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Sexual Identity, Space, and Well-Being – An Examination of Sexual Minority Spaces

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Psychology

by

Emily Esposito

June 2024

Dissertation Committee:
Dr. Jimmy Calanchini, Chairperson
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2024

The Dissertation of Emily Esposito is approved:

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ABSTRACT OF THE DISSERTATION

Sexual Identity, Space, and Well-Being – An Examination of Sexual Minority Spaces

by

Emily Esposito

Doctor of Philosophy, Graduate Program in Psychology
University of California, Riverside, June 2024
Dr. Jimmy Calanchini, Chairperson

Sexual minority spaces, or safe spaces for sexual minority people, have long been theorized to promote many positive outcomes for sexual minority people. Sexual minority spaces may promote identity development, provide space to develop sexual minority community, and act as identity-congruent spaces that promote person-environment fit. Despite these potential benefits, limited research has examined the direct relationship between sexual minority spaces and well-being for sexual minority people. Further, though research examines some sexual minority spaces, such as gay bars, no research has examined how people perceive sexual minority spaces, and no research has examined specific perceptions of sexual minority spaces based on sexual identity labels (e.g., lesbian spaces). The present research examined what constitutes a sexual minority space, for multiple sexual identity labels, and then examined how these spaces relate to sexual minority people's well-being. Study 1 first found which spaces and attributes of spaces are considered sexual minority spaces, and which attributes and places were

associated with each sexual identity. Though there was considerable overlap between types of spaces, many novel spaces and attributes also emerged for each type of sexual minority space. Study 2 then used these attributes and spaces to find that sexual minority spaces and attributes relate positively to belonging and well-being, though there was considerable nuance across the models. Finally, Study 3 found that at the regional level, more sexual minority spaces and attributes related to lower anxiety and depression for sexual minority adults, but not youth. Overall, this research provides further insight into sexual minority spaces and sexual minority well-being, showing that these spaces and attributes relate to more positive outcomes for sexual minority people.

Table of Contents

Introduction & Literature Review……1

Sexual Identity and Person-Level Features……3

Perceptions of Spaces…… 6

Person-Environment Fit……8

Present Research……..11

Study 1……...12

Methods……13

Participants……13

Materials & Procedure……...14

Data Analysis……...16

Hypotheses……17

Results……..18

Non-Responses…….. 18

Perceptions of Sexual Minority Spaces…… 20

Study 1 Discussion……...25

Study 2……... 26

Methods……26

Participants……26

Materials & Procedure……... 29

Data Analysis……...35

Hypotheses……37

Results……..38

Correlations Between Predictor Variables…….38

Models Predicting Belonging from Overall Spaces/Attributes……. 40

Models Predicting Belonging from Identity-Specific Spaces/Attributes……...51

Models Predicting Belonging from Identity-Determined Spaces/Attributes…….64

Models Predicting Well-Being from Overall Spaces/Attributes……... 74

Models Predicting Well-Being from Identity-Specific Spaces/Attributes…….85

Models Predicting Well-Being from Identity-Determined Spaces/Attributes…...97

Study 2 Discussion…….111

Study 3……. 112

Methods……..112

Materials & Procedure……. 112

Data Analysis……119

Hypotheses……...123

Results……123

Models Predicting Mental Health from Overall Spaces/Attributes……. 123

Models Predicting Mental Health from Identity-Specific Spaces/Attributes….. 130

Models Predicting Mental Health from Identity-Determined Spaces/Attributes 138

Study 3 Discussion…….150

General Discussion…….. 150

Individual-Level Sexual Minority Spaces & Sexual Identity…… 152

Region-Level Sexual Minority Spaces & Age Differences……... 154

Implications……155

Limitations……156

Conclusion……... 158

References……159

Appendix A: General Belongingness Scale……167

Appendix B: The General Well Being Schedule……168

Appendix C: The Lesbian, Gay, & Bisexual Identity Scale…… 171

Appendix D: The Lesbian, Gay, & Bisexual Group Identity Measure……173

List of Tables

Table 1. Study 1 Participant Demographics 15

Table 2. Deductive Codes for Analyzing Study 1 Responses 16

Table 3. Non-Responses by Sexual Identity Type and Type of Non-Response 19

Table 4. Most Commonly Mentioned Type of Sexual Minority Space by Sexual Identity Type 21

Table 5. Study 2 Participant Demographics by Sexual Orientation 28

Table 6. Sexual Minority Places by Type of Sexual Identity and Space 30

Table 7. Sexual Minority Attributes by Type of Sexual Identity and Space 32

Table 8. Operationalizations of Predictors and Outcomes in the Regression Models 37

Table 9. Correlation Matrix of Regression Variables 39

Table 10. Regression Model Predicting Belonging from Sexual Identity Labels and Overall Spaces/Attributes 41

Table 11. Regression Model Predicting Belonging from LGB Sexual Identity and Overall Spaces/Attributes 43

Table 12. Simple Slopes Analysis of Interaction Between LGB Identity, Sexual Minority Spaces, and Attributes of Sexual Minority Spaces 45

Table 13. Regression Model Predicting Belonging from LGB Sexual Identity Development and Overall Spaces/Attributes 46

Table 14. Regression Model Predicting Belonging from LGB Sexual Identity Stress and Overall Spaces/Attributes 47

Table 15. Regression Model Predicting Belonging from Identity Integration and Overall Spaces/Attributes 50

Table 16. Regression Model Predicting Belonging from Sexual Identity Labels and Identity-Specific Spaces/Attributes 52

Table 17. Regression Model Predicting Belonging from LGB Sexual Identity and Identity-Specific Spaces/Attributes 54

Table 18. Regression Model Predicting Belonging from LGB Sexual Identity Development and Identity-Specific Spaces/Attributes 58

Table 19. Regression Model Predicting Belonging from LGB Identity Stress and Identity-Specific Spaces/Attributes 60

Table 20. Regression Model Predicting Belonging from Identity Integration and Identity-Specific Spaces/Attributes 63

Table 21. Regression Model Predicting Belonging from Sexual Identity Labels and Identity-Determined Spaces/Attributes 65

Table 22. Regression Model Predicting Belonging from LGB Sexual Identity and Identity-Determined Spaces/Attributes 67

Table 23. Regression Model Predicting Belonging from LGB Sexual Identity Development and Identity-Determined Spaces/Attributes 69

Table 24. Regression Model Predicting Belonging from LGB Identity Stress and Identity-Determined Spaces/Attributes 71

Table 25. Regression Model Predicting Belonging from Identity Integration and Identity-Determined Spaces/Attributes 73

Table 26. Regression Model Predicting Well-Being from Sexual Identity Labels and Overall Spaces/Attributes 75

Table 27. Regression Model Predicting Well-Being from LGB Sexual Identity and Overall Spaces/Attributes 77

Table 28. Regression Model Predicting Well-Being from LGB Sexual Identity Development and Overall Spaces/Attributes 79

Table 29. Regression Model Predicting Well-Being from LGB Identity Stress and Overall Spaces/Attributes 81

Table 30. Regression Model Predicting Well-Being from Identity Integration and Overall Spaces/Attributes 84

Table 31. Regression Model Predicting Well-Being from Sexual Identity Labels and Identity-Specific Spaces/Attributes 86

Table 32. Regression Model Predicting Well-Being from LGB Sexual Identity and Identity-Specific Spaces/Attributes 88

Table 33. Regression Model Predicting Well-Being from LGB Sexual Identity Development and Identity-Specific Spaces/Attributes 91

Table 34. Regression Model Predicting Well-Being from LGB Identity Stress and Identity-Specific Spaces/Attributes 93

Table 35. Regression Model Predicting Well-Being from Identity Integration and Identity-Specific Spaces/Attributes 96

Table 36. Regression Model Predicting Well-Being from Sexual Identity Labels and Identity-Determined Spaces/Attributes 98

Table 37. Regression Model Predicting Well-Being from LGB Sexual Identity and Identity-Determined Spaces/Attributes 99

Table 38. Regression Model Predicting Well-Being from LGB Sexual Identity and Identity-Determined Spaces/Attributes 101

Table 39. Regression Model Predicting Well-Being from LGB Identity Stress and Identity-Determined Spaces/Attributes 103

Table 40. Regression Model of Well-Being Based on Identity Integration and Identity-Determined Spaces/Attributes 105

Table 41. Summary of Study 2 Belonging Findings 107

Table 42. Summary of Study 2 Well-Being Findings 109

Table 43. Regional Sexual Minority Spaces and Attributes of Sexual Minority Spaces 117

Table 44. Regression Model Predicting Lesbian/Gay Anxiety from Overall Spaces/Attributes 124

Table 45. Regression Model Predicting Bisexual Anxiety from Overall Spaces/Attributes 124

Table 46. Regression Model Predicting Lesbian/Gay Depression from Overall Spaces/Attributes 125

Table 47. Regression Model Predicting Bisexual Depression from Overall Spaces/Attributes 126

Table 48. Regression Model Predicting Gay Mental Health Symptoms from Overall Spaces/Attributes 127

Table 49. Regression Model Predicting Lesbian Mental Health Symptoms from Overall Spaces/Attributes 127

Table 50. Regression Model Predicting Bisexual Mental Health Symptoms from Overall Spaces/Attributes 129

Table 51. Regression Model Predicting Lesbian/Gay Anxiety from Identity-Specific Spaces/Attributes 130

Table 52. Regression Model Predicting Bisexual Anxiety from Identity-Specific Spaces/Attributes 131

Table 53. Regression Model Predicting Lesbian/Gay Depression from Identity-Specific Spaces/Attributes 133

Table 54. Regression Model Predicting Bisexual Depression from Identity-Specific Spaces/Attributes 134

Table 55. Regression Model Predicting Gay Mental Health Symptoms from Identity-Specific Spaces/Attributes 135

Table 56. Regression Model Predicting Lesbian Mental Health Symptoms from Identity-Specific Spaces/Attributes 136

Table 57. Regression Model Predicting Bisexual Mental Health Symptoms from Identity-Specific Spaces/Attributes 138

Table 58. Regression Model Predicting Lesbian/Gay Anxiety from Identity-Determined Spaces/Attributes 139

Table 59. Regression Model Predicting Bisexual Anxiety from Identity-Determined Spaces/Attributes 140

Table 60. Regression Model Predicting Lesbian/Gay Depression from Identity-Determined Spaces/Attributes 141

Table 61. Regression Model Predicting Bisexual Depression from Identity-Determined Spaces/Attributes 142

Table 62. Regression Model Predicting Gay Mental Health Symptoms from Identity-Determined Spaces/Attributes 144

Table 63. Regression Model Predicting Lesbian Mental Health Symptoms from Identity-Determined Spaces/Attributes 145

Table 64. Regression Model Predicting Bisexual Mental Health Symptoms from Identity-Determined Spaces/Attributes 147

Table 65. Summary of Findings from Study 3 148

List of Figures

Figure 1. General Belonging Based on Sexual Identity and Overall Sexual Minority Spaces 42

Figure 2. General Belonging Based on LGB Identity, Overall Sexual Minority Spaces, and Overall Attributes of Sexual Minority Spaces 44

Figure 3. General Belonging Based on Overall Sexual Minority Spaces and Overall Attributes of Sexual Minority Spaces 48

Figure 4. General Belonging Based on Sexual Identity and Identity-Specific Attributes of Sexual Minority Spaces 53

Figure 5. General Belonging Based on LGB Identity and Identity-Specific Attributes of Sexual Minority Spaces 55

Figure 6. General Belonging Based on Identity-Specific Sexual Minority Spaces and Identity-Specific Attributes of Sexual Minority Spaces 56

Figure 7. General Belonging Based on LGB Identity Stress and Identity-Specific Attributes of Sexual Minority Spaces 61

Figure 8. General Belonging Based on Sexual Identity and Identity-Determined Attributes of Sexual Minority Spaces 66

Figure 9. General Well-Being Based on Sexual Identity and Sexual Minority Spaces 76

Figure 10. General Well-Being Based on LGB Identity Stress and Overall Sexual Minority Spaces 82

Figure 11. General Well-Being Based on Sexual Identity and Identity-Specific Attributes of Sexual Minority Spaces 87

Figure 12. General Well-Being Based on LGB Identity and Identity-Specific Attributes of Sexual Minority Spaces 89

Figure 13. General Well-Being Based on LGB Identity Stress and Identity-Specific Attributes of Sexual Minority Spaces 94

Figure 14. Regional Estimates of Sexual Minority Mental Health 122

Figure 15. Lesbian Mental Health Symptoms Based on Overall Sexual Minority Spaces and Attributes of Sexual Minority Spaces 128

Figure 16. Bisexual Anxiety Based on Identity-Specific Sexual Minority Spaces and Attributes of Sexual Minority Spaces 132

Figure 17. Bisexual Depression Based on Identity-Specific Sexual Minority Spaces and Attributes of Sexual Minority Spaces 134

Figure 18. Lesbian Mental Health Symptoms Based on Identity-Specific Sexual Minority Spaces and Attributes of Sexual Minority Spaces 137

Figure 19. Bisexual Anxiety Based on Identity-Determined Sexual Minority Spaces and Attributes of Sexual Minority Spaces 140

Figure 20. Bisexual Depression Based on Identity-Determined Sexual Minority Spaces and Attributes of Sexual Minority Spaces 143

Figure 21. Lesbian Mental Health Symptoms Based on Identity-Determined Sexual Minority Spaces and Attributes of Sexual Minority Spaces 146

The Stonewall Inn. Castro Street. Boystown. Throughout generations, lesbian, gay, bisexual, and queer (LGBQ)[1] people have built spaces for themselves in the world, referred to as *sexual minority spaces,* to foster community and explore their sexual identities (Jugănaru, 2018; Croff et al., 2017). *Sexual identity* is the self-imposed label encapsulating one's emotional and physical attraction to the same, different, or multiple genders (Reiter, 1989; Chung et al., 2012)[2]; some common sexual identities are lesbian, gay, bisexual, queer, and straight. Sexual minority spaces are important for LGBQ people, as sexual minority spaces provide safety and community for LGBQ people (Jugănaru, 2018; Croff et al., 2017). Sexual identity and sexual minority space may also interact, as sexual minority space may aid in identity development and other sexual identity-specific processes which, in turn, benefits the well-being of LGBQ people (Fingerhut et al., 2005; Ghavami et al., 2011; Konik & Stewart, 2004). Additionally, sexual minority space may provide benefits by providing a congruent fit with one's environment, a process called *person-environment fit*, which additionally has many positive effects (Bleidorn et al., 2016; Du et al., 2021; Ebert et al., 2020; Fulmer et al., 2010; Götz et al., 2018; Jokela et al., 2015). The benefits of sexual minority space are especially important to understand because LGBQ people are at higher risk of poor

[1] Despite cultural overlap between sexual and gender minority communities, sexual identity (e.g., gay, straight) and gender identity (e.g., cis, trans, non-binary) are distinct constructs that may impact people in different ways (Roselli, 2018; Tasker & Wren, 2002). The present research, as with much of the previous research, focuses solely on sexual identity, with an emphasis on minority sexual identities lesbian, gay, bisexual, and queer.

