few studies mentioned reflexivity in data analysis and reporting.

The dimensional analysis yielded an organising dimension of ‘littoral spaces’ in order to understand the meaning of MSM’s substance use in relation to the social venue. This space is characterised as different from everyday life, through the altering of social boundaries; defined by its illegal qualities; and described as ‘tribal’ and ‘ritual’. Substance use behaviours are embedded as performative regimes within these littoral spaces. Participants in these littoral spaces inevitably encountered limits as consequences of their engagement. We present these three key themes—littoral spaces, performance, and limits—below, and they are depicted in Figure 2. The way in which our analysis developed is documented in Online Information 2.

 **An organising dimension, the perspective of littoral space.** The perspective of ‘littoral space’ emerged as the characteristic with the most explanatory power in addressing the intersection between substance use and social venues in MSM. The tribal nature and ritual of those present in the space, the disruption in normal sensory perception, the multiple endpoints of engaging the littoral space, and the frisson of illegality define littoral spaces. They represent a transient, temporarily transformative tear in the fabric of everyday experience.

 This dimension of ‘littoral space’ emerged in conversation with the idea of liminality, which was specifically cited in two included studies (Slavin, 2004; Weems, 2007). Liminality implies linearity of process: moving from a pre-liminal state, through the liminal period, and into a post-liminal state in which identity is transformed. Similarly, many of the included studies referred to the spaces in which MSM use substances as ‘marginal’, if not the population of substance-using MSM as marginal themselves (*inter alia*, Bauermeister, 2007; Brown et al., 2000; Caceres & Cortinas, 1996; Elwood & Williams, 1998; Green & Halkitis, 2006; Green, 2003; Greenspan et al., 2011; O’Byrne & Holmes, 2011a, 2011b; O’Byrne, 2011; Slavin, 2004; Southgate & Hopwood, 1999b; Westhaver, 2003, 2006). Instead, ‘littorality’ presumes a different process: the idea of being in a liminoid state, with the experience of tribal identity, solidarity, and disruption of external social structures, as a purposeful, temporary end in itself rather than a ‘passing through’ point. In the littoral state, transformation of the self is possible, but this transformation is neither inevitable nor necessarily even desirable to the participant.

 Like the liminal spaces defined by Turner, these littoral spaces were characterised by tribality, or the dissolution of social divisions between persons to form a socially homogeneous group sharing strong affective bonds and a common experience of the littoral space. Several included studies specifically deployed the terms ‘tribe’ or ‘tribal’ to describe the social milieu (Husbands et al., 2004; Klitzman, 2006; Slavin, 2004; Weems, 2007). For example, Green (2003, p. 438) emphasises how substance use in the social space led to what a respondent termed ‘insta-community’. As one respondent explained, referring to a regional community of gay men in New York City whom he perceived to be ‘pretentious’: ‘Gay society can be pretty cold and very superficial. But once everybody’s on E [MDMA], it’s all gone. It’s like a family. Even the pretentious queens in Chelsea really let their guards down’ (Klitzman, 2006, p. 17).

 The synaesthetic experiences MSM report with substance use in the littoral space also point to the space’s disruptive nature. Authors of included studies observed that many MSM reported shifting and combining sensory perceptions. These combinations develop in ways arising out of the embeddedness of substance use in the space. On the one hand, studies described extremely intense experiences that, though often erotic, were not coital in nature—for example, the combination of substance use and the ‘atmosphere’ of the gay circuit party leads to an unusual sensory experience defined by loud techno music; the sight of shirtless men; and the pulsing strobe lights—what one respondent summed up as ‘testosterone’ (O’Byrne, 2009, p. 208). On the other hand, several authors noted that respondents expressed the synaesthetic aspect of the littoral space not by their ability to describe it, but by their inability to do so—by its ‘ineffability’ (Westhaver, 2003, 2005).

