**Sexuality, Space, Gender, and Health: Renewing Geographical Approaches to Wellbeing in LGBTQ Populations**

**Abstract**

Research on sexual orientation and gender identities, such as lesbian, gay, bisexual, transgender, queer (LGBTQ), has been limited in health geography compared to other sub-fields of the discipline. The reasons for this gap include both the logistical limitations of data on sexual orientation as well as the historical dominance of visible, measurable infectious and chronic disease outcomes in health geography research. While medical geographers were among the first to research HIV/AIDS diffusion among gay men, there is now something of a divide between qualitative health geographers studying experience and embodiment and researchers in health science fields examining the socio-spatial determinants of LGBTQ health outcomes. In the following article, we review the LGBTQ health inequalities research, emerging geographies of mental health and substance use among those identified as LGBTQ, and potential avenues for health geographers to re-engage with this field of study.

**Introduction**

Geographers have long been concerned with how place mediates inequalities between the health of the general population and that of specific groups based on ethnicity, race, sex, immigrant status, and other characteristics. Sexual orientation, in contrast, remains under-researched in geographic studies of health inequalities (Parr 2004). In 2007 Del Casino suggested that health geographers have been loath to study the sites, situations and dynamics of sexual encounters and associated behaviours such as drug use (Del Casino 2007a). He also suggested that sexualities geographers have only occasionally studied health *outcomes* among those identified as LGBTQ, despite a strong tradition of research on the regulation of public health and the construction of sexual identities and communities (Del Casino 2007b). More than a decade onward from Del Casino’s observations, we consider the degree to which these dual lacunae in health geography and sexualities geographies has persisted, assess recent theoretical and analytical developments, and set out an agenda for future work.

LGBTQ individuals experience many adverse health outcomes more frequently than their heterosexual counterparts (Conron et al. 2010) and some outcomes have persisted or worsened over time (Gonzales et al. 2016; Jones 2016). Lesbians and bisexual women, for example**,** are at greater risk for breast cancer than heterosexual women (Boehmer 2002; Case et al., 2004). Gay, bisexual and other men who have sex with men (MSM) face higher risk of HIV and other sexually transmitted infections (STIs) (Cochran and Mays, 2007). Depression and anxiety are two to three times more likely to occur in gay, lesbian, and bisexual individuals compared to heterosexuals (Lewis 2009; Alessi 2014). Individuals identified as transgender face erasure in many social and health care institutions (Bauer et al. 2009), leading to high rates of depression and suicide and often poor healthcare experiences (Bauer et al. 2015). Although research attempting to explain these adverse health outcomes has grown considerably, their geographic origins and patterns often remain muted. The following review outlines the trajectory of health and place research concerning LGBTQ populations, emergent geographies of mental health and substance use, and the distinct contributions that geographers can make to this growing field of study.

**The Beginnings of Sexuality, Health and Place Research**

Understandings of the relationship between health, sexual orientation, and gender identity beyond frameworks of deviance and illness were limited for much of the 20th century. Although homosexuality was decriminalized in countries such as the United Kingdom and Canada by the end of the 1960s, it remained illegal in many U.S. states until 2003. The removal of homosexuality from the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders in 1973 marked the initial de-pathologization of non-heteronormative sex and sexualities in medical research. Social stigma affecting LGBTQ populations, however, has persisted. Despite some early research mental health among gay men and lesbian women (see, for example, D’Augelli and Hart 1987, D’Augelli 1989), HIV/AIDS tended to dominate the next decade of health research on sexuality and health.

Medical geographers in the 1980s and 1990s were largely concerned with opportunities to model the spatial diffusion of a rapidly expanding HIV/AIDS epidemic. Studies of HIV diffusion patterns (e.g., Cliff and Haggett 1988; Gould 1993), for example, were concerned with gay population distributions to the extent that they were a correlate of infection rates. Similarly, work addressing AIDS-related migration (Findlay 1993; Cohn et al. 1994; Ellis and Muschkin 1996) was largely interested in HIV-positive gay men to the extent that their migrations might overwhelm local and regional public health systems outside of HIV epicentres. Although these studies helped to uncover the spatial epidemiology of HIV/AIDS at a time when relatively little was known about the subject, they addressed sexual subjectivities and experiences only tangentially. Early medical geography, then, may have inadvertently re-pathologized homosexuality by positioning gay and bisexual men as disease vectors or dangerous populations rather than vulnerable individuals (M. Brown 1995).

