Rural location and exposure to minority stress among sexual minorities in the United States

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Recently, there has been an increase in the number of studies on minority stress among sexual minorities. Few of these studies have explored the ways in which regional or spatial factors influenced the amount of minority stress that lesbians, gay men and bisexuals (LGBs) endure. To see if living in rural and small towns creates stressful social environments for LGBs in the United States, this study analysed the associations between location and three distal minority stress outcomes, as well as feelings of connectedness to the LGB community. In a sample of self-identified LGBs (N = 285), this study found that rural contexts and small towns often presented harsher social climates for sexual minorities compared with urban locales. LGBs who resided in rural areas tended to feel less connected to LGB communities and experienced higher levels of felt stigma and enacted discrimination. Small town inhabitants displayed some similar patterns, but also reported lower levels of enacted discrimination than expected. Living in Southern states subjected LGBs to more discrimination and less satisfactory connections to LGB communities.

Keywords: stigma; discrimination; minority stress; sexual minority; rural environment

Structurally and interpersonally, discrimination against lesbian, gay and bisexual (LGB) individuals takes many forms. Homophobia can manifest itself through physical violence and language that chastises and belittles both homosexuality and non-normative gender behaviour. More subtly, homophobia and heteronormativity inform many insidious practices that privilege heterosexuality. Whether via the lack of legal marital rights or the assumption that heterosexuality must be enforced, LGBs often endure hostile environments that monitor and penalise homosexual behaviour in the United States.

LGB individuals’ experiences of stigma, prejudice and discrimination, which result from heteronormativity, have been usefully conceptualised as constituting minority stress (Brooks, 1981; Dipiacido, 1998; Hatzenbuehler, 2010; Meyer, 2003a, 2003b; Rosario, Schrimshaw, Hunter, & Gwadz, 2002). Minority stress theory is based on social stress theory (Dohrenwend, 2000; Pearlin, 1999), which posits that stressors constitute any factors or conditions that require individuals to adapt to changes intrapersonally, interpersonally or in their environments (Meyer, 2003a; Pearlin, 1999). Factors such as expectations of...
rejection, concealment of a stigmatised identity, internalisation of negative social beliefs about one’s social groups or social identity and experiences of discrimination (both acute events and chronic everyday mistreatment) constitute stressors. These factors stem from and reaffirm a hostile everyday living environment for LGBs, thus creating an environment characterised by minority stress.

Meyer (2003a) posited that minority stressors can be usefully thought of on a continuum of proximity to the self. Stressors most distal to the self are objective stressors based primarily on the environment, such as prevailing stereotypes, prejudice and discrimination. In this category, hate crimes and interpersonal violence directed towards LGB individuals figure centrally, primarily because of the devalued status of sexual minorities within heteronormative cultures. Distal minority stressors lead to more proximal and subjective appraisals of the environment as threatening and resulting expectations of rejection. Most proximal to the self is one’s internalisations of negative social attitudes towards one’s minority group (e.g. internalised homophobia).

Minority stress processes have been hypothesised to create strain on individuals’ ability to adapt to, and function in, their everyday environments and are therefore associated with lowered well-being and impaired mental health. Mental health disparities between heterosexuals and LGBs likely stem from differential exposure to minority stress processes (Meyer, 2003a).

LGB individuals cope with minority stress in a variety of ways. For example, feeling connected to an LGB community is considered a group-level coping resource for dealing with the negative effects of minority stress (Frost & Meyer, 2012; Kertzner, Meyer, Frost, & Stirrat, 2009; Meyer, 2003a). A sense of connectedness allows LGB individuals to experience self-empowerment. Specifically, feeling part of a community of similar others allows LGBs to make positive social comparisons to other people like them, instead of making negative comparisons, based on heterosexist stigma, to members of the out-group (Crocker & Major, 1989; Herek & Glunt, 1995; Meyer, 2003a). For these reasons, connectedness to the LGB community can play an ameliorative role in the relationship between minority stress and mental health (Major & O’Brien, 2005; Meyer, 2003a). Moreover, the survival of discrimination, when combined with other key interpretative schemas, can push LGB individuals into greater amounts of political activism for LGB rights (Hyers, 2007; Jennings & Andersen, 2003; Swank & Fabs, 2011; Taylor, Kimport, Van Dyke, & Andersen, 2009).

Location and sexual stigma

Urban sociologists like Wirth (1938) and Fischer (1975) were some of the early theorists who conceptualised that nations, regions and localities can distinguish their cultures from one another through the historical interplay of many social processes (e.g. state interventions, amount of industrialisation, migration practices, type of social networks available). Rural areas, or spaces that have high land-to-human ratios and an economic dependence on farming, mining and forestry, have often been conceptualised as communities that prize cultural homogeneity, localism, religiosity and ‘traditional values’ (Miller & Laluff, 1981). In contrast, Wirth (1938) argued that the ‘urban way of life’ generally disrupts ethnocentric and authoritarian perspectives. Due to macro issues of city size, population density and greater cultural heterogeneity, city dwellers regularly encounter social systems that transmit new, unique and incompatible moral messages. To cope with diverse and sometimes contradictory social cues, city dwellers must learn how to respond to a wider range of opinions as they try to reconcile competing moral and behavioural expectations. This adaptation then normalises flexibility in thought and a greater tendency to accept practices that could be considered unconventional or strange in more rural and small town settings.
Adding to these contextual factors are possible compositional effects. That is, cities or regions may hold higher concentrations of people who possess the traits associated with liberalism – such as higher education levels, less religious fundamentalism or general inclination to not see diversity as a threat (Adamczyk & Pitt, 2009; Moore & Vanneman, 2003; Van Dyke, Soule, & Widom, 2001). In fact, Johnson and Stokes (1984) contended that the greater conservativism of Southern communities is partly due to greater prevalence of personal piety (e.g. prayer) and the acceptance of orthodox-fundamentalist religious beliefs (the Bible is inerrant, the ubiquity of human sinfulness or the fear of eternal damnation at the hands of a punitive God).