 The illegality of the ‘gay place’ and substance use formed an important property of the littoral space. In particular, illegality reinforces the littoral quality of the space by underlining the break these spaces, and their embedded practices, represent from everyday life. This ‘frisson’ of illegality (Slavin, 2004), or the attendant excitement that comes with the feeling of transgressive substance use behaviour, is both inherent in the activity and reflexively observed by research participants. This is the case even when spaces are not themselves *per se* illegal. Elwood and Williams (1998), in their discussion of bathhouses, link the frequently hidden, dark, and secluded nature of bathhouses to their role as a setting for substance use. Even when the littoral spaces in which substance use occurs are public, or at least in the open, the illegality of the substance use in the littoral space is a critical bonding mechanism that sets apart the space from everyday life. Husbands and colleagues (2004, p. 9) note one participant as saying ‘I guess there’s sort of an air of, of naughtiness to it, you know. I mean you shouldn’t be taking drugs and uhm so I mean there’s sort of a danger aspect to it…’ This ‘danger’ is the frisson of illegality.

 As observed earlier, these littoral spaces are not definitionally transformative. They are, however, characterised by multiple contingent possibilities. It is the impermanence, multiplicity, and lack of inevitability of any of these possibilities that makes the space ‘littoral’ rather than ‘liminoid’. Participants often characterised a successful engagement of the littoral space by a return to normal life without any lasting change or damage—after O’Byrne and Holmes (2011b, p. 1517), that men could ‘return to their routine lives and selves unscathed’. These possibilities may be neutral, if not positive—for example, intense, transcendental, one-time sexual experiences with partners met in the social venue. Many MSM who engage the littoral space return to non-littoral everyday lives with little difficulty, as in the gay bar Cáceres and Cortiñas (1996) studied. Yet negative possibilities lurk in the littoral space, possibly with a lasting effect. Klitzman (2006) points to the challenge of the ‘suicide Tuesday’ some MSM encounter in overcoming the hangover from substance use after weekend-long partying. Another temporary but problematic possibility is a negative substance use experience in the littoral space itself—for example, when an overdose of ketamine results in the user falling into a ‘K-hole’, or a profoundly distressing dissociative experience (Klitzman, 2006; Slavin, 2004; Southgate & Hopwood, 1999b; Weems, 2007; Westhaver, 2003). Finally, another negative possibility with long-lasting ramifications is the possibility of HIV transmission as a result of condomless anal intercourse. Qualitatively, studies did not report that substance use in the main led to risky sex in a causal sense by way of disinhibition—as in, risky sex generally did not occur as an unanticipated and undesired outcome by those taking the substance. Across those studies examining the link between these two behaviours, substance use and risky sex were associated—either one as ‘allowing’ the participant to engage in risky sex (Caceres & Cortinas, 1996; Green & Halkitis, 2006; O’Byrne & Holmes, 2011a, 2011b; O’Byrne, 2009), or both behaviours taken together with substance use increasing sensation (Green & Halkitis, 2006; Husbands et al., 2004; Ireland et al., 1999; Southgate & Hopwood, 1999b). Regardless of whether substance use causes risky sex, both are linked to each other and to the littoral space.

 The properties of transience and intransience and of everyday and fantasy worlds capture essential distinctions between the littoral space and the non-littoral space. In this context, littoral spaces are transient whereas non-littoral spaces are intransient, somewhat permanent fixtures that form the context for the littoral space. Cáceres and Cortiñas (1996) deployed the phrase ‘fantasy world’ describe the Latino gay bar that they studied. In characterising the events of the gay bar as an ‘oasis’ from everyday life, they point to the intersecting roles of alcohol and the gay bar—two features that determine the other in this littoral space—as specifying a space where homosocial and homoerotic behaviours can be enacted in ways socially proscribed elsewhere. Similarly, O’Byrne (2009, p. 228) calls the act of attending a gay circuit party a ‘pre-determined, temporary leave from regular life’, where the entering of a littoral space is conditional on a return to the workaday world. Some study authors saw this transience and fantasy reflected in the superficiality of the relationships (Husbands et al., 2004; Natale, 2008; O’Byrne, 2011; Westhaver, 2003, 2006). Westhaver (2003, p. 108) reflects these ‘superficialities’ in circuit parties in the comments of one participant, who notes that many of the substance-fuelled social connections formed in the circuit party ‘show a lot more warmth that we wouldn’t necessarily otherwise show’.