The 1990s and 2000s were watershed decades for research on the broader health outcomes of LGBTQ populations. As societal norms shifted in North America and Western Europe, voices of diverse sexuality and gender groups gained greater legitimacy and media attention (Smith 2008; Weeks 2007). Psychologists and psychiatrists, for example, developed minority stress theory (Meyer 1995, 2003) as a model to explain high rates of depression, anxiety, and other mental health problems in LGBTQ populations as the products of chronic, often internalized social stigma and consequently elevated levels of stress. Psychologists have also now begun to examine the specific role of microaggressions (i.e., common and often daily verbal and behavioural insults towards marginalised groups) as a vehicle of minority stress (Nadal et al. 2011). To align with these new theories, allied social scientists began to expand their work on the social determinants of health beyond income and poverty. Medical sociologists in particular (e.g., Graham and Kelly 2004; Graham 2007) were instrumental in introducing sexual orientation as an aspect of social identity or position that could, in tandem with particular social environments, contribute to unequal health outcomes. Academic researchers had thus begun to recognise sexuality as an axis of social difference rather than a predictor of disease.

**Sexuality, Gender, and Health in Geography’s Qualitative Turn**

Medical geography in the 1990s experienced its own transformation into a ‘new’ health geography that adopted more flexible approaches to the place-health relationship (Rosenberg 1998). This ‘reformed’ medical geography was inspired by the recent cultural turn in human geography that shifted focus from uncovering spatial patterns to elaborating flexible and subjective experiences of place. Qualitative health geographers began to examine everyday spaces of wellbeing such as the home and the doctor’s office, using life history interviews and storytelling to understand health outcomes (Dyck 2003). Some of the earliest work in this vein counteracted the medicalizing tendencies of HIV/AIDS diffusion studies by focusing on implications of the epidemic for gay men’s individual life-worlds (Wilton 1996) and gay community advocacy strategies (M. Brown 1997). This vein of health geography has continued apace, with a new generation of researchers examining how HIV-positive gay and bisexual men negotiate their place in the world following diagnosis (Myers, 2010).

Many have examined the regulation of LGBTQ populations *through* public health institutions using critical social theory and especially Foucauldian theories of biopolitics and governmentality. Both Tim Brown (2000) and Michael Brown (2006) examined the use of HIV/STI prevention campaigns in the 1970s, 1980s, and 1990s as tools to circumscribe definitions of ‘normality’ and ‘responsibility’ for gay and bisexual men. More recently, Kesby and Sothern (2014) have observed that public health authorities knowingly commit ecological fallacies by projecting their knowledge of population-level HIV prevalence data onto the supposed ‘riskiness’ of blood donations from individual men who have sex with men (MSM). In Canada and the United Kingdom, MSM are deemed a high-risk group that must report a 12-month abstention from same-sex contact to donate whereas men having sex only with women are presumed fit to donate. Kesby and Sothern suggest that this group-based categorization of risk masks individual risk profiles within each group (e.g., MSM in monogamous relationships engaging in safe sex, heterosexual men having unprotected sex with multiple female partners) and is rooted in fear and stigma rather than a sound scientific evidence base. Others have provided a counterpoint to these political and critical approaches by examining care and resilience in LGBTQ populations. Using the concept of the therapeutic landscape (Gesler 1992), many have examined the role that social spaces (e.g., bars and bath houses) play in facilitating care and wellbeing among gay and lesbian populations (Andrews and Holmes 2007; M. Brown et al. 2013).