Studies that link heterosexism to regional variation have mostly followed two approaches. When addressing sexual prejudice of heterosexuals, some studies have explored the possibility of gender and sexuality attitudes being spatialised in the United States (Bolzendahl & Myers, 2004; Carter & Borch, 2005; Rice & Coates, 1995; Twenge, 1997). Traditional gender and sexuality scripts are expressed more frequently by people who reside in a small town or rural communities (Bolzendahl & Myers, 2004; Herk, 2002; Johnson, 1999; Konrad & Harris, 2002; Loftus, 2001; Pratte, 1993; Rhodebeck, 1996; Schulte, 2002). Other studies contend that spatial differences also appear within metropolitan areas as suburban heterosexuals seem less supportive of same-sex marriage rights than centre-city heterosexuals (Loftus, 2001). Conversely, other studies have downplayed the role of urbanity because they could not detect a significant urban–rural divide in homophobic sentiments (Herk & Glunt, 1993; Lemell & Battle, 2004; Marsiglio, 1993).

Other prejudice studies have looked for regional subcultures differences as well. Akin to the Southern subculture of violence studies in criminology (Ellison, 1991; Nisbett & Cohen, 1996), and ‘Southern exceptionalism’ in religious studies (Chalfant & Heller, 1991; Woodberry & Smith, 1998), some studies have examined the Southern effect on gender norms in the United States. Accordingly, people who reside in the ‘Deep South’ (e.g. Mississippi, Georgia, South Carolina, Tennessee, Alabama) were more likely to endorse traditional conceptions of appropriate male and female behaviours (Bolzendahl & Myers, 2004; Carter & Borch, 2005; Eldridge, Mack, & Swank, 2006; Johnson & Stokes, 1984; Konrad & Harris, 2002; Marquart, Nannini, Edwards, Stanley, & Wyman, 2007; Powers et al., 2003; Rice & Coates, 1995; Twenge, 1997).

**Location and minority stress**

The empirical literature on how discrimination and minority stress vary across community contexts is sparse. Since the mid-1990s, there has been a small upsurge in the number of qualitative studies of rural sexualities (Barton, 2010; Bell & Valentine, 1995; Black & Rhorer, 2001; Boulden, 2001; Cody & Welch, 1997; Fellows, 1998; Gottschalk & Newton, 2009; Gray, 2009; Kramer, 1995; McCarthy, 2000; Oswald & Culton, 2003; Tiemann, Kennedy & Haga, 1998; Williams, Bowan & Horwath, 2005; Yarbrough, 2003). Rural-based LGBs overwhelmingly described living in bleak and inhospitable social climates. Their narratives often discuss a hostile rural context that forced sexual minorities into silence, social isolation and fear of moral condemnation and hate crimes. In essence, these studies depict rural families, workplaces and churches as oppressive institutions to flee from, while cities are positioned as providing better contexts for healthy sexual minority identity development.

Quantitative studies about minority stress variation by region offer less consistent results than qualitative studies on this topic (Gonzalez, Miller, Solomon, Bunn & Cassidy, 2009; Johnson, Jackson, Arnette & Koffman, 2005; Kosciw, Greytak & Diaz, 2009; Leedy & Connolly, 2007; Waldo, Hessen-McInnis & D’Augelli, 1998). An early *Kinsey Report*
found that rural gay men lacked access to supportive LGB communities and often had clandestine same-sex sexual encounters with men who never considered themselves gay (Kinsey, Pomeroy & Martin, 1948). A recent study of Canadian LGB adolescents noted that rural youths were confronted more with verbal teasing and physical assaults than their metropolitan counterparts (Poon & Saewyc, 2009). Another national study of LGB high-school students found that students who attended urban schools heard less homophobic remarks and dealt with less sexual harassment related to sexual identity than those who attend schools outside of urban areas (Kosciw et al., 2009). However, suburban and Southern students did not report less homophobic bullying than rural and Midwestern students. Other survey-based studies partially confirmed and rejected aspects of the rural toxicity argument. A recent sample from Wyoming noted that lesbians in smaller towns faced greater levels of public discrimination than those in larger cities (Leedy & Connolly, 2007). However, regional differences were not present for gay men, and small-town lesbians did not face greater levels of homonegativity from parents, siblings and friends. Similarly, rural lesbian mothers experienced more cases of public harassment and rejection than urban lesbian moms, but the spatial differences disappeared when addressing homophobic comments by relatives (Puckett, Horne, Levitt & Reeves, 2011). Also, some evidence indicates that community size does not predict the reported amounts of social stigma for LGBs living with AIDS, yet rural lesbians and small-town gay men were more afraid to disclose their sexual identity than urban LGBs (Gonzalez et al., 2009).