 Finally, the property of ritual characterises an aspect of the littoral space that is shared with Turner’s (1969) conception of liminality. Both aspects of the property of ritual—the routine and the religious—point to the importance of a staged and sequential series of events used to engage episodically the littoral space. Many authors deployed the word ‘ritual’, often as inspired by the language of their own participants (Elwood & Williams, 1998; Green & Halkitis, 2006; Green, 2003; Husbands et al., 2004; Klitzman, 2006; Lewis & Ross, 1995, 1996; Slavin, 2004; Weems, 2007; Westhaver, 2003, 2006). In some cases, ‘ritual’ referred to the specific routines MSM used to prepare for and engage the littoral space, with these routines both individual (Elwood & Williams, 1998; Green & Halkitis, 2006; Green, 2003; Husbands et al., 2004) and yet common across MSM (Ireland et al., 1999). In contrast, several authors (Klitzman, 2006; Lewis & Ross, 1995; Slavin, 2004; Weems, 2007; Westhaver, 2003, 2006) draw on the language of religious ritual, akin to Turner (1969), to describe the process of the littoral space. These descriptions focus less on substance use as behaviour and more on the intersection of MSM, their substance use, and the place. Whereas Weems (2007) calls the act of MSM dancing together under the influence of substances a ‘spiritual ritual’ relatable to indigenous peoples’ traditions, Klitzman (2006, p. 15) observes that one respondent referred to dance parties as ‘big gay male bonding rituals’ in which collective dancing and substance use provided ‘affirmation’.

 **A dimension of actions, the process of performance.** The dimension of performance addresses the ‘process’, or the meanings of the actions in which the persons under study engage. In this analysis, the process that emerged was one of ‘performance’, in which participants used substances in order to perform in the littoral space. This performance was both biological—substances used to make the body perform as desired—and aimed at enacting social scripts, ‘achieving’ masculinities, and working within hegemonic conceptions of the littoral space and its occupants. Performance was also part of substance use consumption itself, as the most accomplished ‘performers’ negotiated a line between self-destruction and littoral pleasures. This dimension was supported by both thematic and descriptive evidence from every included study.

 Authors consistently observed that MSM used substances to meet the physical demands of the littoral space, for example in the context of a weekend-long circuit party (*inter alia*, Husbands et al., 2004; Klitzman, 2006; O’Byrne, 2009; Weems, 2007; Westhaver, 2003). These demands, as reflected in all studies that discussed this, were ones of endurance—the ability to dance for an entire night or an entire weekend, or to maintain extended sexual contact with multiple partners in the course of an evening. This is ‘performance’ in its most literal form. In discussing the theme ‘drugs for sexual performance’, one participant observes that ‘at a certain point… you’re getting fisted [the introduction of an arm into the rectal cavity] and you have to do poppers or ten lines of blow to get someone’s arm up your ass’ (Green, 2003, p. 436).

 As important as biological dimensions of performance is these substances’ role in allowing MSM to enact the social scripts of the littoral space. Often described by authors as lowering inhibitions for social contact, another interpretation through the lens of ‘performance’ views substance use as conferring the ability to act socially as expected, if not required, for the littoral space. Cáceres and Cortiñas (1996) explain how substance use lubricates social interactions between men in the gay bar by allowing them to draw closer and experience transgressive homoerotic encounters. In terms of social scripts of sexuality, biological performance meets social performance as MSM in the littoral space move past physical and psychosocial barriers to risky, challenging sexual behaviours (Elwood & Williams, 1998; Green & Halkitis, 2006; Green, 2003; Wilson, 2004). In a quote that unifies these social scripts, one participant describes his use of crystal methamphetamine in sex clubs: ‘so like I can allow myself—they want a pig, I can be a pig ... That means I can get into, I can have sex with a group more easily—even if I am not attracted to some of the people in the group’ (Green & Halkitis, 2006, p. 324).