Sexualities geographers have also examined aspects of social exclusion among those identified as LGBTQ. Valentine (1998) offered a personal account of fear, anxiety, and depression as a lesbian woman in a hostile academic workplace. Employing the concept of sexual citizenship, Binnie (1997) considered the ways in sexual identity affected the political and social inclusion of sexual minorities in and beyond their respective countries. Others have since debated the ways in which existing power structures have privileged middle-class gay men and lesbians and the degree to which they become complicit in these structures (Nast 2002; Sothern 2004; Oswin 2005). Although these factors all have implications for health and wellbeing, few sexualities geographers have focused explicitly on health outcomes.

In contrast, research on sexual and gender diversity has remained somewhat marginalized in applied health geography (Dyck 2003; Parr 2004; Del Casino 2007a). While geographers have uncovered important spatially mediated processes of exclusion, regulation, and coping that influence LGBTQ health, they have contributed relatively less to explanatory frameworks of ill health or interventions for these populations. There are undoubtedly methodological challenges to integrating sexual and gender subjectivities into more traditional models that analyse socio-spatial determinants of health from a quantitative perspective. Although national health and social surveys (e.g., Health Survey for England, Canadian Community Health Survey) are beginning to include sexual orientation questions in select waves and years, few include consistent year-to-year data and sample sizes are often small. Analysis of these surveys also requires accepting the pre-given sexual behaviour or identity categories, which runs counter to the growing emphasis on ‘queer’ and other more fluid sexual identities in human geography (see Oswin 2008). Finally, critical geographers may be hesitant to study sexualities and health outcomes as related phenomena due to the potential to advance the idea that substance use or unprotected sex are somehow embedded in certain LGBTQ communities. At the same time, explicitly contextual and spatial work has emerged in two key areas of LGBTQ health research: mental health and substance use.

**Emerging Geographies of Mental Health and Substance Use in LGBTQ Populations**

Poor mental health has emerged as an area of stark inequality between LGBTQ and heterosexual/cisgender populations and as a potential contributor to other health inequalities between these groups. Research that *explains* these inequalities, however, has long been limited largely to individual-level psycho-behavioural models. These frameworks link the prevalence of either health outcomes or risk behaviours in LGBTQ people with individual-level factors such as sexual practices, health knowledge, or self-reported sense of attachment to the gay community (Stall et al. 2001). While many studies employ minority stress theory to explore adverse health outcomes in LGBTQ populations, the focus on beliefs and practices as the predictors of health outcomes perhaps overstates the importance of individual-level factors rather than place factors in the mediation of minority stress (Gruskin et al. 2001).

The connection between *place* and mental health for LGBTQ populations is now becoming clearer (Lewis 2009; Hatzenbuehler et al. 2013) as researchers are increasingly able to use secondary data from health and social surveys to study the relationships between laws, social norms, and mental health outcomes (Bourne et al., 2014; Conron et al., 2010; Gruskin et al., 2007). Structural prejudice levied by countries (e.g., lack of rights or protections for LGBTQ groups) is now considered an important determinant of mental for LGBTQ populations in Europe and North America. In Europe, individuals from more politically conservative countries, particularly those in Eastern Europe, report greater levels of internalised stigma than those from Western European countries (Berg et al. 2013). Mental health outcomes may be even worse beyond the Euro-American context, as studies in Asian and Middle Eastern countries (see, for example, Regmi & Teijlingen, 2015) have shown that those identified as LGBTQ often face significant discrimination due to cultural and familial expectations of a heteronormative life course including heterosexual marriage and childbirth. Research in Turkey, for example, has found that most LGBTQ people choose not to disclose their sexual orientation in workplace, education and healthcare settings (Gocmen and Yilmaz 2016).