[2] My definition of sexual identity is consistent with previous work from sexual identity researchers (Cass, 1996; Chase & Ressler, 2009; Chung et al., 2012; Fingerhut et al., 2005; Ghavami et al., 2011; Kirby et al., 2020; Konik & Stewart, 2004; Reiter, 1989; Rosario et al., 2011; Tasker & Wren, 2002). But see Chung et al. (2012) and Dillon et al. (2011) for other conceptualizations of sexual identity.

mental and physical health outcomes (Chung et al., 2012; King et al., 2008; Ryan et al., 2017), and sexual minority space may promote resilience.

Despite previous qualitative research on sexual minority spaces, little has been done to comprehensively evaluate people's perceptions of sexual minority spaces broadly and for each sexual identity. Further, though sexual minority spaces are intended to foster community and aid in identity development, the direct impacts of sexual minority spaces on sexual minority people are mainly theorized and are overall understudied. Therefore, this research aims to more fully investigate the types and features of sexual minority spaces for each sexual identity, and quantitatively examine the impact of sexual minority spaces on LGBQ people. My dissertation will examine what sexual minority space is and for whom sexual minority space is beneficial. Three different areas of research lay the foundation of the present research: sexual identity, features of spaces, and person-environment fit. Importantly, my dissertation evaluated how each of these areas contributes to well-being, jointly and separately. Though sexual identity development, sexual minority spaces, and person-environment fit all relate to well-being individually, how sexual identity development interacts with identity-specific sexual minority space to promote fit and well-being remains unclear. Therefore, I probed further into these areas to examine perceptions of sexual minority space, and how sexual minority space affects LGBQ people's well-being, based on their sexual identity and the fit between space and identity.

Sexual Identity and Person-Level Features

Sexual identity, or the self-imposed label related to romantic and sexual attractions to same, different, and multiple genders (Chung et al., 2012), impacts many aspects of people's lives. Moreover, the development of sexual identity confers a variety of psychological benefits, especially for LGBQ people. Sexual identity, like racial, political, and religious identities (Porter & Umbach, 2006; Motyl et al., 2020; Schmitt et al., 2010), impacts fit and belonging with the environment; LGBQ people report greater belonging to places high in gay culture, compared to straight people (Esposito & Calanchini, 2022). Sexual identity, then, affects person-environment fit directly, with sexual minority identities influencing fit with gay culture.

However, person-environment fit may vary based on individual and sexual identity differences, such as sexual identity labels and sexual identity development. Though having a minority sexual identity relates to greater belonging in places with gay culture, differences may also emerge within the LGBQ community. Intersections with gender and racial identities impact fit with sexual minority space, especially with gay bars, which are a well-known and culturally important sexual minority space (Croff et al., 2017). Whereas many gay men desire gay bars in their communities, lesbian women prefer other sexual minority spaces (Esterberg, 1996), and gay bars are often not accepting of women (Casey, 2004). LGBQ people of color also feel that they do not belong in gay bars (Giwa & Greensmith, 2012; Page et al., 2022) and face high rates of racial and ethnic stigma in sexual minority space (McConnell et al., 2018). Therefore,

other intersecting identities may affect the fit between minority sexual identity and some types of sexual minority space.

Even without considering intersecting identities, sexual identity is not a monolithic construct, and how sexual identity manifests can vary greatly between individuals. Importantly, sexual identity development may impact person-environment fit. Sexual identity development is the process in which people explore their sexuality and arrive at an identity (Cass, 1996; Konik & Stewart, 2004). Though theorists continue to debate specifics regarding stages of sexual identity development (Cass, 1996; Chung et al., 2012; Dillon et al., 2011; Konik & Stewart, 2004), the consensus is that sexual identity development requires exploration of and commitment to a sexual identity, known as *sexual identity achievement* (Chung et al., 2012). Sexual identity development is an effortful and difficult process that benefits from social support (Chung et al., 2012; Konik & Stewart, 2004). Because sexual minority space provides social support and an opportunity to explore sexual identity (Esterberg, 1996), those undergoing sexual identity development may benefit more from access to sexual minority space than those who have already achieved their identity.

Though some identity theories emphasize identity achievement as the endpoint of identity development (Konik & Stewart, 2004; Marcia, 1966), others include identity integration as a final stage beyond achievement (Cass, 1996; Chung et al., 2012; Dillon et al., 2011). LGBQ people are bicultural, as they navigate both mainstream, heterosexual culture and marginalized, sexual minority culture (Lukes & Land, 1990). As a result, LGBQ people can integrate their two identities and cultures through the process of *sexual*

identity integration, wherein LGBQ people have positive attitudes towards both heterosexuality and homosexuality and have active involvement in sexual minority communities and in mainstream, heterosexual communities (Chung et al., 2012; Fingerhut et al., 2005). Though an integrated sexual identity includes active involvement in sexual minority community (Fingerhut et al., 2005), some LGBQ people who prioritize integrating their sexual identity engage primarily with the mainstream, heterosexual community and report a low need for sexual minority space (Brown-Saracino, 2015). Therefore, sexual identity development and integration may impact the need for sexual minority space, but which stages of identity development benefit most from sexual minority space remains an open question.

Sexual identity achievement and integration also relate directly to well-being. Stronger sexual identity achievement correlates with higher self-esteem, lower anxiety, and lower depressive symptoms among gay men and lesbians (Ghavami et al., 2011). However, sexual identity achievement is not always positive; gay men who progress through sexual identity development too quickly are at a heightened risk of discrimination, emotional dysregulation, anxiety, and depression (Rendina et al., 2019). Sexual identity integration, then, may be the stage of development that best predicts well-being.

Across studies, sexual identity integration consistently relates to positive psychological outcomes. For people of all sexual identities, sexual identity integration relates to higher sexual well-being (Brandon-Friedman et al., 2020). For LGBQ people, the relationship between sexual identity integration and well-being persists across other

domains. Lesbian women whose identities are more integrated report higher satisfaction with life (Fingerhut et al., 2005; Li et al., 2013) and higher hope (Li et al., 2013). Same-gender attracted men who have integrated sexual identities have higher levels of happiness and self-esteem and lower levels of loneliness compared to men at earlier stages of identity development (Halpin & Allen, 2004). For LGBQ people more broadly, greater sexual identity integration is related to fewer depression and anxiety symptoms and higher self-esteem (Rosario et al., 2011). Overall, sexual identity development relates to better psychological outcomes, which underscores the importance of understanding ways to promote identity development and to promote well-being during identity development.

Perceptions of Spaces

Supportive spaces may be crucial in promoting identity development, as supportive environments make sexual identity development easier (Kaminski, 2000). Therefore, understanding spaces and examining what constitutes a supportive or safe space for LGBQ people is important in promoting positive well-being among LGBQ people. The study of space is common in modern research, with many lines of work dedicated to understanding environmental cues and their differential impact on members of social groups. Spaces are imbued with meaning, and even seemingly neutral space, such as public spaces and spaces that do not cater to specific social groups, may favor one group over another (Murphy & Walton, 2013). Public space, which should be accessible for all, is frequently associated with higher-status groups, which negatively affects lower-status groups' experiences in public space. For example, students of lower

socioeconomic status (SES) use campus public spaces less and have a lower sense of belonging in public space, compared to higher-SES students (Trawalter et al., 2021). Similarly, some LGBQ people feel uncomfortable in public space and, consequently, they avoid public spaces (Kirby & Hay, 1997). When lower-status groups do not feel comfortable using public space, they can create and use their own space to reap the community benefits of public space (Talen, 1999), without the discomfort of being in spaces for higher status groups.

Sexual minority space is a safe space for LGBQ people to exist in public and build community outside of the mainstream culture where they may not be accepted (Jugănaru, 2018). However, sexual minority space is not well-defined in the literature, and it appears that people may consider various spaces to be sexual minority spaces. Many studies of sexual minority spaces focus on gay bars and clubs (Baldor, 2019; Croff et al., 2017; Hartless, 2019; Hutson, 2011) or gay neighborhoods, especially in urban areas (Adler & Brenner, 1992; Esterberg, 1996; Ghaziani, 2014; Weston, 1995). However, other spaces are also sexual minority spaces, such as women's music festivals (Esterberg, 1996; Morris, 2005) and women's professional basketball games (Dolance, 2005; Muller, 2007; Myrdahl, 2009). These spaces all potentially serve as sexual minority spaces, and there appears to be a split between spaces for gay men and lesbian women. However, what sexual minority space looks like for each sexual identity is unclear, and more needs to be done to systematically capture the many forms of sexual minority spaces.

Though sexual minority spaces may not be fully captured in research, the sexual minority spaces examined still provide psychological benefits for LGBQ people. Sexual minority space promotes a sense of safety (Croff et al., 2017) and belonging (Esposito & Calanchini, 2022) among LGBQ people. Sexual minority spaces on college campuses are related to less discrimination and higher self-acceptance among LGBQ students (Woodford et al., 2018). Further, sexual minority space may allow for LGBQ people to come together in community, which has additional benefits. Support from the sexual minority community may further aid identity development (Chung et al., 2012; Konik & Stewart, 2004) and provide unique well-being outcomes. Community support relates to greater satisfaction with life, more self-esteem, less depression, and less anxiety among lesbian and gay people (Ghavami et al., 2011) and belonging to the sexual minority community relates to lower depression levels in gay men and lesbian women (McLaren et al., 2008; McLaren, 2009). Overall, sexual minority space can provide belonging, aid in identity development, and create a sense of community, which, in turn, promotes positive outcomes for LGBQ people. However, the direct relationship between sexual minority space and well-being has not been studied, nor has it been studied in the context of sexual identity development or based on specific types of sexual minority spaces.

Person-Environment Fit

Though sexual identity and sexual minority spaces may relate to belonging and well-being separately, the interaction between these person-level and environmental factors also influences behaviors and well-being outcomes in a variety of ways, through person-environment fit. Person-environment fit occurs when people share traits with their

environment, with impacts across many domains; people may find fit with the social environment of their workplace (Edwards et al., 1998; Su et al., 2015), the academic culture of their college major (Porter & Umbach, 2006), the moral values of their country (Hanel et al., 2020), or the dominant personality traits of their region (Rentfrow et al., 2008). Environmental features can take many forms but are often found at the intersection of social and built environment. Extraverted people tend to live among other extraverted people, together shaping a social environment that fits their goals, desires, and interests: for example, extraverted people tend to go to more bars and other social spaces (Rentfrow et al., 2008), so they create and patronize physical spaces that suit them. Built environment, in turn, signals qualities of the region, which also promotes belonging. Bookstores signal liberalism (Motyl et al., 2020) and Christmas decorations signal Christian religiosity (Schmitt et al., 2010), relating to greater belonging among liberals and Christians, respectively. Across domains, people tend to live around those similar to them, and features of the built environment promote belonging and signal community fit.

Similarly, LGBQ people may cluster in areas that fit their sexual identity, using environmental cues and cultural histories to guide where they live. Gay bars are identity-congruent spaces that may signal community and gay friendliness (Jugănaru, 2018), thus promoting fit among LGBQ people. As a result, LGBQ people often migrate to regions with sexual minority space, such as gay neighborhoods (Weston, 1995), and LGBQ people report greater belonging to spaces high in gay culture, relative to straight culture (Esposito & Calanchini, 2022). However, not all LGBQ people live in communities with

sexual minority space (Cooke & Rapino, 2007), and some LGBQ people do not feel that sexual minority space fits them (Annes & Redlin, 2012; Brown-Saracino, 2015). Further, mere presence of a sexual minority space does not always provide fit and belonging for LGBQ people (Seelman et al., 2015), and sexual minority spaces in schools provide academic benefits even for those who do not want the spaces, showing benefits despite a person-environment misfit (Calzo et al., 2020). Therefore, sexuality-based person-environment fit merits further examination, with an emphasis on how features of people interact with environments to impact fit.