 One particularly important social script enacted by substance use is the social script of masculinity, which substance use in the littoral space allows men to perform. Slavin (2004, p. 283) describes how substance use facilitates homosocial, but not necessarily homoerotic, bonds as he quotes his informant describing the chemically induced feeling in the club as one of ‘brotherhood’. The social script of masculinity is central to Weems’ (2007) thesis: that the inextricable components of the circuit party, including substance use, require performance of a ‘nonviolent masculinity’ from which solidarity, like Slavin’s (2004, p. 283) ‘brotherhood’, arises.

 Substance use reciprocally translated across included studies as a marker of performance itself. Put otherwise, the ability to skilfully manage polydrug combinations, and the use of substances in a public setting, indicates that the participant himself can negotiate the littoral space. Viewed from a Goffmanian perspective, substance use becomes the ‘sign-equipment’ (Goffman, 1959) used to indicate belonging; from a Butlerian standpoint, substance use is the performative act that creates the anticipated belongingness in the littoral space. The role of substance use as a mechanism also manifests in the ‘folk pharmacologies’ and harm reduction practices that readily develop in groups (Greenspan et al., 2011; Ireland et al., 1999; O’Byrne, 2009; Southgate & Hopwood, 1999b; Westhaver, 2003). Groups of friends, or even bystanders, at a dance party may know what to do if someone is believed to have overdosed (Greenspan et al., 2011).

 Finally, the hegemony of the littoral space compels the otherwise recalcitrant participant towards substance use. From a performance perspective, this ‘precarious’ position (Butler, 2009) puts the abstinent partygoer at risk of temporary social marginalisation. Husbands and colleagues (2004, p. 21) cite how substance use is demanded by these littoral spaces as they quote a participant who describes walking into a club sober: ‘they are just dancing and hopping and going crazy and I'm just standing there and like, oh my God, actually this is not going to work’. Elsewhere, they quote another participant who, in the face of his venture into a dance party without substance use, describes being ‘like an outcast’ (Husbands et al., 2004, p. 16). In part, the participant who abstains from substance use marginalises himself from the ‘headspace’ of the club (Slavin, 2004), from the opportunity of ‘fitting in’ with others (Husbands et al., 2004), or from the ‘insta-community’ that develops (Green, 2003).

 **A dimension of outcomes, limits as consequences.** Consequences of the process of performance can be viewed as ‘limits’, or points beyond which substance use behaviours in the littoral space would lead to self-destruction—the creation of those limits, the reaching of limits, and the pushing of biological and social limits. The limits participants in the littoral space experienced were organised in the included studies around substance use and sex.

 Though substances enhanced biological performance, authors noted that participants eventually reached limits. In most accounts across included studies, these limits were reached when the supply of substances ran out, or when the event was over (Husbands et al., 2004; Ireland et al., 1999; Natale, 2008; Wilson, 2004). Across included studies, reaching the limits marked the return to the non-littoral space, or the everyday, intransient world. Yet it was also common across included studies for participants to state that they knew when they had reached their own sexual or substance use limits (Greenspan et al., 2011; Husbands et al., 2004; Ireland et al., 1999; Klitzman, 2006; O’Byrne & Holmes, 2011b; Slavin, 2004; Southgate & Hopwood, 1999a). These limits were both identified beforehand and also in the moment. Knowing these limits assisted the partygoer in controlling and planning substance use and sexual activity—as one participant observed, ‘But know what you’re doing and know your limits, or know THE limits’ (O’Byrne & Holmes, 2011a, p. 1515).