Others have investigated differences in the mental health of LGBTQ populations between urban and rural regions within countries (Berg et al. 2013; Poon & Saewyc, 2009; Wienke & Hill, 2013). Younger people identified as LGBTQ and living in rural areas have reported more substance use, binge drinking, isolation and suicidal feelings compared to those in urban areas (Poon & Saewyc, 2009). Some have suggested, however, that the effect of rural environments on LGBTQ mental health has been overstated and that larger cities are actually associated with poorer wellbeing outcomes (Wienke & Hill, 2013). Studies at the regional and local levels also link stigma-related factors (e.g., laws, religiosity) to health outcomes. For example, the previous prohibition of same-sex marriage in some U.S. states has been linked to poorer mental health outcomes (Herdt and Kertzner 2006). Similarly, living in states with social policies that do not protect LGBTQ individuals are associated with feelings of hopelessness and expectations of violence and victimisation among those individuals (Everett 2014; Hatzenbuehler 2010). At the same time, more informal social environments (e.g., churches, communities) that are less easily measured but still geographically mediated can also contribute to minority stress (Lewis 2014).

The epidemiological research on substance use in LGBTQ populations traditionally has connected drug use to individual beliefs and intention to use specific drugs rather than location or drug availability (Ramchand et al. 2013). While substance use in general tends to be higher in sexual minorities compared to their heterosexual counterparts (Goldbach et al. 2014), specific substance use patterns also vary by sub-population. Tobacco use and risk factors associated with tobacco use are higher among sexual minority groups than heterosexual populations (Tang et al., 2004; Gruskin et al. 2007; Lee et al. 2013), alcohol use is more variable. Research has indicated discrepancies in alcohol consumption are greater between sexual minority women and heterosexual women compared to between gay and heterosexual men (Drabble et al. 2005) and younger lesbian and bisexual women are more likely to report heavy alcohol intake than both heterosexual women and older lesbians (Gruskin et al. 2001).

Researchers are now also beginning to recognize the implications of place for substance use in LGBTQ populations. Several studies have noted differences in the frequency of drug use and type of drugs amongst MSM across different regions of the United States (Stall et al. 2001; Thiede et al. 2003), with one finding an additional association with higher frequencies of unprotected anal sex (Hirshfield et al. 2004). In contrast to the existing mental health research, environments that are religious have found to be associated with less engagement in alcohol and tobacco consumption or unprotected sex provided that the environment is also legally supportive of those who identify as LGBTQ (Hatzenbuehler et al. 2012). A few studies have focused specifically on the neighbourhood scale (Carpiano et al. 2011; Egan et al. 2011; Everett 2014). While some have found that living in a ‘gay neighbourhood’ is correlated with higher levels of drug use and unprotected sex among gay men (Carpiano et al., 2011; Egan et al. 2011), others have observed that living in an urban, liberal neighbourhood has a protective effect against depression and anxiety (Everett 2014).

There is also a growing body of research looking at drug use among gay men and other MSM in specific *settings* such as clubs and sex parties. ‘Chemsex’ refers to MSM who use drugs before or during sex, and has received both significant media and research attention in recent years (Bourne et al. 2014). Most of the research surrounding chemsex focuses on the link between drug use, unprotected sex, and HIV infection within individuals (Petersson et al. 2016). Bourne et al. (2014) used data from the European Men who have sex with men Internet Survey (EMIS) to identify drug use in the context of chemsex across three locations in the UK. While the study notes potential geographical differences in chemsex practices, few conclusions were drawn regarding differences in outcomes across study locations. Additional studies have suggested, however, that permissive social norms and other stimuli located in specific cities, neighbourhoods, and venues may increase drug use (Theodore et al. 2014).

This emerging research on mental health and substance use on LGBTQ populations attends to the role of both physical and social environments in shaping risk and therefore has the potential to advance understandings of the relationships between health and place in these populations. At the same time, there are theoretical and methodological limitations in this work that risk reinforcing some of the problems observed in the earlier geographic studies of sexuality and health. The ongoing focus on individual psycho-social correlates such as self-esteem, depression, and childhood abuse can reinforce existing stigma. Similarly, the ongoing measurement of individual substance use without attending to environmental factors can reinforce the problematic notion of LGBTQ ‘lifestyles’ in which substance use is ostensibly normalized (Lewis 2017).