Importantly, person-environment fit relates to a variety of positive psychological outcomes, such as subjective well-being (Fulmer et al., 2010; Götz et al., 2018), longevity (Ebert et al., 2020), self-esteem (Bleidorn et al., 2016; Du et al., 2021), and life satisfaction (Jokela et al., 2015). Person-environment fit also promotes greater belonging to a place (Motyl et al., 2014), which is a fundamental human need (Baumeister & Leary, 1995) that also relates to other positive outcomes, including hope, adjustment, and resilience (Van Ryzin et al., 2009; Shakespeare-Finch & Daley, 2017). However, little has been done to examine person-environment fit for LGBQ people in sexual minority spaces, and the previous research does not examine fit based on sexual identity, fit with the community, or the well-being related to fit. Therefore, due to the effect of person-environment fit on well-being, both directly and indirectly, how sexuality-based person-environment fit may occur and how it positively impacts LGBQ people's well-being must be further examined.

Present Research

Across three studies, the present research probed into perceptions of sexual minority space to identify the features associated with sexual minority space for different sexual identities and use these features to examine how sexual minority spaces relate to LGBQ people's well-being. Building upon evidence that spaces have stereotypes and perceptions associated with them (e.g., Motyl et al., 2020, Bonam et al., 2016), Study 1 investigated perceptions of sexual minority space. Importantly, I investigated sexual minority spaces as a function of sexual identity, to determine differences and similarities between spaces for different identities within the LGBQ community. I hypothesized that participants will report features of sexual minority space that are consistent among participants (e.g., many people will mention gay bars as a gay space), and perceptions of sexual minority space will differ for each sexual identity (e.g., differences exist between lesbian space and gay space).

Using perceptions of sexual minority space from Study 1, and evidence that person-environment fit promotes well-being (e.g., Götz et al., 2018, Rentfrow et al., 2008), Study 2 assessed if LGBQ participants' belonging and well-being is related to living in communities with sexual minority space. Given that LGBQ people have worse mental health during early stages of sexual identity development, compared to those with developed and integrated identities (e.g., Fingerhut et al., 2005, Li et al., 2013, Halpin & Allen, 2004, Rosario et al., 2011), I will examine how sexual minority space may be particularly important for those undergoing sexual identity development, who may have worse mental health and therefore need community support from these spaces more than

those with integrated identities. I hypothesized that sexual minority spaces will be associated with positive outcomes for LGBQ people who live in communities with those spaces, with greater belonging and better well-being outcomes for LGBQ people living in spaces that reflect their sexual identity (e.g., a lesbian living among lesbian spaces). Additionally, I hypothesized that LGBQ people who are developing their sexual identity will have a sharper increase in belonging and well-being as the number of sexual minority spaces increases than those who have integrated their sexual identity.

Continuing to employ theories of person-environment fit and research on spaces, Study 3 examined the relationship of sexual minority space and well-being at the regional level. Based on perceptions of sexual minority space identified in Study 1, I quantified the number of sexual minority spaces in a state. Then, I examined if the number of sexual minority spaces relate to the LGBQ people's well-being in each state. I hypothesized that the regional quantity of sexual minority space will positively correlate with LGBQ people's well-being in the region. Together, the three studies of my dissertation advanced research on perceptions of spaces, sexual identity, and person-environment fit theories, and how the interactions between spaces, sexual identity, and person-environment fit relate to LGBQ well-being.

Study 1

Spaces may have stereotypes about them (Bonam et al., 2016) and certain spaces may signal identities or traits (Motyl et al., 2020; Rentfrow et al., 2008). Similarly, sexual minority spaces may have stereotypes or associations with them. Many studies outside the discipline of psychology have examined sexual minority spaces, typically using

qualitative methods to examine how specific spaces function as sexual minority spaces, like local gay bars or WNBA games (Hartless, 2019; Muller, 2007; Myrdahl, 2009), or examine LGBQ people's experiences in gay bars (Baldor, 2019; Croff et al., 2017; Hutson, 2011). Though these studies identify some spaces as sexual minority spaces, no research to date investigates perceptions of sexual minority space, and how sexual minority space may be different depending on its associated sexual identity label. Therefore, Study 1 establishes people's perceptions of sexual minority space for various sexual identities.

Methods

Participants

I recruited 120 participants using an online survey platform, CloudResearch, recruiting an equal number of straight, gay, lesbian, and bisexual participants. After excluding the participants who did not want their data used in analyses, I included 117 CloudResearch participants in the sample, which consisted of 28 bisexual participants, 28 gay participants, 20 lesbian participants, 3 queer participants, 37 straight participants, and 1 participant who identified as "Other," writing in "normal" for her sexual identity. Recruiting an equal number of straight, gay, lesbian, and bisexual participants ensures that multiple sexual identities are represented in the analysis so that I can examine perspectives from ingroup (sexual minority people) and outgroup (straight people) about sexual minority spaces. The sample size is based on the average sample size of previous qualitative research on the perceptions of spaces, which had 60 participants on average (Baldor, 2019; Bonam et al., 2016; Brown-Saracino, 2015; Casey, 2004; Croff et al.,

2017; Ghaziani, 2014; Hartless, 2019; Hutson, 2011), and based on when qualitative datasets reach saturation (i.e., no novel codes appearing at this point), which was between 9 and 17 participants on average, or between 20 and 40 participants for more obscure topics (Hennink & Kaiser, 2022).

I also recruited a sample of 120 participants from the university subject pool, where I was unable to recruit by sexual identity. Therefore, the undergraduate student sample consisted of 2 asexual participants, 17 bisexual participants, 4 gay participants, 2 lesbian participants, 3 queer participants, 89 straight participants, and 3 participants who identified as "Other," who wrote in demisexual, "not sure," and "still figuring it out."

Materials & Procedure

Participants first consented to participate in the study and then they viewed the following instructions:

> "This survey will ask for your thoughts about the spaces that different groups of people inhabit. For example, if the survey asks what comes to mind when you think of "teacher spaces," you would want to think about spaces for teachers and spaces that teachers enjoy and frequent, such as schools, libraries, and education conferences. Please report types of physical spaces (e.g., bookstores) and features of these spaces (e.g., quiet) when responding to prompts, if they come to mind.
>
> There are no right or wrong answers, and it's ok if you find yourself responding similarly to multiple questions if you have similar impressions of different spaces."

Participants then responded to prompts about their perceptions of sexual minority spaces. Participants reported their perceptions of five types of sexual minority spaces, each related to a different sexual identity or category label: queer space, LGBTQ+ space, gay space, lesbian space, and bisexual space. I will give participants the following prompt:

> "[Queer/LGBTQ+/Gay/Lesbian/Bisexual] spaces are spaces that are made for [Queer/LGBTQ+/Gay/Lesbian/Bisexual] people, that [Queer/LGBTQ+/Gay/Lesbian/Bisexual] people like, and/or that [Queer/LGBTQ+/Gay/Lesbian/Bisexual] people frequent. In 2-3 sentences, share what comes to mind when you think of [Queer/LGBTQ+/Gay/Lesbian/Bisexual] spaces. What types of places do you associate with [Queer/LGBTQ+/Gay/Lesbian/Bisexual] people, and what are those places like?"

Participants responded to both general categories first (queer space and LGBTQ+ space), with their order of presentation randomized. Participants then responded to the specific sexual orientation categories (gay space, lesbian space, and bisexual space), with their order of presentation randomized. Participants reported their sexual orientation and gender, as well as a few other demographic questions (age and race/ethnicity). Participant demographics are included in Table 1.

Table 1

Study 1 Participant Demographics

Demographic Variable	***Value***
Age	27.91 (*SD* = 11.60)
Gender	
Man	93 (39.2%)
Non-Binary	4 (1.7%)
Other	2 (0.8%)
Transman	2 (0.8%)
Transwoman	3 (1.3%)
Woman	133 (56.1%)
Race/Ethnicity	
Asian	57 (24.1%)
Black/African American	12 (5.1%)
Hispanic/Latine/x	50 (21.1%)
Middle Eastern	6 (2.5%)
Multiracial	17 (7.2%)
Native American or Alaska Native	1 (0.4%)
Other	1 (0.4%)
White	93 (39.2%)

Data Analysis

A team of research assistants and I analyzed the responses to the perceptions of sexual minority space using the qualitative analysis software, QualCoder. We thematically coded responses, using both deductive and inductive coding. My deductive codes are split into three broad parent codes: physical spaces, transient event spaces, and qualities of spaces. Under each parent code, I created deductive codes, listed in Table 2. I developed these deductive codes based on popular media and culture, previous literature, and my own personal expertise.

Table 2

Deductive Codes for Analyzing Study 1 Responses

Physical Spaces	Transient Event Spaces	Qualities of Spaces
Gay bars or clubs	Pride parades	Urban
Queer coffeeshops	Pride events	Artistic
Queer bookstores	Women's music festivals	Liberal
LGBTQ community centers	Women's sporting events	New or up-and-coming

Note. Each column is a different parent code with deductively created child codes beneath.

I also created inductive codes based on the data. The inductive codes captured other common responses in the data, and I added them to the codebook during the coding process. The research assistants and I coded all prompts using the finalized codebook that includes both deductive and inductive codes. After coding the data, I regrouped the codes into two primary parent codes: spaces and attributes. Spaces reflect any actual place a person can go to, including transient spaces (e.g., pride events), and attributes reflect any traits of places, including the demographics of a place (e.g., large population of gay people).

I then analyzed the frequency that each code was mentioned for each type of sexual minority space. Originally, I planned to create a list of codes for each type of sexual minority space, using the codes that are mentioned by more than half of participants or the five most mentioned codes, whichever is larger. Across the five types of sexual minority spaces, no spaces were mentioned by 50% of participants, so I focused on the most mentioned codes for each type of sexual minority space.

I also examined the similarities and differences between features of sexual minority spaces for each sexual identity. I examined the codes to find which themes were only mentioned for some sexual identity types and which themes were commonly mentioned in the context of multiple sexual identity types. Finally, I examined which sexual identity spaces have more crystallized spaces associated with them, based on the consensus among participants. I preregistered all methods, analyses, and hypotheses before starting data collection, which can be found on https://osf.io/grvxm/.

Hypotheses

I hypothesized that, across the 75 responses, each type of sexual minority space will have features and spaces that are commonly mentioned. I considered these commonly mentioned features and types of space to be the sexual minority spaces for each sexual identity. I also hypothesize that there will be overlap in features and spaces for the types of sexual minority space; in other words, the same features and spaces will be associated with multiple types of sexual minority space. I hypothesize that the overlap will occur between gay space and broader queer and LGBQ space, signaling a pattern of androcentrism, or the societal centering of men and positioning of men as the default and

as gender-neutral (Bailey et al., 2019). Further, I hypothesize that the types of sexual minority space that have greater historical or cultural representation (i.e., gay space) will also have a greater consensus among the codes, compared to types of spaces that are less crystallized (i.e., bisexual space), as indicated by higher code frequencies and a fewer number of themes mentioned.

Results

Non-Responses

Overall, most participants responded to the prompts and provided information about spaces they perceive as sexual minority spaces. Across sexual identity space types, participants provided a "non-response" in 22.9% of responses, such as not answering the question (e.g., "I think it is a space I could be a part of in the future if I have a change in mind"), saying all spaces are sexual minority spaces (e.g., "I think of anywhere on this planet"), responding that they did not know of any spaces (e.g., "I really have no idea what would be considered a lesbian space"), or providing an anti-LGBTQ+ response (e.g., "Cult. That is what comes to mind, a cult"). Non-responses were particularly common among responses to bisexual spaces, with 41.8% of responses including a non-response compared to 14.6% of gay space responses, 24.1% of lesbian space responses, 15.6% of LGBTQ+ space responses, and 18.6% of queer space responses.

Participants compared the space asked about to other sexual identity spaces in 13.8% of responses (e.g., "I assume it would be the same as regular LGBTQ+ spaces."). Once again, participants used these comparisons most commonly for bisexual spaces, comparing them to other sexual identity spaces in 28.7% of responses, compared to 7.2%

of gay space responses, 11.4% of lesbian space responses, 9.5% of LGBTQ+ space responses, and 15.4% of queer space responses. Full breakdown of non-responses by sexual minority space type are in Table 3.

Table 3

Non-Responses by Sexual Identity Type and Type of Non-Response

Type	Bisexual	Gay	Lesbian	LGBTQ+	Queer	Total
Total of Non-Responses	41.8%	14.6%	24.1%	15.6%	18.6%	22.9%
Anti-LGBTQ+	1.7%	3.6%	2.5%	2.5%	3.4%	2.7%
Any or All	18.1%	6.1%	5.7%	6.3%	5.5%	8.4%
Don't Know	17.7%	2.5%	8.4%	3.0%	4.4%	7.2%
Non-Answer	4.2%	2.3%	7.4%	3.8%	5.3%	4.6%
Same as…	28.7%	7.2%	11.4%	9.5%	12.0%	13.8%
Bisexual	–	0.4%	0.0%	0.0%	0.0%	0.1%
Gay	5.3%	–	2.5%	0.0%	0.0%	1.6%
Lesbian	2.3%	0.4%	–	0.0%	0.0%	0.5%
LGBTQ+/Queer	15.0%	5.5%	8.0%	8.4%	10.8%	9.5%
Straight	6.1%	0.8%	0.8%	1.1%	1.3%	2.0%

Note. Participants often grouped LGBTQ+ and queer together when responding that a space was like one of those spaces, therefore we combined their responses of same as LGBTQ+ and same as queer for that code. For perceptions of queer spaces, participants responded that the spaces were like LGBTQ+ spaces, and vice versa for perceptions of LGBTQ+ spaces.