 Even when substance use was employed as part of sexual performance, all authors addressing sexual limits observed that participants reported having *some* prior limits, particularly around safer sex and esotery of sex acts (Green & Halkitis, 2006; Green, 2003; Greenspan et al., 2011; Husbands et al., 2004; Ireland et al., 1999; O’Byrne & Holmes, 2011a, 2011b; Slavin, 2004). For example, in a quote that also reflects the tribal and mechanistic dimensions of substance use and performance in the littoral space, one participant reports about being with his friends: ‘I wouldn’t want to go home with someone I didn’t really like. So I know that if I have them there, it’s like the barrier’ (Husbands et al., 2004, p. 8). Similarly, while Cáceres and Cortiñas (1996) point out that bar patrons’ intoxication was a source of ‘collective amusement’, bystanders acted to sanction those whose behaviour was perceived as out of control. Several studies reported limit-pushing experiences resulting in fear of impending death (Southgate & Hopwood, 1999b) or ‘bargaining with God’ after consuming a poorly calculated polydrug cocktail (Westhaver, 2005, p. 356).

**Discussion**

 In this grounded theory, the idea of ‘littoral spaces’ was a key organising perspective by which to understand the roles of performance, identification and pushing of limits in constructing the meaning of MSM’s substance use in relation to the social space and to sexual outcomes. Specifically, the ‘littoral space’ is characterised as different from everyday life, in which social boundaries and sensory perception are altered; defined by its illegal, subaltern qualities; and described as ‘tribal’ and ‘ritual’. What makes this space ‘littoral’ rather than ‘liminal’ is the repeated, episodic nature of the person’s interaction with the space, and the purportedly and preferably impermanent effects of this interaction.

 **In relation to prior research.** As noted in the introduction, the role of context in shaping drug use has been addressed by other sociologists and anthropologists across a broad range of studies and perspectives. Two specific accounts of context in shaping and understanding substance use behaviours (Duff, 2007; Rhodes, 2002, 2009) have been especially influential, and we relate our work to them here. First, Duff (2007) draws on de Certeau’s account of space to offer an account of substance use behaviours as defined by ‘space, embodiment and practice’. While our analysis is less concerned with embodiment than Duff (2007), we also draw on the idea of ‘space’ as an organising feature to characterise the littoral spaces. In this analysis, Duff (2007) recommends that accounting for context requires understanding substance use contexts as ‘assemblages’ of space, embodiment and practice, as well as accounting for affect; simplistically, ‘affect’ refers to how substance use feels. In parallel with Duff’s comments on ‘assemblages’, we underscore here how performative regimes of substance use are by nature embedded in the littoral spaces in which they occur. We also draw on affect, albeit indirectly, throughout our analysis, e.g. the experience of the littoral space as synaesthetic. However, unlike Duff (2007), we foreground Butlerian approaches to performance and performativity (Butler, 1999)—that is, in anticipation of a future outcome—as important in understanding substance use behaviours.

Second, in congruence with the key insights of Rhodes (2002, 2009) in his work on ‘risk environments’, our analysis focuses on the role of substance use context and practice as mutually constitutive. However, instead of focusing on ‘risk’ *per se*, we focus on the multiplicity of outcomes arising from the spaces and practices within which substance use occurs. We characterise these littoral spaces as risk environments in which successful navigation could include emerging ‘unscathed’, rather than being subject to potential negative consequences of substance use.

The analysis we offer here also has important parallels with sociological accounts of substance use less directly concerned with ‘local’ contextual factors. For example, the idea of ‘edgework’ as accounting for voluntary risk taking (Lyng, 1990) was influential for several of the primary studies included in this review (O’Byrne & Holmes, 2011b; Westhaver, 2005). In Lyng’s (1990) definition, edgework involves the presence of a ‘clearly observable threat’ to the health and physical integrity of the practitioner, whereas those engaging in edgework have specific abilities and report specific intense sensations. It is clear how the idea of ‘edgework’ is reflected in many aspects of our analysis, though it was not necessarily part of our organising framework; drug use as performance requires specific, local bodies of knowledge and results in ineffable sensations reported by participants. In an interesting contrast to the idea of edgework, our analysis also points to how the experience of coming up against limits in substance use and sexual performance, or of experiencing the potentially negative transformative aspects of the littoral space, can be characterised as ‘falling off the edge’; experiencing the real and observable harms that are always possible for those engaging in edgework.