Some studies have detected no urban or rural effects on the experience of minority stress for LGBs. For example, a study of LGB senior citizens in nursing homes found that community size did not predict the amount of discrimination they recognised from administrators, staff and other residents (Johnson et al., 2005), and a study of LGB college students found that urban and rural respondents reported similar levels of verbal or physical harassment, access to the LGB community and familial acceptance of their sexual identity (Waldo et al., 1998). Finally, place of residency was unrelated to levels of internalised homophobia, stigma consciousness and the amount of ‘outness’ among urban and rural lesbian mothers (Puckett et al., 2011).

In the light of these inconsistent quantitative findings on location and minority stress, additional research is necessary to determine whether the qualitative differences in experiences of minority stress in rural and urban locations can be demonstrated quantitatively and on a larger scale. This is necessary given that a separate body of research has argued that geographic differences in the magnitude of disparities in mental health between LGBs and heterosexuals are indicative of potential place-based differences in minority stress (Lewis, 2009). Rural LGB youth are at greater risk for mental health problems such as depression, suicidal ideation and substance use compared with urban LGB youth (Galliher, Rostosky, & Hughes, 2004; Poon & Saewyc, 2009). Although these location-based differences in mental health provide some evidence for the negative effects of minority stress on health for rural LGBs, few recent studies have explicitly tested whether LGBs in rural locations are exposed to greater minority stress than LGBs in urban or suburban locations. To fully analyse the relationship between the rural locations and the minority stress process, one must test how living in a rural location results in increased exposure to minority stress (Meyer, Schwartz, & Frost, 2008).

Because sexual stigma (and related prejudices towards gender non-conformity) is probably higher in rural locations, rural LGBs could be at risk for greater exposure to minority stress than urban or suburban LGBs (Bell & Valentine, 1995; Kosciw et al., 2009; Leedy & Connolly, 2007). LGBs are often drawn to urban centres because they often provide visible LGB communities and are often centred on community centres and nightlife. Rural
locations often lack visible LGB communities, although resources dedicated to the pro-
motion of LGB health and well-being are often scarce or non-existent (Gonzalez et al.,
2009; Oswald & Culton, 2003; Tiemann et al., 1998; Willging, Salvador, & Kano, 2006).
Rural LGBs may therefore lack access to community coping resources that are theorised to
buffer the negative effects of minority stress, such as psychological connectedness to LGB

**Aims and hypotheses**

This study aimed to test critical components of both the minority stress and the social
stress models. More specifically, we hypothesised that living in rural locations would result
in excess exposure to minority stressors and decreased coping resources (Meyer et al.,
2008). Specifically, we tested the hypothesis that LGBs living in rural locations would
report greater minority stress than LGBs living in more suburban and urban communities.
Additionally, given that previous research has identified the unique role of sexual stigma in
Southern US culture (Gonzalez et al., 2009; Oswald & Culton, 2003; Tiemann et al., 1998;
Willging et al., 2006), we hypothesised that living in the Southern United States would
increase exposure to minority stress compared with others living in non-Southern rural
locations. In other words, living in a Southern region of the United States may result in
added exposure to minority stress, above and beyond the exposure associated with living
in a rural location alone. Finally, due to the lack of visible sexual minority populations
and community resources available to LGBs in rural areas, we hypothesised that rural
and Southern LGBs would report less psychological connectedness to an LGB community
compared with urban and non-Southern LGBs.

**Method**

**Participants**

This online study analysed data from a sample of 285 LGB women and men recruited
from throughout the United States in December 2007. Online surveys offer unique method-
ological advantages when studying LGB populations (Herek, 2009; Koch & Emery, 2002;
Riggle, Rostokwsky, & Reedy, 2005) for several reasons. First, national random sam-
ples often fail to ask questions about sexual orientation and discrimination against sexual
minorities. Second, the use of Internet listservs offers access to a national scope of potential
respondents. Third, random phone or mail samples are difficult to obtain, in part because
researchers vary the definition of who qualifies as LGB, and because complete lists of every
LGB person in the United States do not exist. Fourth, convenience samples are often less
representative since they attract participants that are too homogeneous (Faugier & Sargeant,
1997) and disproportionately select those who are already ‘out’ and located solidly within
the LGB community (Farquhar, 1999; Rhoads, 1997). Finally, in-person recruitment at
LGB establishments like bars or clubs would be too selective as well (Riggle et al., 2005),
as it would likely oversample those who are younger or more active in the LGB commu-
nity, while excluding LGB people who are more closeted and those with disabilities (Butler,
1999).