Overall, this pattern of findings shows that bisexual spaces have less crystallized spaces associated with them, and there are more comparisons and non-answers given for perceptions of bisexual spaces. This finding is in line with predictions that spaces with less historical and cultural representation (e.g., bisexual space) will have fewer spaces associated with them than are associated with spaces with more representation (e.g., gay spaces; Esterberg, 1996). Further, participants compared bisexual spaces to straight spaces more often than any other space was compared to straight spaces (6.1% of responses compared to 1.0% of all other space types), showing evidence of bisexual erasure in the LGBTQ+ community (e.g., Kirby et al., 2020).

Perceptions of Sexual Minority Spaces

To examine the most common features and types of sexual minority spaces, I first examined the most common responses to each type of sexual minority space by all participants. Overall, each sexual minority space type shared many codes with other types of sexual minority spaces in their most mentioned codes. Bar and nightclub were the two most mentioned codes for each type of sexual minority space. Many attributes of sexual minority spaces were also represented in many of the top codes for each sexual minority space type, such as inclusive and accepting, safe, and open. I focused on the spaces and attributes separately in subsequent studies, to emphasize the distinction between physical spaces one can be in and attributes of their overall community. The codes mentioned by more than 10% of respondents for each sexual minority space are outlined in Table 4.

Table 4

Most Commonly Mentioned Type of Sexual Minority Space by Sexual Identity Type

	Type of Space	Percent Mentioned		
		All Participants	Sexual Minority	Same Identity as Space
Bisexual				
	Inclusive and Accepting	24.7%	14.9%	33.3%
	Bar	24.1%	43.3%	20.0%
	Nightclub	18.4%	26.9%	17.8%
	Open and No Concealment	13.5%	13.4%	26.7%
	Coffeeshop/Café	10.1%	13.4%	8.9%
	Non-Book Shopping	7.8%	12.7%	8.9%
	Safe	6.3%	6.0%	13.3%
	Outdoor Spaces	6.1%	1.5%	12.2%
	Community Centers	4.6%	13.4%	2.2%
	Quiet	3.6%	12.2%	12.2%
	Support Group	3.4%	0.0%	11.1%
Gay				
	Bar	49.6%	57.5%	62.5%
	Nightclub	33.1%	36.3%	42.2%
	Inclusive and Accepting	19.0%	25.0%	12.5%
	Open and No Concealment	15.6%	15.6%	9.4%
	Coffeeshop/Café	12.2%	11.3%	23.4%
	Pride Events	11.8%	21.9%	6.3%
	Safe	11.6%	15.6%	9.4%
	Prevalence of Gay People	10.3%	10.0%	12.5%
	Fun	8.4%	12.5%	9.4%
	Loud	8.0%	11.3%	6.3%
	Restaurant	5.9%	8.8%	12.5%
	Gym	3.4%	3.8%	12.5%
	Bathhouse	3.0%	2.5%	12.5%
	Museum	1.9%	1.3%	10.9%
Lesbian				
	Bar	37.1%	57.1%	36.4%
	Nightclub	20.9%	33.1%	22.7%
	Inclusive and Accepting	18.6%	23.4%	27.3%
	Coffeeshop/Cafe	13.5%	15.6%	31.8%
	Non-Book Shopping	12.7%	15.6%	18.2%
	Safe	11.0%	16.9%	18.2%
	Bookstore	9.7%	14.3%	27.3%
	Open and No Concealment	7.8%	11.0%	4.5%
	Women-Only Spaces	7.4%	11.7%	11.4%

	Outdoor Spaces	6.8%	10.4%	13.6%
	Sports and Sporting Events	6.3%	5.8%	22.7%
	Prevalence of Lesbians	6.1%	10.4%	2.3%
	Quiet	5.9%	10.4%	9.1%
	Restaurant	4.6%	3.9%	22.7%
	Artsy and Creative	3.6%	3.9%	11.4%
LGBTQ+				
	Inclusive and Accepting	37.8%	44.2%	
	Bar	34.6%	47.3%	
	Nightclub	26.4%	33.9%	
	Safe	19.0%	21.4%	
	Coffeeshop/Cafe	17.3%	25.0%	
	Open and No Concealment	15.2%	19.6%	
	Pride Events	15.2%	13.8%	
	Colorful	11.8%	10.7%	
	Non-Book Shopping	11.4%	16.1%	
	Community Center	9.7%	17.0%	
	Prevalence of Sexual Minority People	6.1%	10.3%	
Queer				
	Inclusive and Accepting	34.0%	36.6%	
	Bar	30.4%	37.5%	
	Nightclub	24.1%	24.1%	
	Safe	19.2%	22.8%	
	Open and No Concealment	16.7%	16.1%	
	Coffeeshop/Cafe	16.0%	25.0%	
	Non-Book Shopping	12.7%	21.9%	
	Pride Events	11.8%	12.1%	
	Bookstore	8.0%	15.2%	
	Community Center	8.0%	14.3%	

For all respondents, I found that participants largely mentioned the same spaces and attributes for each type of space. Participants frequently associated bars, nightclubs, and coffeeshops with bisexual, gay, lesbian, queer, and LGBTQ+ spaces. Participants also reported frequently that sexual minority spaces are safe, inclusive and accepting, and open, allowing for no concealment. These findings align with previous work on sexual minority spaces, showing that bars and safe spaces are often considered to be sexual minority spaces.

However, when including all participants' responses, there are minimal differences between spaces for each sexual identity. Bisexual spaces mentioned by at least 10% of all participants fully overlap with gay and lesbian spaces, with no additional spaces for bisexual spaces. Lesbian spaces and gay spaces also largely overlap, but non-book shopping was only mentioned for lesbian spaces and pride events and a large population of gay men was only mentioned for gay spaces. Therefore, I examined responses only from sexual minority people, who may have further insight into sexual minority spaces.

I then examined the most common responses to each type of sexual minority space based on responses from sexual minority participants who are not the target sexual minority space type (e.g., gay and lesbian people responding about bisexual spaces). I examined their perceptions because sexual minority participants share the same sexual minority community and may have additional knowledge about sexual minority spaces beyond what straight participants might be aware of. The commonly mentioned codes are outlined in Table 4.

Overall, codes mentioned by the overall sample and codes mentioned by only sexual minority people had a considerable overlap. However, multiple new codes emerged for each type of sexual minority space. Three new codes emerged for bisexual spaces: non-book shopping, community centers, and quiet. For gay spaces, sexual minority people mentioned attributes of fun and loud over 10% of the time. Lesbian spaces had the highest number of new codes added from this approach, which are bookstore, open and no concealment, quiet, women's only spaces, outdoor areas, and a large population of lesbian women. This approach also elucidated two new codes for LGBTQ+ spaces (community centers and high population of LGBTQ+ people) and two new codes for queer spaces (bookstores and community centers).

Finally, I examined the most common responses to each type of sexual minority space based on responses from identity-space matched participants (e.g., lesbian people responding to lesbian spaces). I examined their perceptions because they may have even greater insight into the spaces within their identity-specific community. The commonly mentioned codes are outlined in Table 4.

At least 10% of bisexual participants reported that bisexual spaces are safe and quiet, and that bisexual spaces are outdoor areas support groups, but less than 10% mentioned coffeeshops, which the outgroups reported more consistently for bisexual spaces. At least 10% of gay participants reported the additional codes of restaurants, gyms, bathhouses, and museums as gay spaces. At least 10% of lesbian participants reported sporting events, restaurants, and artsy and creative places as lesbian spaces.

Overall, bisexual, gay, and lesbian participants reported multiple unique spaces for their sexual identities.

Study 1 Discussion

Study 1 used a qualitative approach to understand how people perceive sexual minority spaces. Participants provided numerous physical spaces and events as well as less tangible features of sexual minority spaces. In line with predictions, perceptions of bisexual spaces were less crystallized than perceptions of spaces with more history, such as gay spaces. Participants also provided different spaces for different sexual identities, showing some differences in how lesbian, gay, and bisexual spaces are perceived. For example, unlike gay and lesbian spaces, bisexual spaces included community centers and support groups. People perceived gay spaces as being fun and loud, in stark contrast to lesbian and bisexual spaces that were perceived as quiet. Gay spaces also included bathhouses, gyms, and museums, which were unique to gay spaces. Lesbian spaces, instead, included sporting events and women's spaces.

In contrast to my hypotheses, participants rarely formed a consensus on sexual minority spaces, as most spaces were mentioned by less than half of participants. Further, there is considerable overlap in spaces across identities, with bars, nightclubs, and accepting being associated with all identities. Despite these challenges, Study 1 still provides deeper insight into perceptions of sexual minority spaces, specifically the nuances between sexual identities, and the spaces identified are fundamental for the analyses in Studies 2 and 3.

Study 2

In Study 1, I identified the many spaces and attributes of spaces that constitute sexual minority spaces in a comprehensive analysis. Study 2 built upon these findings to further examine how sexual minority spaces relate to well-being. Sexual minority spaces are safe spaces for LGBQ people to develop their identities and find social support (Annes & Redlin, 2012; Esterberg, 1996) and feel a sense of belonging and fit (Esposito & Calanchini, 2022), all of which promote well-being outcomes for LGBQ people (Ghavami et al., 2011; Rosario et al., 2011; Shakespeare-Finch & Daley, 2017). However, the direct pathways from sexual minority spaces to well-being are understudied, and questions remain about how individual differences impact this relationship. In Study 2, I quantitatively examined the benefits of person-environment fit between sexual minority people and sexual minority spaces, with a particular emphasis on how sexual identities and sexuality-based types of sexual minority spaces relate to well-being.

Methods

Participants

I recruited 360 participants using an online survey platform, CloudConnect, but after removing one participant who opted out of data usage, I had a total of 359 participants. I determined the sample size from an effect size in a similar paper (Motyl et al., 2019), an alpha of 0.05, and a power of 0.8, using G*Power (Faul et al., 2007). I aimed to recruit an equal number of straight, gay, lesbian, and bisexual participants to ensure that multiple sexual identities are represented in the analysis and allow for

comparisons within and between people of different sexual identities. However, straight people were slightly overrepresented in the sample (29.8%) due to participant information being incorrect on CloudConnect. Bisexual people (25.0%), gay people (22.6%), and lesbian people (22.6%) constitute the rest of the sample. Participant demographics are in Table 5.

Table 5

Study 2 Participant Demographics by Sexual Orientation.

Variable	***Lesbian***	***Gay***	***Bisexual***	***Straight***
Gender				
Man	0 (0.0%)	73 (90.1%)	25 (27.8%)	57 (53.3%)
Woman	79 (97.5%)	0 (0.0%)	59 (65.6%)	50 (46.7%)
Transman	0 (0.0%)	7 (8.6%)	2 (2.2%)	0 (0.0%)
Transwoman	2 (2.5%)	0 (0.0%)	1 (1.1%)	0 (0.0%)
Non-Binary	0 (0.0%)	1 (1.2%)	3 (3.3%)	0 (0.0%)
Race				
Asian	2 (2.5%)	11 (13.6%)	3 (3.3%)	14 (13.1%)
Black or African American	8 (9.9%)	10 (12.3%)	10 (11.1%)	5 (4.7%)
Hispanic/Latine	5 (6.2%)	3 (3.7%)	3 (3.3%)	5 (4.7%)
Multiracial	5 (6.2%)	10 (12.3%)	12 (13.3%)	9 (8.4%)
Native American	0 (0.0%)	0 (0.0%)	1 (1.1%)	0 (0.0%)
Native Hawaiian or Pacific Islander	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)
Self-Report: Ashkenazi	0 (0.0%)	0 (0.0%)	1 (1.1%)	0 (0.0%)
White	61 (75.3%)	46 (56.8%)	60 (66.7%)	74 (69.2%)
Age	36.81 (13.00)	37.80 (12.70)	32.06 (8.76)	37.07 (10.78)
Politically Conservative (1-7 Scale)	2.01 (1.30)	2.32 (1.52)	2.26 (1.57)	3.49 (2.01)
General Belonging Scale	5.01 (1.56)	4.49 (1.86)	4.85 (1.67)	5.32 (1.47)
General Well-Being	63.38 (23.62)	59.70 (26.33)	56.52 (21.29)	69.71 (22.16)
LGBIS Overall	4.44 (0.60)	4.23 (0.69)	4.13 (0.66)	–
LGBIS Identity Stress	2.84 (0.94)	3.27 (1.07)	2.98 (0.99)	–
LGBIS Identity Development	4.38 (0.68)	4.32 (0.59)	3.91 (0.68)	–
LGBGIM Ingroup Orientation	3.10 (0.54)	2.98 (0.54)	2.88 (0.56)	–
LGBGIM Outgroup Orientation	3.44 (0.49)	3.43 (0.51)	3.49 (0.45)	–
Percent of Sexual Minority Spaces	72.7% (24.44)	73.1% (23.91)	70.5% (27.76)	76.3% (22.84)
Features of Sexual Minority Spaces	0.85 (0.46)	0.82 (0.45)	0.79 (0.38)	0.82 (0.39)
Percent of Identity-Specific Sexual Minority Spaces	79.2% (19.53)	74.3% (24.05)	76.4% (24.42)	–
Features of Identity-Specific Sexual Minority Spaces	0.62 (0.22)	0.69 (0.39)	0.62 (0.18)	–
Percent of Identity-Determined Sexual Minority Spaces	76.3% (19.53)	75.6% (21.93)	71.4% (31.41)	–
Features of Identity-Determined Sexual Minority Spaces	0.65 (0.26)	0.54 (0.29)	0.62 (0.18)	–

Note. For categorical variables, the table reports the number of participants in a category with the percentage in the parentheses. For numeric variables, the table reports the mean with the standard deviation in the parentheses.