Finally, it is of interest to compare the analysis we develop here an analysis of drug use from a similar, but distinct context. Kavanaugh and Anderson (2008) present an ethnographic analysis of substance use in the electronic dance music scene. They characterise substance use as both a source of solidarity and a source of fragmentation, and they further characterise solidarity as relating to ‘social-affective’ and ‘behavioural-organisational’. The littoral spaces we describe here demonstrate both types of solidarity; furthermore, we highlight in our analysis how the hegemonic dimensions of the littoral space compel the participant to engage in substance use practices that result in this social-affective solidarity. We also highlight how the expert practice of substance use itself (i.e. being seen to expertly practice substance use) is key in establishing social-affective solidarity.

 **Contribution to knowledge and implications for research and practice.** This project contributes to enhanced understandings of the cultural contexts of social substance use by MSM specifically and to the generation of intervention approaches for substance use, risky sex, and MSM. This metasynthesis also furthers the project of developing health behaviour theories that more adequately reflect the specific cultural and social milieu of MSM (O’Byrne, 2009, 2011; Westhaver, 2003), a project that which is important to break the gridlock on structural-level HIV prevention for MSM (Beyrer et al., 2012; Kalichman, Cain, Carey, Carey, & Simbayi, 2013; Kalichman, 2010). Specifically, the episodic nature of interactions with the littoral space suggests a harm reduction approach to substance use and risky sex. Of course, an underlying issue in planning interventions for the littoral space is the conceit that this space represents—which is that it is as far away as possible from the realities of everyday life. Therefore, intervention approaches might focus on developing individual change plans that are able to cross the barrier from the everyday to the littoral space.

 Currently, interventions have not met the need to contextualise these behaviours in space. This is an insight shared by other accounts of substance use that address the role of context directly (Duff, 2007; Rhodes, 2002, 2009). This is also important because social space may have the potential to shape the experience of initiation to substance use in MSM, especially in the context of sexualised drug use (Parsons, Kelly, & Weiser, 2007). A recent systematic review (Melendez-Torres & Bonell, 2014) demonstrates that few interventions for episodic, non-dependent MSM currently address this need for individual planning exclusively (Mansergh et al., 2010) or even extensively (Koblin, Chesney, Coates, & EXPLORE Study Team, 2004), with no interventions demonstrating clinically or statistically significant effects over assessment-only controls. Both of these types of interventions specifically focus on ‘heat of the moment’ sexual negotiation, which may be too late to avert negative outcomes. It may prove more effective for MSM to consider plans, intentions, and acceptable consequences before entering the social space—not just before entering a sexual encounter.

 Changing littoral spaces to make them less attractive for substance use is a potential, but perhaps unsuccessful, structural intervention target—partly because substance use itself induces pleasurable effects (Lewis & Ross, 1995). A feasible intervention approach may be to incorporate information and harm reduction supplies into the social space, or the distribution of specific information and reminders at the venue. It is likely that community-based groups are already carrying out these interventions in some form or another. However, these interventions appear to have been poorly evaluated in the literature. If substance use behaviours are carefully pre-planned and choreographed prior to engaging the littoral space, then it is unclear if these at-venue interventions will actually be effective.

 Another approach involves bringing peer-led education into the milieu of the littoral space. However, the suitability of public opinion leader interventions (Kalichman, 2010; Kelly, 2004; Kelly et al., 1992, 1997; Sikkema, 2005) is questionable, as the intervention logic would dictate that a public opinion leader would himself need to use substances. Indeed, the sensory disruption and suspension of rational faculties in the littoral space clarifies why replications of public opinion leader interventions for gay men in different settings have frequently been unsuccessful (Bonell, Strange, Allen, & Barnett-Page, 2006; Elford, Hart, & Sherr, 2002).