Participants were recruited through 10 email listservs. Two of the listservs contained
members of ‘Fairness Alliances’ that sought equality for LGB individuals. Memberships
in these email groups were free and most of their participants resided in the Midwestern
and Mid-Atlantic states, with the largest contingencies from Kentucky, Ohio, Indiana,
Tennessee and West Virginia. The rest of the listservs provided less explicitly politically
engaged networks. To select these email groups, we selected Yahoo groups that met three
criteria. First, the group had to exist for explicitly social purposes (i.e. they did not mention anything political in the description of their listserv). Some of these groups concentrated on hobbies (e.g. ‘Dykes on bykes’ ‘Gay Square Dancers’ or ‘GLBT Horselovers’), whereas others displayed support group qualities (e.g. ‘Lavender Mothers’ or ‘Kentucky Pride’).

Second, we excluded groups that seemed to serve as romantic or sexual matchmaking sites to avoid biasing the sample with an overrepresentation of single participants (we feared that the use of such sites would dramatically lessen the proportion of coupled respondents in the comparison group). Finally, to lessen problems of selection bias along spatial lines, we looked for groups that mentioned the regions that were most common in the political listservs (e.g. Queer Kentucky, Rural Pride of Tennessee or Gay in Ohio).

The cover letters sent via the listservs asked potential respondents to click on a link that took them to the study website. The letter solicited the involvement of adults who considered themselves lesbian, gay or bisexual. As expected, the letter stated that involvement in this project was anonymous and voluntary. The response rate to this letter was impossible to calculate since we did not have access to the number of people who belonged to each listserv.

The sample of 285 participants had a preponderance of males (58% male) and a mainly Euro-American racial composition (79% European American, 7% Native American, 2% African American, 1% Asian American, 1% Latino/a and 10% ‘refuse to answer’). Ages in the sample spanned a wide range, from age 18 to 75, with 24% under age 30, 54% ages 30–50 and 22% ages 51–75 ($\bar{x} = 39.75, SD = 12.19$). The sample included a diverse array of incomes, including 10% below $20,000 per year, 27% $20,000–50,000 per year, 25% 50,000–80,000 per year and 31% over $80,000 per year, with 8% being missing data. Similar to most samples of ‘out’ LGB participants, our sample was highly educated, with 3% having earned a high-school degree, 58% having some college or a bachelor’s degree and 32% having a graduate degree. Participants tended to be distributed in many types of urban and rural spaces, with 26% residing in a large urban centre, 18% residing in a suburb of a large city, 18% residing in a mid-sized city, 23% residing in small towns and 9% living in rural areas. Because the majority of recruitment took place in the geographic South of the United States, 65.2% of participants lived in the South, 15.7% lived in the Midwest, 6.2% lived in the West and 4% lived in the East, with Kentucky, Ohio, Indiana, Tennessee and West Virginia representing the most respondents.

**Measures**

**Current location**

When identifying urban–rural distinctions, we asked the question ‘What type of community do you currently reside in?’ All of the close-ended responses dealt with the population density of that community (Hewitt, 1992): rural, small town, midsize city, suburban metropolitan and centre-city metropolitan. Participants’ responses were recoded into a system of binary variables as each type of location may differ in the amount of minority stress. The centre-city metropolitan served as the referent group because our aims were to test the degree to which living in more rural locations represented added exposure to minority stress in relation to urban environments, which have been portrayed in the literature as accepting of LGB individuals.

An open-ended item asked ‘What state do you currently live in?’ Participants who typed Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia were deemed Southern residency.
Minority stress variables

This study measured several aspects of minority stress for LGB individuals: felt stigma, enacted discrimination and connectedness to an LGB community. By focusing on distal factors, each variable explored the extent to which sexual minorities encountered hostile or supportive social environments (see Table 1). All measures came from short versions of standardised scales and were coded such that higher scores indicated higher levels of the construct. Shortened versions of measures were used to minimise participant fatigue and survey dropout.

The three-item additive scale for felt stigma (adapted from Herek, 2009) dealt with perceptions that people in the participant’s immediate environment were inclined to universally accept or demean homosexuality (Cronbach $\alpha = 0.695$). By using a 5-point Likert scale, the first item measured the acceptance of sexual minorities in the workplace: ‘At my workplace gays and lesbians are treated with respect’ (strongly agree = 1). The last two items dealt with homonegativity in larger contexts: ‘I fear that most of my neighbors object to my homosexuality’ and ‘In my daily settings most people treat gays and lesbian with thinly veiled hostility’ (strongly agree = 5).

Enacted discrimination was measured with 18 questions that addressed how often participants had endured cases of explicit discrimination because of their perceived sexual identity (Herek, 2009). To address issues of physical violence, harassment and economic discrimination, participants were asked whether these events never occurred, happened once or twice or more times. Examples of physical violence questions included ‘You were hit, beaten, physically attacked or sexually assaulted’. To address anti-gay harassment, respondents were asked to identify whether ‘someone threatened you with violence’ or ‘someone verbally insulted you’ because of LGB identity. To measure economic discrimination, respondents were asked whether they were ‘denied or fired from a job’ or ‘prevented from moving into an apartment or house’ because of their sexual identity. Items also differentiated between recent and long-term experiences of discrimination (nine items asked whether these events occurred in the last year, while nine addressed whether these events happened when they were 16 years old). The Cronbach $\alpha$ values for enacted discrimination in the last year and since 16 years old were 0.719 and 0.795, respectively.