Materials & Procedure

Participants completed the following measures to capture the amount of sexual minority spaces in their communities and the features of their communities, as well as the participants' time in their community, sexual identity development, belonging to their community, and overall well-being. Each measure is described below. Participants also reported their demographics, including their age, gender, race/ethnicity, and sexual identity, outlined in Table 5.

Community Sexual Minority Spaces. I created a list of the sexual minority spaces based on the results from Study 1, which included the overall most mentioned spaces, the spaces mentioned most by sexual minority people, and the spaces mentioned most by people of the target sexual identity (e.g., bisexual people responding about bisexual spaces). Participants responded to a series of questions about if each place was in their community and participants could answer "Yes," "No," or "I don't know." I then created three operationalizations of sexual minority spaces – overall sexual minority spaces, identity-specific sexual minority spaces, and identity-determined sexual minority spaces – which are outlined in Table 6.

Table 6

Sexual Minority Places by Type of Sexual Identity and Space

	Lesbian	Gay	Bisexual
Overall		- Queer/LGBTQ bar - Nightclub - Outdoor area - Coffeeshop - Shopping area - Bookstore - Restaurant - Sporting event - Women's sporting event - Women-Only event/space - Pride event - Bathhouse - Gym - Museum - LGBTQ support group - LGBTQ community center	
Identity-Specific	- Lesbian bar - Queer/LGBTQ bar - Nightclub - Outdoor area - Coffeeshop - Shopping area - Bookstore - Restaurant - Sporting event - Women's sporting event - Women-Only event/place	- Gay bar - Queer/LGBTQ bar - Nightclub - Coffeeshop - Pride event - Bathhouse - Gym - Restaurant - Museum	- Queer/LGBTQ bar - Nightclub - Outdoor area - LGBTQ support group - LGBTQ community center - Coffeeshop - Shopping area
Identity-Determined	- Lesbian bar - Queer/LGBTQ bar - Nightclub - Outdoor area - Coffeeshop - Shopping area - Bookstore - Restaurant - Sporting event - Women's sporting event - Women-Only event/place	- Gay bar - Queer/LGBTQ bar - Nightclub - Coffeeshop - Bathhouse - Gym - Restaurant - Museum	- Queer/LGBTQ bar - Nightclub - Outdoor area - LGBTQ support group

Note. Identity-specific and identity-determined spaces are listed in the order of percent of overall participants mentioning the code, with first item the most mentioned by all participants. Overall spaces reflect all commonly mentioned spaces for all identities, so their order is not related to mentions due to the complexity.

Overall sexual minority places are associated with any of the sexual identities from Study 1. Identity-specific sexual minority places are only associated with certain sexual identities from Study 1, which I matched to participants' sexual identities. Identity-determined sexual minority places are identity-specific and mentioned by at least 10% of people of that sexual identity. These lists are not mutually exclusive, as places can fit into multiple categories and can be associated with multiple sexual identities.

Attributes of Sexual Minority Spaces. I created a list of the attributes of sexual minority spaces based on the results from Study 1, which included the overall most mentioned attributes, the attributes mentioned most by sexual minority people, and the attributes mentioned most by people of the target sexual identity (e.g., bisexual people responding about attributes of bisexual spaces). Participants responded on a 5-point Likert scale from "Strongly Disagree" to "Strongly Agree" to prompts of "My community is/has [attribute]" for all attributes, outlined in Table 7. I again created three operationalizations of sexual minority attributes: overall sexual minority attributes, identity-specific sexual minority attributes, and identity-determined sexual minority attributes.

Table 7

Sexual Minority Attributes by Type of Sexual Identity and Space

	Lesbian	Gay	Bisexual
Overall		- Inclusive and accepting - Open and no concealment - Safe - Quiet - Artsy and creative - Large population of lesbian women - Fun - Loud - Large population of gay men - Colorful - Large population of LGBTQ people	
Identity-Specific	- Inclusive and accepting - Open and no concealment - Safe - Quiet - Artsy and creative - Large population of lesbian women	- Inclusive and accepting - Open and no concealment - Safe - Fun - Loud - Large population of gay men	- Inclusive and accepting - Open and no concealment - Safe - Quiet
Identity-Determined	- Inclusive and accepting - Safe - Artsy and creative	- Inclusive and accepting - Large population of gay men	- Inclusive and accepting - Open and no concealment - Safe - Quiet

Note. Attributes are listed in the order of percent of overall participants mentioning the code, with first item the most mentioned by all participants. Overall attributes reflect all commonly mentioned spaces for all identities, so their order is not related to mentions due to the complexity.

As above, overall sexual minority attributes are attributes associated with any of the sexual identities from Study 1. Identity-specific sexual minority attributes are only associated with certain sexual identities from Study 1, which I matched to participants' sexual identities. Identity-determined sexual minority attributes are identity-specific and mentioned by at least 10% of people of that sexual identity. These lists are not mutually exclusive, as attributes can fit into multiple categories and can be associated with multiple sexual identities.

The General Belongingness Scale (GBS). The General Belongingness Scale (GBS) is a 12-item measure of a sense of general belonging (Appendix A; Malone et al., 2012). Six of the items reflect acceptance and inclusion (e.g., "I feel accepted by others") and the other six items reflect rejection and exclusion (e.g., "I feel isolated from the rest of the world") and are reverse-scored ($\alpha = 0.967$).

The General Well-Being Schedule (GWB). The General Well-Being Schedule (GWB) is an 18-item measure of well-being across six dimensions: positive well-being, self-control, vitality, depression, anxiety, and general health (Appendix B; Fazio, 1977). Example items include "How happy, satisfied, or pleased have you been with your personal life?" and "Have you been anxious, worried, or upset?" ($\alpha = 0.953$).

The Lesbian, Gay, and Bisexual Identity Scale (LGBIS). The Lesbian, Gay, and Bisexual Identity Scale (LGBIS) is a 27-item measure of sexual identity across eight dimensions: identity uncertainty (e.g., "I'm not totally sure what my sexual orientation is."), internalized homonegativity (e.g., "If it were possible, I would choose to be straight."), identity affirmation (e.g., "I am glad to be an LGB person."), acceptance

concerns (e.g., “I think a lot about how my sexual orientation affects the way people see me.”), identity superiority (e.g., “I feel that LGB people are superior to heterosexuals.”), concealment motivation (e.g., “My sexual orientation is a very personal and private matter.”), identity centrality (e.g., “Being an LGB person is a very important aspect of my life.”), and difficult process (e.g., “Admitting to myself that I'm an LGB person has been a very painful process.”) (Appendix C; Mohr & Kendra, 2011) ($\alpha = 0.871$).

Adapted Multigroup Ethnic Identity Measure. The Multigroup Ethnic Identity Measure (MEIM) is a 20-item measure of ethnic identification with four subscales: affirmation and belonging (e.g., “I am happy that I am a member of the group I belong to”), ethnic identity achievement (e.g., “I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs”), ethnic behaviors (e.g., “I am active in organizations or social groups that include mostly members of my own ethnic group”), and other-group orientation (e.g., “I like meeting and getting to know people from ethnic groups other than my own”) (Phinney, 1992). Sarno and Mohr (2016) adapted the measure for use with LGBQ people and the adapted measure has high reliability and validity. However, their adapted measure, the Lesbian, Gay, and Bisexual Group Identity Measure (LGBGIM), only adapted three of the four subscales (affirmation and belonging, ethnic identity achievement, and ethnic behaviors) and did not test the final subscale, other-group orientation (Sarno & Mohr, 2016). However, to test integrated identities, I will use both the ingroup identity subscales (affirmation and belonging, identity achievement, and ingroup behaviors) and the outgroup identity subscale (other-

group orientation), in line with Fingerhut and colleagues (2005) (Appendix D; $\alpha = 0.881$ for ingroup scales; $\alpha = 0.796$ for outgroup scales).

Data Analysis

I quantified community sexual minority spaces in three ways. First, I created a scale of the overall number of sexual minority spaces in a community, regardless of its related sexual identity. Second, I identified the number of identity-specific sexual minority spaces based on each participants' sexual identity, such that, for each lesbian woman, she has a number of lesbian spaces in her community, and so on for gay and bisexual participants. Third, I identified the number of identity-determined sexual minority spaces based on each participants' sexual identity. For straight participants, I did not quantify the straight spaces in their communities, as spaces are considered straight by default (Kirby & Hay, 1997), but I still examined the effect of overall sexual minority spaces on straight people. For each type of sexual minority space, I calculated a percentage of spaces present in each participant's community, excluding "I don't know" responses from the calculation.

I scored the GBS, GWS, LGBIS, and LGBGIM according to their standard procedures to create measures of belonging, well-being, identity development, and identity integration, respectively. For the LGBIS, I created two additional measures based on the six subscales. First, I created an identity development scale based on the subscales directly related to identity development (identity uncertainty, identity affirmation, identity superiority, and identity centrality) ($\alpha = 0.829$). Second, I created an identity stress scale based on the subscales directly related to identity concerns (internalized

homonegativity, acceptance concerns, concealment motivation, and difficult process) ($\alpha = 0.877$). Though not directly related to identity development and integration like the other measures, the LGBIS sexual identity stress scale captures identity-relevant issues, and I examined if sexual minority spaces relate to more positive well-being outcomes, in the context of high identity stress. I also split the LGBGIM into two measures, one for ingroup identity, using the ingroup identity subscales (affirmation and belonging, identity achievement, ingroup behaviors), and one for outgroup identity, using the other-group orientation subscale.

I standardized the numeric variables age, political orientation, GBS, GWS, LGBIS, LGBGIM, and both sets of subscales of the LGBIS. For the sexual minority spaces and the attributes of sexual minority spaces, I group mean standardized the spaces and attributes about their type of space.

Using RStudio, I ran linear regressions to evaluate how sexual minority spaces interact with sexual identity, one to predict belonging and another to predict well-being. Each model included an interaction between a measure of sexual identity, the percentage of sexual minority spaces, and the amount of sexual minority space attributes, with the exception of identity integration. To capture identity integration, I include a four-way interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, the percentage of sexual minority spaces, and the amount of sexual minority space attributes. Table 8 includes the multiple operationalizations of sexual identity, sexual minority space, and outcomes.

Table 8

Operationalizations of Predictors and Outcomes in the Regression Models

Sexual Identity	Sexual Minority Spaces × Attributes	Outcomes
1. Sexual identity label (e.g., gay, lesbian) 2. Sexual identity scale (LGBIS) 3. Sexual identity development (LGBIS identity subscales) 4. Sexual identity stress (LGBIS stress subscales) 5. Ingroup sexual identity scale (LGBGIM ingroup subscales) × Outgroup sexual identity scale (LGBGIM other-group orientation)	1. Overall spaces 2. Identity-specific spaces 3. Identity-determined spaces	1. Belonging (GBS) 2. Well-Being (GWS)

Note. Each column reflects a different construct.

With these operationalizations, I created 30 regression models that predicted belonging and well-being based on the interactions between sexual identity, sexual minority spaces, and attributes of sexual minority spaces. I controlled for participant demographics in these models as well as the length of time each participant spent in their community. I preregistered all methods, analyses, and hypotheses before starting data collection, which can be found on https://osf.io/grvxm/.

Hypotheses

My main hypothesis was that lesbian, gay, and bisexual (LGB) people will have higher belonging and well-being in communities with more sexual minority spaces, compared to in communities with fewer sexual minority spaces, and that this effect will be stronger for identity-specific spaces than for overall spaces. Further, I hypothesized that this effect will be stronger for LGB people whose sexual identity is less developed, compared to more developed. I predict also that LGB people will have higher belonging

and well-being in communities with more sexual minority spaces than straight people will.

Exploratorily, I hypothesized that identity-determined sexual minority spaces will have a stronger relationship between the presence of sexual minority spaces and well-being for LGB people, compared to overall sexual minority spaces. I also predict that either places or attributes of places may relate more strongly to well-being and belonging, but I do not predict which will be stronger.

Results

Correlations Between Predictor Variables

I first examined the correlations between the variables before I began running regression analyses, and the correlation matrix is in Table 9.