 Finally, a broad structural approach places the littoral space in its larger context. This metasynthesis points to the littoral space as a unifying aspect of urban gay men’s sociality—yet this may not always be so. Historically, these littoral spaces emerged out of a history of marginalisation and illegality of homosexual contact (Lewis & Ross, 1995; Southgate & Hopwood, 1999a; Weems, 2007). A range of venues where MSM can socialise, and that discourage substance use, may help transform sociality away from health-damaging behaviours (Sigma Research Group, 2011). While little will stop those who enjoy recreational drug use, the growing political and social emancipation of LGBTQ populations only creates more opportunities for alternative socialities outside performative regimes of substance use.

 This grounded theory also points to a different conception of place in health promotion. Currently, theories linking health and place generally fall into one of two categories. In one group, these theories relate health to the built environment—e.g. how the availability of play spaces impacts child health and development (Blacksher & Lovasi, 2012). In the other group, these theories tie the social and structural characteristics of place-bounded groups of people, such as communities, to risk and protective factors for health and wellbeing above and beyond individual determinants, including social determinants of health, or how the social and structural conditions in which people live affect their health (Baral, Logie, Grosso, Wirtz, & Beyrer, 2013; Blakely & Woodward, 2000; Cohen, Farley, & Mason, 2003). This metasynthesis both integrates these perspectives and moves beyond them to examine how a person’s episodic, planned interaction with place is enmeshed with and results in specific health behaviours. This grounded theory and the dimensional analysis used to generate it model this reciprocal determinism and unpack the interactions between the constituent components of the phenomenon. By unifying person, place, and practice in the ‘space’ (De Certeau, 2011), this grounded theory opens up a new avenue in understanding how, for example, temporary groups of people in transient social communion can produce substantial effects on health behaviours.

 **Strengths and limitations of this project.** The emergence of a grounded theory durable to the myriad qualitative designs, epistemologies, and methodologies and variety of social spaces, substance use patterns, and particular populations studied is a major strength of this metasynthesis, suggesting a level of conceptual generalizability (Mills, Durepos, & Wiebe, 2010; Small, 2009) important for the creation of theory. Systematic review methodology ensured that all available journal-level evidence was considered. The line-by-line dimensional analysis procedure ensured a rigorous, comprehensive grounded theory with explicitly defined parts.

 However, studies were limited in the locations they examined. Moreover, within these countries, several key populations were under-sampled. Despite several authors’ efforts to ‘oversample’ underrepresented ethnic groups (Greenspan et al., 2011; Husbands et al., 2004; Natale, 2008) and several authors’ focus on Latino MSM (Bauermeister, 2007; Caceres & Cortinas, 1996; Wilson, 2004), the experiences of ethnic minority MSM were inadequately represented. We were also unable to locate relevant studies on the experiences of MSM not living in the Global West.

Because this is a metasynthesis of qualitative data, statistical generalizability cannot be ascertained, nor is it necessarily desirable or appropriate for an interpretive study. While the results of this metasynthesis may be conceptually generalizable—that is, useful in interpreting specific instantiations of space and substance use that may not have been specifically treated here—the ‘tentative’ nature of qualitative data analysis (Charmaz, 2006) points to the shifting realities and interpretations of participants, researchers, and metasynthesists. It is worth observing as well that ineffable experiences may not themselves be amenable to description and synthesis in account-based qualitative research. Finally, as the social landscapes and substance use patterns of MSM both within and across specific evolve, this metasynthesis will require updating.

**Conclusion**

 This grounded theory of meanings of MSM’s substance use in social venues deploys the dimension of ‘littoral space’ as an approach for research and practice that innovatively accounts for the role of place, practice, and person in health promotion, particularly in a population at high risk for negative health outcomes. While several questions are left unanswered by this metasynthesis, important next steps include the theory’s use in guiding intervention development and its verification through primary research.

**Compliance with ethical standards**

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**Works cited**

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**Figure 1.** PRISMA flowchart of included studies.

6,839 records identified via database searching

4,629 records after duplicates removed

4,566 records excluded based on title and abstract

70 full-text records assessed for eligibility

44 records excluded

* 40 due to inadequate treatment of place
* 4 awaiting classification

26 studies included in qualitative metasynthesis

7 additional records identified through hand search

**Figure 2.** Explanatory matrix of key themes