Work that attends to more contextual factors can still stigmatize and even pathologize the places that intersect with LGBTQ lives. Quantitative studies examining gay neighbourhoods (e.g., Buttram and Kurtz 2013; Carpiano et al. 2011), for example, tend to imply that certain locations somehow *create* ‘risky’ lives. Researchers continue to focus on the role of gay neighbourhoods and nightlife districts in alternately supporting sexual and gender identities and potentially facilitating unhealthy behaviours (Stall et al. 2001; Egan et al. 2011) rather than understanding how they intersect with broader LGB life-worlds. While neighbourhood-focused research provides a signpost for health promoters looking to ‘target’ LGBTQ populations for substance use and HIV prevention interventions, it implicitly pathologizes urban gay neighbourhoods as inherently unhealthy places.

**Conclusion: What Can Health Geographers Contribute Now?**

There is clearly still need for research that acknowledges the interplay of individual and spatial factors contributing to LGBTQ health outcomes. Health geographers are now well positioned address sexual and gender difference as an important mediator of place-health relationships while avoiding the pathologization of places and groups that characterized earlier medical geography. As seen in research on indigenous health (Browne et al. 2005; Lavallee & Poole 2010), the absences illuminated in early-stage research on the geography of LGBTQ health can be addressed by integrating critical analytic approaches with existing methodological traditions. We argue that geographers can achieve this objective through applying established health geographic approaches to LGBTQ populations, including marginalized and intersectional identities in this research, and attending to new frontiers of inequality.

The emergence of multi-level modelling in the study of LGBTQ health represents an area in which health geographers can make a significant contribution. Bauermeister et al. (2015) incorporated multilevel modelling into health geography to map HIV risk in MSM according to individual and neighbourhood characteristics. The use of multilevel modelling allowed inferences to be drawn from both individual factors such as ethnicity, substance use, relationship status and from neighbourhood level factors including proximity to community support centres, stigma within the community and overall socioeconomic status within the neighbourhood. In addition, data linkage may provide an avenue for joining large-scale social survey data on political and social attitudes to (usually smaller) health surveys that include a sexual orientation variable. This would allow geographers to begin studying the connections between levels of social acceptance and spatially variable stress-related health outcomes in LGBTQ populations. Given the strong tradition of substance use research in geography (Duncan et al. 1999; Pearce et al. 2009), health geographers might also choose to look more closely at the spatial interactions of sexual orientation and the use of alcohol, tobacco, and illicit drugs. Such strategies may help to bring the study of LGBTQ health further ‘upstream’ and assess whether the area-level determinants affecting outcomes in heterosexual or general populations function in the same way.

Health geographers might also investigate the dynamics between individual life-worlds and ‘risky’ venues by following the cues of medical anthropologists who explain health disparities through cultural models rather than behavioural ones (Silenzio, 2003).Carrying on the excellent geographic work on gay and lesbian life-worlds and spatial attachments (Wilton 1996; Brown and Knopp 2008), qualitative health geographers could begin investigating some of the more socially controversial spaces (e.g., sex parties) that intersect the lives of some LGB people and pose health risks. While research of this nature requires careful consideration of researcher safety and positionality (see Bain and Nash 2006), it also serves to deconstruct risk behaviours as more than just irresponsible hedonism (see Andersson 2011). Using concepts from feminist geography such as embodiment and emotion, qualitative studies might explore the linkages between, for example, social stress, the use of different venues as therapeutic spaces, and the potential for health risks within them. Such studies would begin to illustrate the internal dynamics of places and events that are sometimes categorized more flatly as ‘risky’ or risk-associated in the epidemiological literature.

Following Gesler (1992), geographers could also consider the genesis of affinities for new types of therapeutic sites among individuals identified LGBTQ; for example, the creation of trans communities and support systems around gender reassignment clinics rather than in traditional gay or queer neighbourhoods (Brown and Lim 2010). Geographers interested in health services could also investigate whether higher geographic concentrations of services earmarked for LGBTQ populations are associated with *better* health outcomes in those populations. They might also examine issues of area-level access and stigmatization to explain a lack of engagement with health promotion activities such as HIV testing (Berg et al., 2013). Both types of efforts may require the formulation of new databases and datasets from the ‘ground up’ through community-based participatory research.