Table 9

Correlation Matrix of Regression Variables

	Age	Pol	Time	GBS	GWS	LGBIS Stress	LGBIS Dev	LGBIS
Age	1.000							
Pol	0.076	1.000						
Time	0.212 ***	0.041	1.000					
GBS	0.206 ***	0.090	0.049	1.000				
GWS	0.262 ***	0.172 ***	0.111 *	0.692 ***	1.000			
LGBIS Stress	-0.156 *	0.139 *	0.016	-0.458 ***	-0.415 ***	1.000		
LGBIS Dev	-0.063	-0.346 ***	0.064	0.084	0.121	-0.246 ***	1.000	
LGBIS	-0.158	-0.303 ***	0.033	0.371 ***	0.372 ***	-0.828 ***	0.733 ***	1.000
LGBGIM Ingroup	-0.045	-0.423 ***	0.040	0.267 ***	0.188 **	-0.244 ***	0.706 ***	0.588 ***
LGBGIM Outgroup	-0.020	-0.129 *	0.048	0.252 ***	0.127 *	-0.187 **	0.013	0.183 **
Overall Places	-0.023	-0.035	0.009	0.072	0.074	0.043	-0.063	-0.065
Overall Attr.	-0.034	0.095	0.037	-0.043	0.023	-0.037	0.102	0.069
Spec Places	-0.033	-0.059	0.055	0.066	0.057	0.044	-0.054	-0.059
Spec Attr.	0.023	0.145 **	0.031	0.153 **	0.139 **	-0.219 ***	0.051	0.171 **
Deter Places	-0.012	-0.048	0.050	0.079	0.078	0.011	-0.001	-0.005
Deter Attr.	0.014	0.128	0.024	0.330 ***	0.261 ***	-0.299 ***	-0.002	0.209 ***

	LGBGIM Ingroup	LGBGIM Outgroup	Overall Places	Overall Attr.	Spec Places	Spec Attr.	Deter Places	Deter Attr.
LGBGIM Ingroup	1.000							
LGBGIM Outgroup	0.118	1.000						
Overall Places	0.028	0.092	1.000					
Overall Attributes	-0.040	0.049	-0.295 ***	1.000				
Spec Places	0.032	0.097	0.947 ***	-0.294 ***	1.000			
Spec Attributes	0.039	0.121	0.047	0.427 ***	0.013	1.000		
Deter Places	0.064	0.114	0.932 ***	-0.276 ***	0.961 ***	0.034	1.000	
Deter Attributes	0.095	0.143 *	0.125	0.191 ***	0.102	0.730 ***	0.106 *	1.000

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Pol = Political Orientation, higher = more conservative. Time = Time in Community. GBS = General Belongingness Scale. GWS = General Well-Being Schedule. LGBIS Stress = LGBIS Identity Stress Scales. LGBIS Dev = LGBIS Identity Development Scales. LGBIS = Lesbian, Gay, and Bisexual Identity Scale. LGBGIM: In = Lesbian, Gay, and Bisexual Group Identity Measure Ingroup Scales. LGBGIM: Out = Lesbian, Gay, and Bisexual Group Identity Measure Outgroup Scale. Spec = Identity-Specific. Deter = Identity-Determined. Attr. = Attributes.

The correlation matrix reveals a few significant relationships. In line with previous research on identity development and well-being, the LGBIS is positively related to both the General Belongingness Scale ($r(251) = 0.371$, $p < 0.001$) and the General Well-Being Schedule ($r(251) = 0.372$, $p < 0.001$). Additionally, identity-specific and identity-determined sexual minority attributes both related positively to belonging and well-being (rs > 0.139, ps < 0.01). However, sexual minority spaces were not directly related to belonging or well-being (rs < 0.079, ps > 0.05).

Models Predicting Belonging from Overall Spaces/Attributes

Predicting Belonging from Overall Spaces/Attributes and Sexual Identity Label. I ran a multiple linear regression predicting general belongingness based on the interaction between sexual identity label, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces. In the manuscript, I unpacked only the main effects and interactions of my three variables of interest: identity, spaces, and attributes. I report the full model in Table 10.

Table 10

Regression Model Predicting Belonging from Sexual Identity Labels and Overall Spaces/Attributes

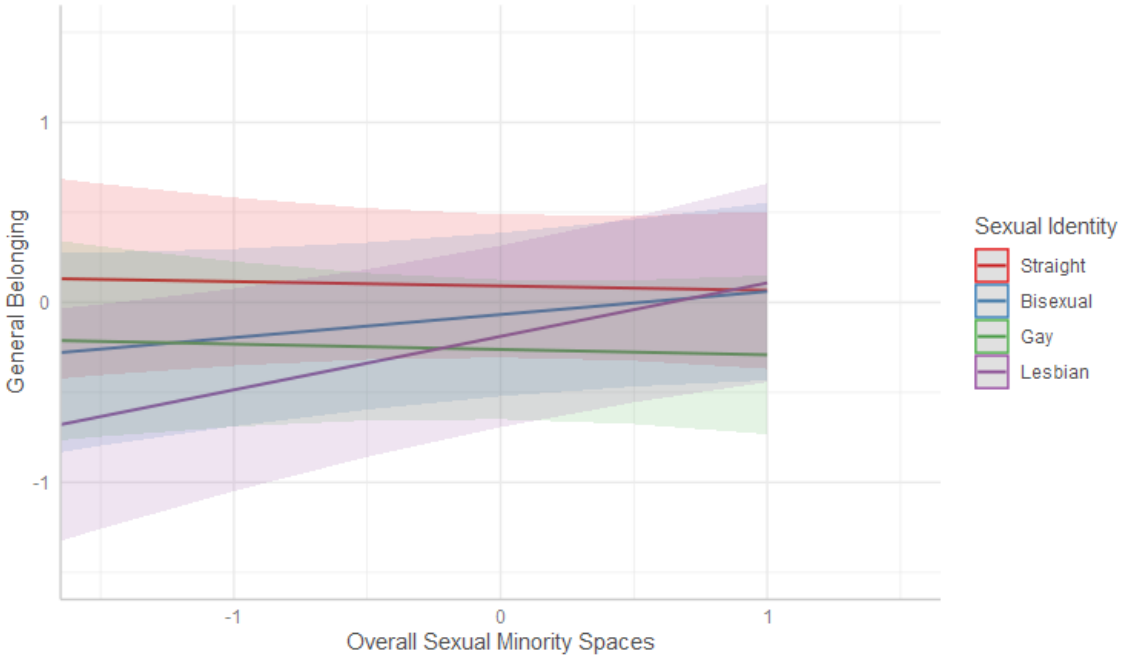
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.105	-0.192	0.402	0.151	0.489
Age	0.184	0.074	0.294	0.056	0.001 **
Gender: Woman	0.250	-0.038	0.537	0.146	0.088
Gender: Transman	-0.385	-1.085	0.315	0.356	0.280
Gender: Transwoman	-0.740	-1.900	0.420	0.590	0.210
Gender: Non-Binary	0.505	-0.479	1.489	0.500	0.313
Political Orientation	0.042	-0.066	0.150	0.055	0.447
Race: Asian	-0.022	-0.403	0.358	0.193	0.908
Race: Black	-0.118	-0.479	0.242	0.183	0.520
Race: Hispanic/Latine	0.303	-0.198	0.804	0.255	0.236
Race: Other	0.761	-0.370	1.892	0.575	0.187
Race: Multiracial	-0.124	-0.471	0.224	0.177	0.484
Time in Community	0.001	-0.008	0.009	0.004	0.884
Sexual Identity: Bisexual	-0.159	-0.466	0.149	0.156	0.311
Sexual Identity: Gay	-0.353	-0.692	-0.014	0.172	0.042 *
Sexual Identity: Lesbian	-0.280	-0.628	0.068	0.177	0.114
Overall Spaces	-0.024	-0.240	0.191	0.109	0.824
Overall Attributes	0.080	-0.145	0.305	0.114	0.485
Bisexual × Spaces	0.152	-0.135	0.440	0.146	0.298
Gay × Spaces	-0.006	-0.321	0.310	0.161	0.973
Lesbian × Spaces	0.321	0.002	0.641	0.163	0.049 *
Bisexual × Attributes	0.328	-0.056	0.711	0.195	0.094
Gay × Attributes	-0.253	-0.601	0.095	0.177	0.154
Lesbian × Attributes	-0.036	-0.417	0.346	0.194	0.855
Spaces × Attributes	0.114	-0.114	0.341	0.116	0.328
Bisexual × Spaces × Attributes	0.158	-0.169	0.485	0.166	0.342
Gay × Spaces × Attributes	-0.016	-0.357	0.326	0.174	0.928
Lesbian × Spaces × Attributes	-0.074	-0.417	0.270	0.175	0.674

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to straight. Race is compared to White. Gender is compared to man.

The model reveals a main effect of gay sexual identity, such that gay men have lower belonging than straight people, b = -0.353, 95% CI [-0.692, -0.014], p = 0.042. The model also revealed an interaction between lesbian sexual identity and overall sexual minority spaces, b = 0.321, 95% CI [0.002, 0.641], p = 0.049, shown in Figure 1.

Figure 1

General Belonging Based on Sexual Identity and Overall Sexual Minority Spaces



Simple slopes analyses revealed that for lesbian participants, a higher percentage of overall sexual minority spaces related to higher belonging, b = 0.297, 95% CI [0.060, 0.534], p = 0.014. For gay, bisexual, and straight participants, percentage of overall sexual minority spaces and belonging were not related (b = -0.030, 95% CI [-0.259, 0.199], p = 0.798 for gay; b = 0.128, 95% CI [-0.065, 0.321], p = 0.193 for bisexual; b = -0.024, 95% CI [-0.240, 0.191], p = 0.824 for straight).

Predicting Belonging from Overall Spaces/Attributes and LGBIS. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 11. This model only includes sexual minority participants.

Table 11

Regression Model Predicting Belonging from LGB Sexual Identity and Overall Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.215	-0.487	0.057	0.138	0.121
Age	0.086	-0.037	0.210	0.063	0.171
Gender: Woman	0.260	-0.001	0.521	0.133	0.051
Gender: Transman	-0.300	-0.977	0.376	0.343	0.383
Gender: Transwoman	-0.094	-1.218	1.030	0.571	0.869
Gender: Non-Binary	0.520	-0.446	1.487	0.491	0.290
Political Orientation	0.103	-0.046	0.253	0.076	0.174
Race: Asian	0.050	-0.461	0.562	0.260	0.846
Race: Black	-0.361	-0.746	0.024	0.195	0.066
Race: Hispanic/Latine	-0.086	-0.683	0.511	0.303	0.777
Race: Other	0.726	-0.365	1.817	0.554	0.191
Race: Multiracial	0.060	-0.336	0.457	0.201	0.764
Time in Community	0.006	-0.004	0.016	0.005	0.229
LGB Identity (LGBIS)	0.445	0.308	0.582	0.070	< 0.001 ***
Overall Spaces	0.112	-0.008	0.232	0.061	0.068
Overall Attributes	0.108	-0.069	0.286	0.090	0.231
LGBIS × Spaces	0.026	-0.095	0.147	0.061	0.670
LGBIS × Attributes	0.202	0.009	0.395	0.098	0.040 *
Spaces × Attributes	0.182	0.037	0.328	0.074	0.014 *
LGBIS × Spaces × Attributes	0.145	0.002	0.288	0.072	0.046 *

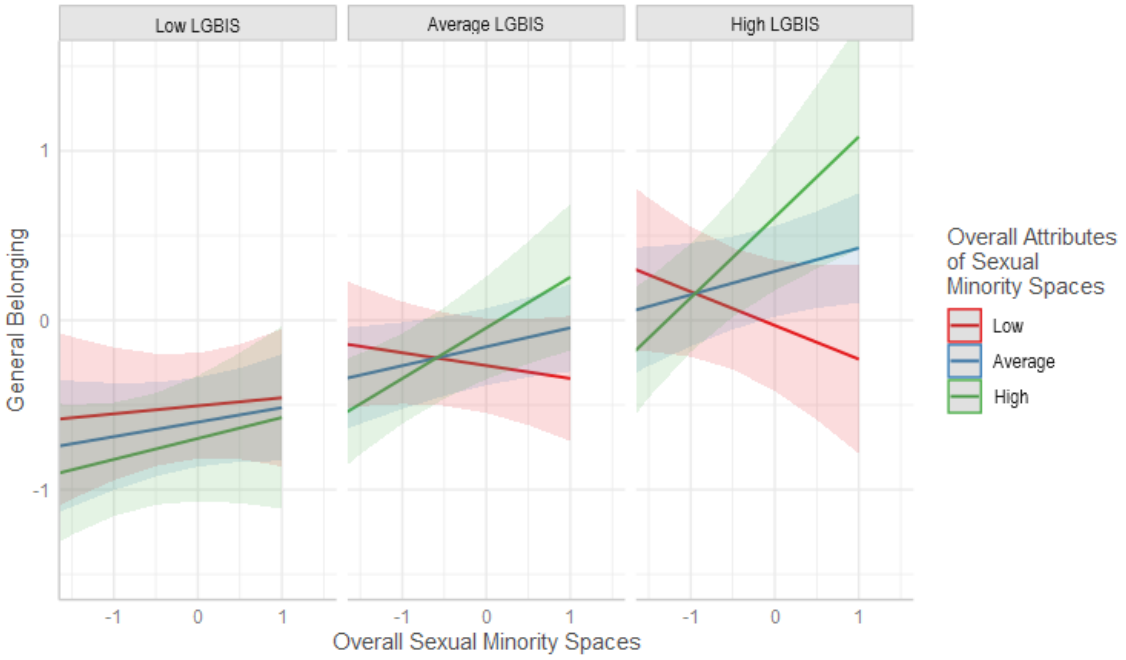
Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity, such that participants with stronger sexual identities have higher belonging than participants with weaker sexual identities, $b = 0.445$, 95% CI [0.308, 0.582], $p < 0.001$. This effect was qualified by a

three-way interaction between sexual identity, overall sexual minority spaces, and overall attributes of sexual minority spaces, b = 0.145, 95% CI [0.002, 0.288], p = 0.046, shown in Figure 2.

Figure 2

General Belonging Based on LGB Identity, Overall Sexual Minority Spaces, and Overall Attributes of Sexual Minority Spaces



Simple slopes analyses (Table 12) revealed that, in communities with high levels of overall attributes of sexual minority spaces, more sexual minority spaces are related to higher belonging for participants with average LGB identity strength, b = 0.300, 95% CI [0.106, 0.494], p = 0.003, or high LGB identity strength, b = 0.476, 95% CI [0.183, 0.769], p = 0.002.