A sense of psychological connectedness to an LGB community was assessed using three items from the Connection to the Gay or Lesbian Community Scale (Szymanski, Chung, & Balsam, 2001). The first item confirmed a desire to be part of an LGB community: ‘Being a part of the lesbian and gay community is important to me’. The second and third items addressed an absence of being a member of the LGB community: ‘I feel isolated and separated from other gays and lesbians’ and ‘I feel like I am the only gay or lesbian in most settings I am in’. In reversing the direction of the coding, higher scores for this additive scale scores suggest greater connection to the LGB community (Cronbach $\alpha = 0.707$).

Control variables

Gender and race were treated as binary variables in which female and White were coded as 1, whereas other responses were coded as 0. Age was assessed with an open-ended question and we kept the data in interval form. Income was determined through a scale of family income in the last year (there were 10 categories that started at below $10,000 and ended with above $151,000).

Analytical plan. A series of hierarchical ordinary least-squares (OLS) regression models tested the extent to which rurality of location and Southern location predicted exposure
Table 1. Descriptive statistics for minority stress outcomes.

<table>
<thead>
<tr>
<th>Enacted discrimination</th>
<th>Never</th>
<th>Last year once</th>
<th>Twice or more</th>
<th>Never</th>
<th>Since 16 years once</th>
<th>Twice or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denied employment</td>
<td>247 (94%)</td>
<td>11 (4%)</td>
<td>3 (1%)</td>
<td>188 (71%)</td>
<td>44 (16%)</td>
<td>31 (11%)</td>
</tr>
<tr>
<td>Evicted, denied housing</td>
<td>258 (97%)</td>
<td>3 (1%)</td>
<td>2 (1%)</td>
<td>236 (90%)</td>
<td>13 (5%)</td>
<td>11 (4%)</td>
</tr>
<tr>
<td>Verbal threats</td>
<td>131 (49%)</td>
<td>56 (21%)</td>
<td>76 (28%)</td>
<td>32 (12%)</td>
<td>23 (8%)</td>
<td>212 (79%)</td>
</tr>
<tr>
<td>Threatened with violence</td>
<td>228 (86%)</td>
<td>20 (7%)</td>
<td>16 (6%)</td>
<td>126 (47%)</td>
<td>53 (12%)</td>
<td>84 (31%)</td>
</tr>
<tr>
<td>Personal property damaged</td>
<td>239 (91%)</td>
<td>13 (5%)</td>
<td>9 (4%)</td>
<td>167 (63%)</td>
<td>42 (16%)</td>
<td>54 (20%)</td>
</tr>
<tr>
<td>Objects thrown at you</td>
<td>246 (94%)</td>
<td>8 (3%)</td>
<td>6 (2%)</td>
<td>196 (74%)</td>
<td>32 (11%)</td>
<td>35 (13%)</td>
</tr>
<tr>
<td>Chased or followed</td>
<td>243 (92%)</td>
<td>11 (4%)</td>
<td>7 (2%)</td>
<td>176 (66%)</td>
<td>40 (15%)</td>
<td>46 (18%)</td>
</tr>
<tr>
<td>Punch, hit, kicked or beaten</td>
<td>253 (97%)</td>
<td>6 (2%)</td>
<td>1 (1%)</td>
<td>211 (80%)</td>
<td>23 (9%)</td>
<td>29 (11%)</td>
</tr>
<tr>
<td>Sexually assaulted</td>
<td>254 (97%)</td>
<td>5 (2%)</td>
<td>3 (1%)</td>
<td>218 (82%)</td>
<td>27 (10%)</td>
<td>18 (7%)</td>
</tr>
<tr>
<td>Felt stigma</td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Not sure</td>
<td>Disagree</td>
<td>Strongly disagree</td>
<td>Mean</td>
</tr>
<tr>
<td>Gays and lesbians are treated with respect</td>
<td>70 (25%)</td>
<td>93 (33%)</td>
<td>70 (25%)</td>
<td>29 (10%)</td>
<td>15 (5%)</td>
<td>2.36</td>
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<td>at my workplace (R)</td>
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<tr>
<td>I fear that most of my neighbors object</td>
<td>28 (10%)</td>
<td>59 (20%)</td>
<td>61 (21%)</td>
<td>93 (33%)</td>
<td>36 (13%)</td>
<td>2.80</td>
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<td>to my homosexuality</td>
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<tr>
<td>In my daily settings most people treat</td>
<td>8 (3%)</td>
<td>52 (18%)</td>
<td>53 (18%)</td>
<td>124 (43%)</td>
<td>39 (14%)</td>
<td>2.50</td>
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<td>gays and lesbian with thinly veiled</td>
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<tr>
<td>hostility</td>
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</table>
to the minority stress outcomes beyond demographic controls. The same approach examined the extent to which rurality of location and Southern location predicted psychological sense of connection to an LGB community. Variables were entered into the regression equations in two steps. Block 1 included the demographic control variables of gender (1 = male, 0 = female), race/ethnicity (1 = white, 0 = racial/ethnic minority), income and age. Block 2 added the location variables to the controls. Specifically, responses to the item measuring rurality of location were separated into a series of dichotomous variables representing (1) rural, (2) small town, (3) midsize city and (4) suburb of a large metropolitan centre. The centre city of a large metropolitan centre was treated as the referent group. The Southern location was added to the model in step (2) (non-Southern states served as the referent group). Our discussion of the explanatory results focused on the final models, because the standardised regression coefficients ($\beta$) and $R^2$ change ($\Delta R^2$) detect the spatial factors’ incremental contributions to the variance explained for our four outcome variables.