Health geographers must also attend to the various structures and events that have recently been ‘queered’ by scholars in sexualities and trans geographies. Like other groups (e.g., immigrants) that health geographers have studied, those who identify as LGBTQ may have family forms that diverge from the mainstream (Gorman-Murray 2008). Much like extended families may provide resilience against health risks such as work-related stress among immigrants (Dean and Wilson 2010), supportive families or same-sex partners may guard against place-rooted stressors or exacerbate these when they are less supportive. For trans folk, it will be important to examine the health impact of urban spaces that, because of heteronormative planning procedures, remain unsafe for people who are trans or who express a non-normative gender representation (Doan 2007, 2009). Migration may be another recently ‘queered’ area of study in which health geographers can track the relationships between displacement, movement, and health, especially for young and under-resourced individuals who also identify as LGBTQ (Bruce and Harper 2011). For those who are both socially disenfranchised and socially displaced, the migrant’s destination environment may have a therapeutic effect in some respects but also introduce social and sexual scenes that are unfamiliar and therefore distressing (Lewis 2014, 2017).

Next, geographers can draw attention to groups and identities that continue to be under-researched in LGBTQ health. Work in the health sciences has revealed that revealed health disparities with cisgender populations that outpace even those based on sexual orientation (Bauer et al. 2009), it remains unclear whether those located outside of large cities face a health disadvantage (Bauer et al. 2013). Geographers, with their expertise in how places are experienced and embodied, may be able to draw out the linkages between trans embodiment and health (Nash 2010). There is also considerable potential for researchers from India, Brazil, and other countries with perspectives that defy Euro-American understandings of an LGBTQ hierarchy in which trans-identified individuals are the most socially marginalized (e.g., Silva & Vieira, 2014), though the development and impact of this work is often limited by socially conservative higher education regimes and neo-colonialist academic networks that marginalize this knowledge.

There is also a need for work on intersectional identities in LGBTQ health, another area in which medical anthropologists have spearheaded new lines of research. Recent studies have argued that developing appropriate interventions for HIV prevention requires a contextual understanding of the norms that may lead to transmission among gay and bisexual men in diverse cultural communities (Silenzio, 2003; Janes & Corbett, 2009). Geographers have extended this research by differentiating risk factors for gay and bisexual ethnic minority men who are new immigrants versus those who are second generation (Lewis and Wilson 2017).

Finally, geographers can illuminate ongoing areas of inequality as the social landscape of acceptance and inclusion for LGBTQ populations continues to change. Geographers have been instrumental in drawing attention to flashpoints of exclusion amidst these new equalities (see, for example, Browne and Nash’s 2016 work on social resistance toward LGBTQ rights recognition). The inclusivity of sex education in schools, for example, has become a new flashpoint for homophobic discourse in an era of new legal equalities for some LGBTQ groups (McCarty-Caplan 2013; Tracy 2015). The ongoing heteronormativity of sex education may be a key factor perpetuating health inequalities among different sexual orientation and gender identity groups (Buston and Hart 2001). Recent work has also outlined the different ‘socio-geographies’ of health education and health services for LGBTQ populations, noting both measurable and perceived differences in access to care across large cities, smaller towns, and rural areas (Baker and Beagan 2016). There is increasing evidence to suggest that less inclusive health education in socially conservative environments can create a sexual health disadvantage for those who identify as LGBTQ (Lewis 2015).

We hope to have advanced Del Casino’s original call for a more theoretically engaged, comprehensive integration of sexualities and gender identity into health geography. As the previous review suggests, many of the gaps observed at that time in 2007 (e.g., the lack of spatial and contextual studies of sexual health) have been addressed at least partially. Geographical research on sexual orientation, gender identity, and health has moved beyond responding to the global crisis of HIV/AIDS through spatial science and now addresses the experiences of LGBTQ people more fully. Through renewed theoretical approaches and methodological applications, researchers interested in LGBTQ health can extend geography’s rich tradition in using theories of social disadvantage to identify wellbeing inequalities, trajectories, and interventions.

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