Table 12

Simple Slopes Analysis of Interaction Between LGB Identity, Sexual Minority Spaces, and Attributes of Sexual Minority Spaces

LGBIS	***Attributes of Sexual Minority Spaces***	***b Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Low	Low	0.047	-0.203	0.298	0.127	0.710
Low	Average	0.086	-0.089	0.260	0.089	0.336
Low	High	0.124	-0.130	0.378	0.129	0.339
Average	Low	-0.075	-0.265	0.114	0.096	0.434
Average	Average	0.112	-0.008	0.232	0.061	0.067
Average	High	0.300	0.106	0.494	0.099	0.003 **
High	Low	-0.198	-0.479	0.083	0.143	0.166
High	Average	0.139	-0.028	0.305	0.084	0.102
High	High	0.476	0.183	0.769	0.149	0.002 **

Note. Low reflects one standard deviation below the mean and high reflects one standard deviation above the mean. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Predicting Belonging from Overall Spaces/Attributes and LGBIS Identity Development.

I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity development, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 13. This model only includes sexual minority participants.

Table 13

Regression Model Predicting Belonging from LGB Sexual Identity Development and Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.231	-0.525	0.064	0.149	0.124
Age	0.146	0.013	0.279	0.068	0.032 *
Gender: Woman	0.315	0.035	0.595	0.142	0.028 *
Gender: Transman	-0.515	-1.245	0.215	0.370	0.166
Gender: Transwoman	-0.462	-1.669	0.745	0.613	0.452
Gender: Non-Binary	0.390	-0.670	1.451	0.538	0.469
Political Orientation	-0.009	-0.174	0.157	0.084	0.919
Race: Asian	-0.117	-0.667	0.433	0.279	0.675
Race: Black	-0.302	-0.719	0.114	0.211	0.154
Race: Hispanic/Latine	0.228	-0.408	0.865	0.323	0.481
Race: Other	0.609	-0.575	1.793	0.601	0.312
Race: Multiracial	-0.102	-0.527	0.323	0.216	0.636
Time in Community	0.005	-0.006	0.016	0.006	0.383
LGB Identity Development	0.083	-0.063	0.229	0.074	0.266
Overall Spaces	0.107	-0.023	0.237	0.066	0.108
Overall Attributes	0.064	-0.117	0.245	0.092	0.489
Identity Dev × Spaces	-0.007	-0.138	0.123	0.066	0.914
Identity Dev × Attributes	-0.021	-0.215	0.172	0.098	0.828
Spaces × Attributes	0.142	-0.010	0.293	0.077	0.067
Identity Dev × Spaces × Attributes	0.009	-0.145	0.162	0.078	0.910

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed no significant key main effects or interactions.

Predicting Belonging from Overall Spaces/Attributes and LGBIS Identity Stress. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity stress, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 14. This model only includes sexual minority participants.

Table 14

Regression Model Predicting Belonging from LGB Sexual Identity Stress and Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.199	-0.465	0.066	0.135	0.141
Age	0.095	-0.025	0.214	0.061	0.121
Gender: Woman	0.185	-0.074	0.443	0.131	0.161
Gender: Transman	-0.243	-0.912	0.426	0.339	0.475
Gender: Transwoman	-0.154	-1.236	0.927	0.549	0.779
Gender: Non-Binary	0.541	-0.401	1.482	0.478	0.259
Political Orientation	0.025	-0.114	0.165	0.071	0.722
Race: Asian	0.122	-0.379	0.623	0.254	0.632
Race: Black	-0.305	-0.679	0.068	0.189	0.108
Race: Hispanic/Latine	-0.069	-0.655	0.516	0.297	0.815
Race: Other	0.801	-0.266	1.869	0.542	0.140
Race: Multiracial	0.078	-0.308	0.463	0.196	0.692
Time in Community	0.005	-0.005	0.015	0.005	0.296
LGB Identity Stress	-0.471	-0.597	-0.344	0.064	< 0.001 ***
Overall Spaces	0.100	-0.018	0.218	0.060	0.095
Overall Attributes	0.092	-0.086	0.269	0.090	0.310
Stress × Spaces	-0.023	-0.143	0.098	0.061	0.708
Stress × Attributes	-0.107	-0.275	0.061	0.085	0.209
Spaces × Attributes	0.159	0.015	0.304	0.073	0.031 *
Stress × Spaces × Attributes	-0.088	-0.214	0.038	0.064	0.169

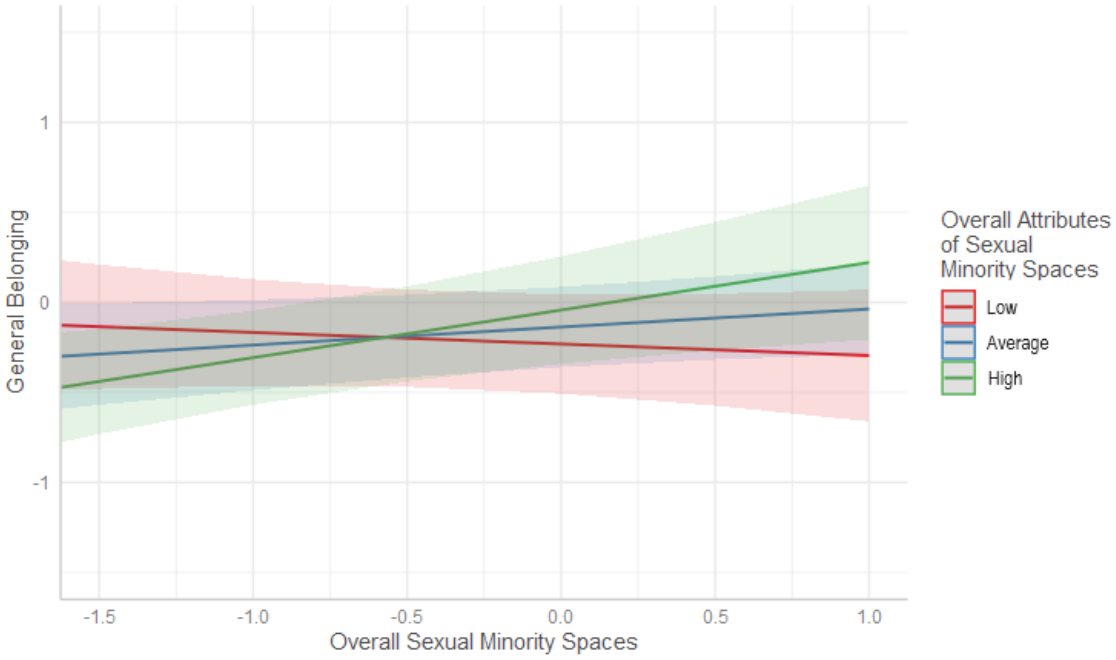
Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of LGB identity stress, such that participants with more identity stress have less belonging than participants with low identity stress, *b*

= -0.471, 95% CI [-0.597, -0.344], $p < 0.001$. The model also revealed an interaction between overall sexual minority spaces and overall attributes of sexual minority spaces, b = 0.173, 95% CI [0.037, 0.310], p = 0.013 (Figure 3).

Figure 3

General Belonging Based on Overall Sexual Minority Spaces and Overall Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that in communities that are high in overall attributes of sexual minority spaces, more overall sexual minority spaces relate to more belonging, b = 0.265, 95% CI [0.072, 0.457], p = 0.007. There was no relationship between sexual minority spaces and belonging when communities had low (b = -0.064, 95% CI [-0.250, 0.123], p = 0.503) or average (b = 0.100, 95% CI [-0.017, 0.218], p = 0.094) attributes of sexual minority spaces.

Predicting Belonging from Overall Spaces/Attributes and Identity Integration

Integration. I ran a multiple linear regression predicting general belongingness based on the interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 15. This model only includes sexual minority participants.

Table 15

Regression Model Predicting Belonging from Identity Integration and Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.095	-0.374	0.184	0.141	0.503
Age	0.143	0.018	0.267	0.063	0.025 *
Gender: Woman	0.223	-0.041	0.487	0.134	0.098
Gender: Transman	-0.546	-1.232	0.139	0.348	0.118
Gender: Transwoman	-1.217	-2.440	0.005	0.620	0.051
Gender: Non-Binary	-0.069	-1.098	0.959	0.522	0.895
Political Orientation	0.088	-0.073	0.250	0.082	0.284
Race: Asian	-0.068	-0.584	0.447	0.261	0.794
Race: Black	-0.431	-0.825	-0.037	0.200	0.032 *
Race: Hispanic/Latine	0.249	-0.341	0.839	0.299	0.407
Race: Other	0.781	-0.334	1.896	0.566	0.169
Race: Multiracial	-0.187	-0.585	0.212	0.202	0.356
Time in Community	0.002	-0.008	0.013	0.005	0.675
LGBGIM Ingroup	0.311	0.172	0.450	0.071	< 0.001 ***
LGBGIM Outgroup	0.215	0.075	0.355	0.071	0.003 **
Overall Spaces	0.088	-0.035	0.212	0.063	0.160
Overall Attributes	-0.005	-0.185	0.174	0.091	0.953
Ingroup × Outgroup	-0.078	-0.209	0.053	0.066	0.241
Ingroup × Spaces	0.112	-0.014	0.237	0.064	0.081
Outgroup × Spaces	-0.051	-0.179	0.077	0.065	0.434
Ingroup × Attributes	-0.042	-0.224	0.140	0.092	0.653
Outgroup × Attributes	0.001	-0.228	0.229	0.116	0.995
Places × Attributes	0.092	-0.054	0.239	0.074	0.216
Ingroup × Outgroup × Places	-0.098	-0.225	0.029	0.065	0.131
Ingroup × Outgroup × Attributes	0.016	-0.169	0.202	0.094	0.861
Ingroup × Places × Attributes	0.040	-0.113	0.193	0.078	0.606
Outgroup × Places × Attributes	0.053	-0.094	0.200	0.075	0.481
Ingroup × Outgroup × Places × Attributes	-0.083	-0.237	0.071	0.078	0.289

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of ingroup LGB identity, such that higher ingroup identity is associated with more belonging than low ingroup identity, $b = 0.311$, 95% CI [0.172, 0.450], $p < 0.001$. The model also revealed a main effect of outgroup

identity, such that higher outgroup identity is associated with more belonging than low outgroup identity, $b = 0.215$, 95% CI [0.075, 0.355], $p = 0.003$.

Models Predicting Belonging from Identity-Specific Spaces/Attributes

Predicting Belonging from Identity-Specific Spaces/Attributes and Sexual Identity Label. I ran a multiple linear regression predicting general belongingness based on the interaction between sexual identity label, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 16.

Table 16

Regression Model Predicting Belonging from Sexual Identity Labels and Identity-Specific Spaces/Attributes

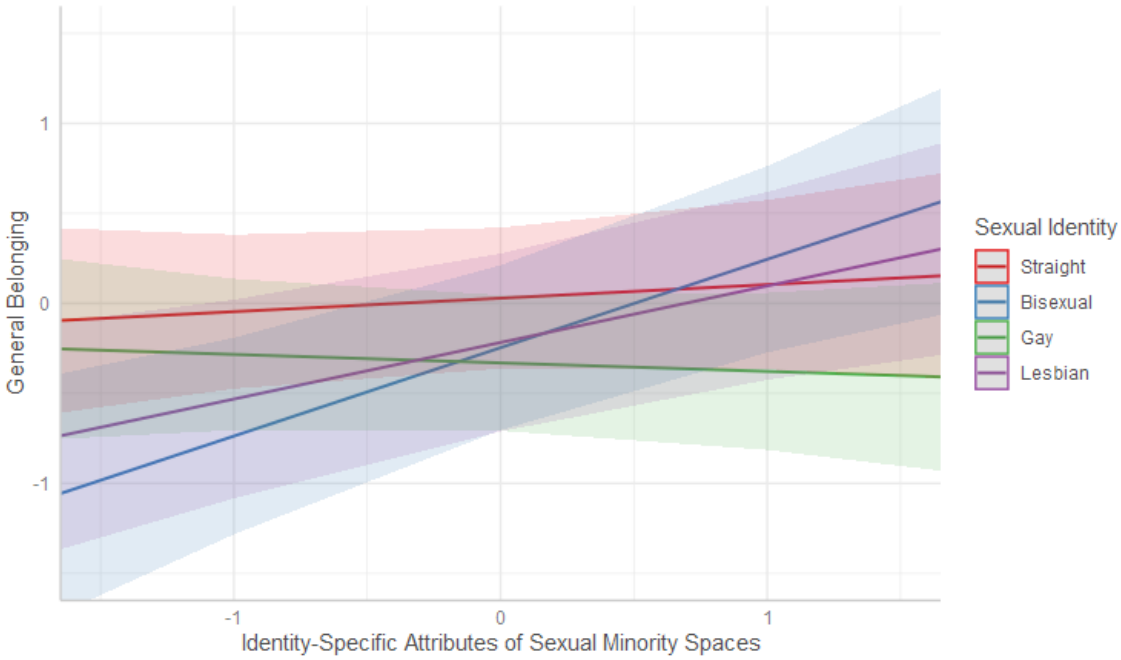
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.088	-0.205	0.381	0.149	0.556
Age	0.158	0.050	0.267	0.055	0.004 **
Gender: Woman	0.257	-0.026	0.539	0.144	0.075
Gender: Transman	-0.387	-1.057	0.283	0.341	0.257
Gender: Transwoman	-0.464	-1.596	0.669	0.576	0.421
Gender: Non-Binary	0.460	-0.508	1.427	0.492	0.351
Political Orientation	0.064	-0.043	0.170	0.054	0.240
Race: Asian	-0.087	-0.462	0.289	0.191	0.650
Race: Black	-0.165	-0.521	0.191	0.181	0.363
Race: Hispanic/Latine	0.183	-0.316	0.682	0.254	0.471
Race: Other	0.814	-0.289	1.918	0.561	0.148
Race: Multiracial	-0.121	-0.461	0.219	0.173	0.486
Time in Community	0.002	-0.007	0.011	0.004	0.648
Sexual Identity: Bisexual	-0.275	-0.588	0.038	0.159	0.085
Sexual Identity: Gay	-0.360	-0.688	-0.032	0.167	0.032 *
Sexual Identity: Lesbian	-0.247	-0.587	0.093	0.173	0.154
Identity-Specific Spaces	-0.019	-0.231	0.193	0.108	0.860
Identity-Specific Attributes	0.074	-0.147	0.296	0.113	0.509
Bisexual × Spaces	-0.014	-0.319	0.291	0.155	0.927
Gay × Spaces	0.056	-0.250	0.363	0.156	0.718
Lesbian × Spaces	0.165	-0.155	0.484	0.162	0.311
Bisexual × Attributes	0.415	0.063	0.768	0.179	0.021 *
Gay × Attributes	-0.122	-0.421	0.177	0.152	0.424
Lesbian × Attributes	0.240	-0.067	0.547	0.156	0.125
Spaces × Attributes	0.113	-0.111	0.337	0.114	0.323
Bisexual × Spaces × Attributes	0.073	-0.252	0.398	0.165	0.658
Gay × Spaces × Attributes	-0.052	-0.346	0.241	0.149	0.726
Lesbian × Spaces × Attributes	-0.248	-0.552	0.056	0.155	0.110

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to straight. Race is compared to White. Gender is compared to man.