**Results**

*Descriptive statistics for enacted discrimination and felt stigma*

Table 1 offers the descriptive statistics of enacted discrimination and felt stigma items. As a whole, felt stigma was more common than enacted discrimination (suggesting that implied heterosexism is more widespread than overt heterosexism). Cases of recent enacted stigma are relatively rare in this study, while most participants confronted the looming stress of threatened heterosexism. In the lifetime measures, almost nobody escaped heterosexist threats, and roughly two out of five have had their property damaged and over one-third had been chased or denied employment since 16 years old. Very high rates of sexual assault during a lifetime were also discovered (10% were sexually assaulted once in their adulthood and 7% 2 times or more).

While felt stigmatization was common for a large segment of the sample, its presence was not a universal norm. At least 30% of respondents noticed homophobia from neighbours and 21% felt that ‘thinly veiled’ instances of anger in the community. Nevertheless, the mean was below the mid-point of 3 because the distribution skewed towards the ‘less’ felt stigma categories. That is, 58% of respondents ‘agreed’ or ‘strongly agreed’ that gays and lesbians were respected at their place of employment and between 46% and 57% disagreed to felt stigma items on neighbours and interactions in daily settings.

*Place variables and felt stigma-enacted discrimination*

Location-based differences in exposure to the minority stressors of stigma and discrimination are presented in Table 2. When exploring the proportion of variance explained by all of the variables, the $R^2$ and $\Delta R^2$ for the full model were significant in every case (Block 2). This suggests that the spatial and control variables together accounted for at least 9.3% of the variance in these discrimination outcomes and the spatial factors as a group significantly added between 4.7% and 6.7% of the variance explained beyond the control variables. When exploring specific factors, living in a rural location was significantly associated with increased exposure to stigma as well as more frequent experiences of discrimination since age 16 ($\beta$ values ranged from 0.168 to 0.161, $p < 0.05$). Living in a small town was also associated with increased exposure to stigma compared with living in a city ($\beta = 0.154, p < 0.05$) but not for any of the discrimination measures. Living in a
Table 2. Hierarchical regressions for regional variables, controls and felt stigma-enacted discrimination outcomes.

| Predictor variables | Felt stigma | | | Enacted discrimination last year | | | Enacted discrimination since 16 years | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                     | $B$         | $SE_B$      | $\beta$    | $B$         | $SE_B$      | $\beta$    | $B$         | $SE_B$      | $\beta$    |
| **Block 1 (controls)** |             |             |             |             |             |             |             |             |
| Male                | 0.297       | 0.342       | 0.055       | 0.198       | 0.232       | 0.046       | 1.245       | 0.522       | 0.154$^*$  |
| White               | -0.002      | 0.456       | -0.001      | -0.640      | 0.379       | -0.024      | -0.527      | 0.706       | 0.047      |
| Family Income       | -0.590      | 0.149       | -0.250$^{**}$ | -0.073      | 0.125       | -0.038      | -0.460      | 0.229       | -0.128$^*$  |
| Age                 | -0.001      | 0.014       | -0.004      | -0.025      | 0.011       | -0.149$^*$  | 0.053       | 0.021       | 0.166$^*$  |
| $R^2$               | 0.069       |             |             | 0.026       |             |             | 0.070       |             |             |
| $F$                 | 4.583       |             |             | 1.585       |             |             | 4.527       |             |             |
| **Block 2 (full model)** |             |             |             |             |             |             |             |             |
| Rural residency     | 1.533       | 0.632       | 0.168$^*$   | 0.819       | 0.460       | 0.128       | 2.156       | 0.939       | 0.161$^*$  |
| Small-town residency| 1.198       | 0.565       | 0.154$^*$   | 0.202       | 0.420       | 0.036       | 0.840       | 0.844       | 0.073      |
| Midsize city        | 0.320       | 0.437       | 0.056       | -0.117      | 0.330       | -0.028      | 0.474       | 0.651       | 0.056      |
| Metropolitan suburb | 0.271       | 0.474       | 0.042       | -0.368      | 0.352       | -0.079      | 0.336       | 0.709       | 0.035      |
| Southern            | 0.288       | 0.376       | 0.050       | 0.714       | 0.280       | 0.170$^*$   | 1.123       | 0.557       | 0.132$^*$  |
| $R^2$               | 0.121       |             |             | 0.093       |             |             | 0.117       |             |             |
| $F$                 | 3.448       |             |             | 2.481$^*$   |             |             | 3.280       |             |             |
| $\Delta R^2$        | 0.052$^*$   |             |             | 0.067$^*$   |             |             | 0.047$^*$   |             |             |

Notes: Reference categories for the location variables are centre-city metropolitan area and non-Southern states. Control variables were included in the final model, but their results are not shown. $^* p < 0.05; ^{**} p < 0.01$. 
Table 3. Hierarchical regressions for regional variables, controls and community outcomes.

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>LGB community connectedness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Block 1 (controls)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.055</td>
</tr>
<tr>
<td>White</td>
<td>0.597</td>
</tr>
<tr>
<td>Family Income</td>
<td>0.386</td>
</tr>
<tr>
<td>Age</td>
<td>0.011</td>
</tr>
<tr>
<td>R²</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Block 2 (full model)</td>
<td></td>
</tr>
<tr>
<td>Rural residency</td>
<td>−0.797</td>
</tr>
<tr>
<td>Small-town residency</td>
<td>−0.648</td>
</tr>
<tr>
<td>Midsize city</td>
<td>−0.170</td>
</tr>
<tr>
<td>Metropolitan suburb</td>
<td>−0.061</td>
</tr>
<tr>
<td>Southern</td>
<td>−0.711</td>
</tr>
<tr>
<td>R²</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Reference categories for the location variables are centre-city metropolitan area and non-Southern states. Control variables were included in the final model, but their results are not shown. *p < 0.05; **p < 0.01.

Southern location (regardless of rurality and other control variables) was further associated with heightened exposure to discrimination (both in the past year and since age 16) compared with living in other parts of the United States (β values ranged from 0.170 to 0.132, p < 0.05).

**Place variables and psychological connectedness to the lesbian, gay, bisexual and transgender community**

Results of tests for location differences in feelings of connectedness to an LGB community are presented in Table 3. With significant coefficients of determination for both blocks of variables, it is clear that the spatial factors explained unique variance in participants’ sense of closeness to an LGB community above and beyond the control variables (R² = 0.072 and 0.118 for both blocks and ΔR² of 0.046 for the spatial factors). Living in a rural location was associated with lower levels of community connectedness compared with living in a centre city (β = −0.120 p < 0.05). Additionally, living in the Southern United States was further associated with lower levels of community connectedness compared with living in another part of the United States (β = −0.166, p < 0.05).

**Discussion**

This study addressed possible relationships between location of residency and exposure to minority stress. Specifically, we analysed that the ways living in different types of communities were connected to four elements of the experience of minority stress among self-identified LGB individuals: felt stigma, enacted discrimination – short and long terms – and feelings of connectedness to an LGB community. In several instances, results indicated a greater prevalence of minority stress in small towns and rural settings compared with urban environments. The largest impact of living in these communities was found
regarding felt stigma and long-term experiences of enacted discrimination. Specifically, rural and small-town LGBs were more likely to endure a history of subtle discrimination and rural individuals encountered more lifetime discrimination. Conversely, rural and small-town LGBs did not report significantly higher levels of recent discrimination. This difference in significance for lifetime and recent levels of discrimination could be due to an improvement in rural conditions in the past decades or it could be an artefact of methodological problems like too small of a sample size or focusing on the wrong types of discrimination. Clearly, longitudinal data are required to address a relative improvement for rural participants over time. Rural LGBs not only reported greater stigma, but also were more isolated and disconnected from communities that may provide affirmation of their sexual identities, as evidenced by lower levels of community connectedness among rural-living LGBs compared with urban dwelling LGBs. This again supports the argument that centre cities may partially insulate LGBs from some of the felt stigma and isolation that rural communities impose upon sexual minorities.

Dwelling in mid-sized cities and the suburbs was not associated with any aspect of minority stress. Although these locations displayed more minority stress than their centre-city counterparts, these differences were not substantial or statistically significant. On the other hand, a Southern residency presented several important ramifications for LGBs. Importantly, Southerners reported higher levels of recent and lifetime enacted discrimination and less connection to the LGB community. These findings clearly suggest that the South is a harsher place for sexual minorities than other regions of the United States.

Although the associations between location and minority stress were our primary focus in this study, some other notable findings emerged regarding our control variables of gender, race/ethnicity, income and age. In most cases, the effects of control variables on minority stress were not significant. However, gender occasionally mattered, as gay and bisexual men dealt with more enacted discrimination in their lifetime than lesbian and bisexual women. Further, higher income was associated with fewer experiences of felt or long-term discrimination and greater connections to the LGB community. This suggests that gay and bisexual men and poorer sexual minorities might be targeted more for discrimination and may have less of the vital resources that assist in the avoidance of discrimination. Age and when people were exposed to discrimination had opposite directions in this study. Younger sexual minorities experienced more recent discrimination, but older sexual minorities experienced a larger amount of lifetime discrimination. The link between older age and lifetime discrimination suggests that older individuals may not experience active discrimination, but they may have lived through years when homophobia and heterosexism were more explicit, rampant and publicly condoned. Further, older LGBs had greater opportunity to be exposed to discrimination, given they have lived more years since age 16 than younger LGBs. Thus, the association between age and long-term discrimination should not be interpreted beyond its role as a control variable in the present analyses.

Although we did not examine indicators of LGB health in this study, our findings have significant implications for the larger body of literature examining the connection between minority stress and health. Specifically, rural geographic location represents an important risk factor for increased exposure to some forms of minority stress beyond other disadvantaged social statuses (e.g. gender, race/ethnicity, income, age). Thus, geographic location needs to be considered in larger models of social stress and minority stress due to its potential implications for the overarching relationship between stress and health among sexual minorities (see Meyer et al., 2008). Even further, rural location limits community coping resources; thus, rural-living LGBs’ resources to cope with minority stressors are further
limited by location, making negative health implications potentially more likely to result from minority stress exposure.

**Limitations**

These findings should be interpreted in the light of several study limitations. Some of the biggest measurement limitations could be found in the ability of respondents to detect, label and remember discriminatory experiences. Although some behaviours are considered obviously discriminatory to all observers, some of most insidious discriminatory actions transpire in ambiguous or confusing situations (e.g. adolescent boys’ use of ‘fag’ as a form of salutation; Major & Sawyer, 2009). When determining whether an action is discriminatory or not, people often reflect upon a long list of questions: Who is doing the discrimination? Is the behaviour considered harmful and intentional? Is the possible discriminator a member of a respected or disliked group? Does the respondent think the victim deserves the discrimination? Clearly, the answers to such questions are sometimes dependent on the characteristics of individual observers, so it would be safe to assume that the measures of felt and enacted discrimination could have problems with reliability and validity. Future research should include a wider range of stress measures, including both subjective and objective methods. Our measures of minority stress are not always ‘place-specific,’ so it is possible that a person who lives in a rural area could have experienced discrimination in another geographical area. Furthermore, we used shortened measures of minority stress in order to reduce participant burden and increase the feasibility of the online survey. Future studies should be conducted to replicate our findings using measures that have more extensive histories of psychometric soundness.

People may also differ in their definitions of what is rural or where the boundaries of centre cities and suburbs begin or end in large metropolitan areas. Also, because place of residency is not always constant, a measure of current residency may not reflect the amount of exposure to minority stress in previous locations. Accordingly, some people may have been classified as urban, small town or rural, although the discrimination could have occurred elsewhere (e.g. a recent migrant to a metropolitan area may have remembered discrimination that transpired in that person’s teenage rural years). This study would also have been improved if we included a measure that distinguished bisexuals from lesbians and gays.

Although online surveys offered some advantages in the study of LGB populations, they are not without limitations. For example, our choice of listservs generated a higher proportion of respondents from some states (Kentucky and Ohio). The use of an Internet-based survey may introduce other sorts of selection bias since computer usage can vary by age, social class and race. This study had a low percentage of African Americans and high percentage of Native Americans. Likewise, the use of Internet sources can underestimate the proportion of sexual minorities who are more concealed about their sexual orientation. Also, the use of listservs might influence the findings on community connectedness because everyone in the sample was at least connected to other LGBs through an electronic network. However, this limitation does not justify dismissing these findings, given the demographic characteristics of online and mail samples of LGBs have been demonstrated to be ‘practically indistinguishable’ and ‘equivalent’ (Koch & Emery, 2002; Riggle et al., 2005). The smaller sample size has also some limitations. With a larger number of participants, we could have tested for interaction effects between our spatial factors, as the cell size was too small to permit statistical power to detect if rural or small-town Southerners significantly differed from metropolitan Southerners. Finally, caution should
be taken in generalising these findings to other countries. Studies do find cross-national variations in the acceptance and treatment of gays and lesbians (Adamczyk & Pitt, 2009; Štulhofer & Rimac, 2009), with the United States being more heteronormative than several European countries but much less than countries on other continents.

The $\beta$ coefficients of the location and regional differences in minority stress are small to moderate. We do not consider this to be surprising; many factors in addition to location may affect exposure to minority stress that are not included in this study. Further, the goal of this study was not to explain variance in these constructs, but instead to examine location and regional differences in LGBs’ experiences of minority stress. As a result, small to moderate yet statistically significant differences in minority stress exposure are of practical significance, especially given that many of these differences remained significant after controlling for demographic and Socio-Economic Statuses (SES) factors.

Finally, this study probably overlooks some factors that matter in the spatial distribution of minority stress (Adamczyk & Pitt, 2009). Suggesting some possible extraneous factors, rural states produced more lesbian, gay, bisexual and transgender (LGBT) hate crimes until one controls for poverty rates and the presence of gay–lesbian community centres (Van Dyke et al., 2001). Also, Southern states embrace greater gender conservatism because they contain higher concentrations of poor religious fundamentalists who have less access to higher education (Moore & Vanneman, 2003).

Conclusions
In sum, this study offers some unique yet preliminary findings that highlight the role of rural location in LGBs’ experiences of minority stress and community connectedness. By being the first study to systematically examine the urban–rural continuum and exposure to minority stress, this study provides new insights into the relationship between the geographical location and the lives of sexual minorities. These findings certainly suggest that future research should interrogate some of the common assumptions about rural locations as toxic spaces for LGBs and urbanity as an idealised space for LGBs; our results suggest a more complicated picture. In addition, the assumption that the South provides a particularly hostile environment for LGBs was mostly supported, highlighting yet another regional risk factor for minority stress that future research should continue to investigate. Certainly, the complicated relationship between minority stress and location of residence emphasises the importance of striving for contextual understandings of LGB individuals’ lives in their social and spatial milieu.

Acknowledgements
The authors thank Dr. Bernadette Barton, Michele Fiore and Jessica Roe for their assistance in the gathering of data for this study.

Note
1. This sampling technique was devised because this study came out of a project that was also trying to examine political activism among gays and lesbians (Swank & F ahs, in press).

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References