The model reveals a main effect of gay sexual identity, such that gay men have lower belonging than straight people, b = -0.360, 95% CI [-0.688, -0.032], p = 0.032. The model also revealed an interaction between bisexual sexual identity and identity-specific attributes of sexual minority spaces, b = 0.415, 95% CI [0.063, 0.768], p = 0.021, shown in Figure 4.

Figure 4

General Belonging Based on Sexual Identity and Identity-Specific Attributes of Sexual Minority Spaces



Simple slopes analyses revealed that for lesbian and bisexual participants, more identity-specific attributes of sexual minority spaces related to higher belonging, b = 0.315, 95% CI [0.104, 0.525], p = 0.004 for lesbian participants and b = 0.490, 95% CI [0.218, 0.761], p < 0.001 for bisexual participants. For gay and straight participants,

identity-specific attributes of sexual minority spaces and belonging were not related (b = -0.047, 95% CI [-0.251, 0.157], p = 0.648 for gay; b = 0.074, 95% CI [-0.147, 0.296], p = 0.509 for straight).

Predicting Belonging from Identity-Specific Spaces/Attributes and LGBIS. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 17. This model only includes sexual minority participants.

Table 17

Regression Model Predicting Belonging from LGB Sexual Identity and Identity-Specific Spaces/Attributes

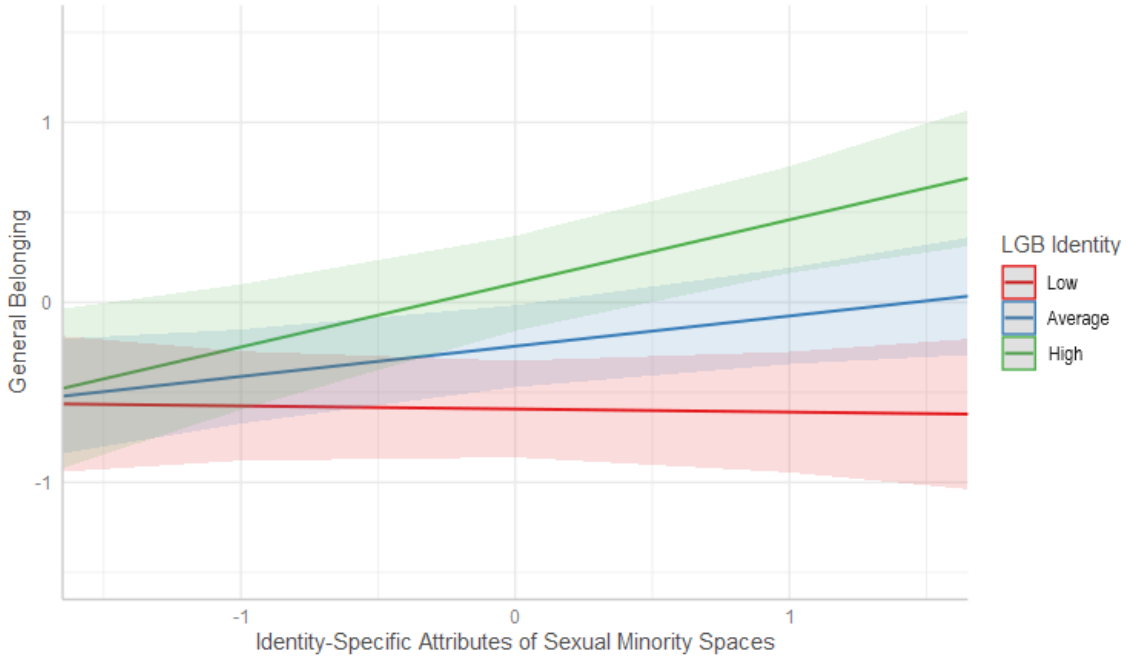
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.294	-0.565	-0.024	0.137	0.033
Age	0.104	-0.018	0.226	0.062	0.095
Gender: Woman	0.212	-0.048	0.473	0.132	0.110
Gender: Transman	-0.293	-0.955	0.368	0.336	0.384
Gender: Transwoman	-0.291	-1.439	0.857	0.583	0.618
Gender: Non-Binary	0.460	-0.491	1.411	0.483	0.342
Political Orientation	0.063	-0.088	0.213	0.076	0.413
Race: Asian	0.009	-0.495	0.513	0.256	0.972
Race: Black	-0.348	-0.726	0.031	0.192	0.072
Race: Hispanic/Latine	-0.194	-0.785	0.397	0.300	0.518
Race: Other	0.687	-0.392	1.767	0.548	0.211
Race: Multiracial	0.011	-0.377	0.399	0.197	0.956
Time in Community	0.005	-0.005	0.015	0.005	0.287
LGB Identity (LGBIS)	0.345	0.206	0.484	0.071	< 0.001 ***
Identity-Specific Spaces	0.117	-0.018	0.252	0.068	0.088
Identity-Specific Attributes	0.174	0.038	0.311	0.069	0.013 *
LGBIS × Spaces	-0.095	-0.225	0.035	0.066	0.150
LGBIS × Attributes	0.187	0.065	0.309	0.062	0.003 **
Spaces × Attributes	0.136	0.010	0.263	0.064	0.035 *
LGBIS × Spaces × Attributes	0.041	-0.058	0.140	0.050	0.416

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity, such that participants with stronger sexual identities have higher belonging than participants with weaker sexual identities, $b = 0.345$, 95% CI [0.206, 0.484], $p < 0.001$. The model also reveals a main effect of attributes of sexual minority spaces, such that more attributes of sexual minority spaces related to higher belonging, $b = 0.174$, 95% CI [0.038, 0.311], $p = 0.013$. These effects were qualified by two two-way interactions. The model revealed an interaction between LGB identity strength and attributes of sexual minority spaces, $b = 0.187$, 95% CI [0.065, 0.309], $p = 0.003$, shown in Figure 5.

Figure 5

General Belonging Based on LGB Identity and Identity-Specific Attributes of Sexual Minority Spaces

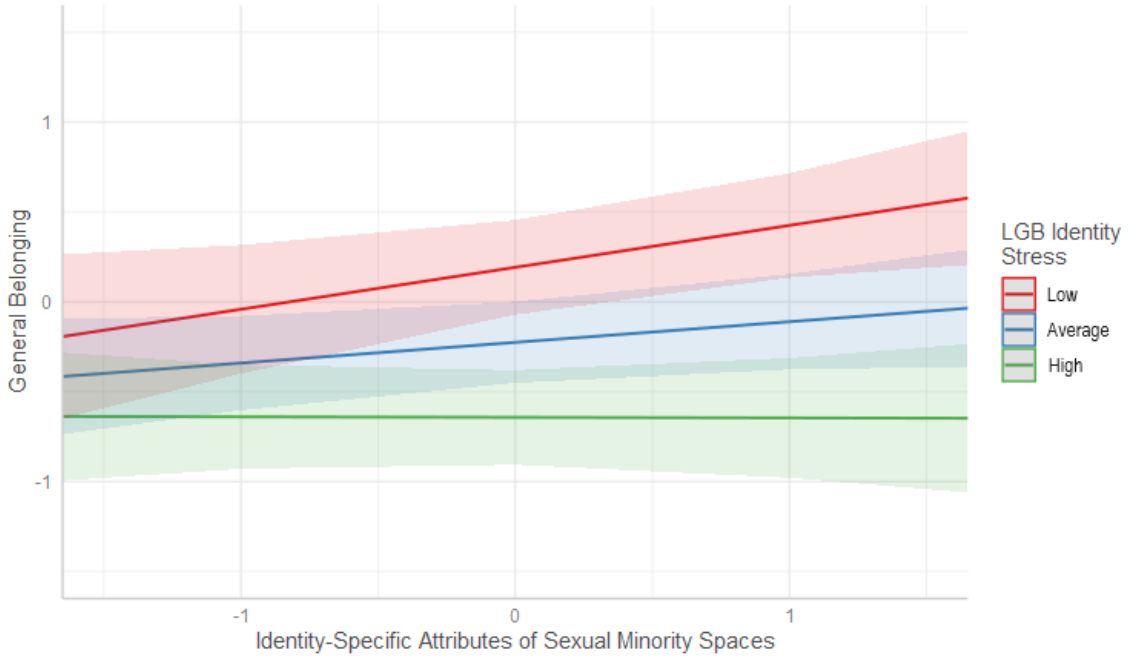


Simple slopes analyses revealed that more attributes of sexual minority spaces are related to higher belonging for participants with average LGB identity strength (b = 0.174, 95% CI [0.038, 0.311], p = 0.013) or high LGB identity strength (b = 0.361, 95% CI [0.170, 0.553], p < 0.001). For participants with low LGB identity strength, identity-specific attributes of sexual minority spaces do not relate to belonging (b = -0.013, 95% CI [-0.187, 0.161], p = 0.883).

The model also revealed an interaction between sexual minority spaces and attributes of sexual minority spaces, b = 0.136, 95% CI [0.010, 0.263], p = 0.035, shown in Figure 6.

Figure 6

General Belonging Based on Identity-Specific Sexual Minority Spaces and Identity-Specific Attributes of Sexual Minority Spaces



Simple slopes analyses revealed that more identity-specific sexual minority spaces are related to higher belonging for participants when communities are high in identity-specific attributes of sexual minority spaces, $b = 0.251$, 95% CI [0.056, 0.446], $p = 0.012$. When communities have average ($b = 0.112$, 95% CI [-0.022, 0.246], $p = 0.102$) or low ($b = -0.027$, 95% CI [-0.204, 0.150], $p = 0.762$) attributes of sexual minority spaces, identity-specific sexual minority spaces do not relate to belonging.

Predicting Belonging from Identity-Specific Spaces/Attributes and LGBIS Identity Development. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity development, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 18. This model only includes sexual minority participants.

Table 18

Regression Model Predicting Belonging from LGB Sexual Identity Development and Identity-Specific Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.303	-0.593	-0.012	0.147	0.041
Age	0.148	0.017	0.280	0.067	0.028 *
Gender: Woman	0.322	0.045	0.600	0.141	0.023 *
Gender: Transman	-0.478	-1.193	0.238	0.363	0.190
Gender: Transwoman	-0.519	-1.756	0.717	0.628	0.409
Gender: Non-Binary	0.450	-0.584	1.484	0.525	0.392
Political Orientation	-0.020	-0.184	0.144	0.083	0.808
Race: Asian	-0.036	-0.578	0.505	0.275	0.894
Race: Black	-0.271	-0.684	0.141	0.209	0.196
Race: Hispanic/Latine	-0.004	-0.646	0.638	0.326	0.990
Race: Other	0.684	-0.482	1.849	0.591	0.249
Race: Multiracial	-0.038	-0.454	0.378	0.211	0.857
Time in Community	0.005	-0.006	0.016	0.005	0.391
LGB Identity Development	0.052	-0.096	0.199	0.075	0.491
Identity-Specific Spaces	0.079	-0.061	0.219	0.071	0.265
Identity-Specific Attributes	0.199	0.056	0.342	0.073	0.007 **
Identity Dev × Spaces	-0.012	-0.152	0.127	0.071	0.861
Identity Dev × Attributes	0.099	-0.044	0.242	0.073	0.175
Spaces × Attributes	0.059	-0.071	0.189	0.066	0.373
Identity Dev × Spaces × Attributes	0.012	-0.111	0.135	0.062	0.853

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of identity-specific attributes of sexual minority spaces, such that participants have higher belonging in communities high in attributes of sexual minority spaces than in communities with fewer attributes, $b = 0.199$, 95% CI [0.056, 0.342], $p = 0.007$. No other key effects emerged.

Predicting Belonging from Identity-Specific Spaces/Attributes and LGBIS Identity Stress. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity stress, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 19. This model only includes sexual minority participants.

Table 19

Regression Model Predicting Belonging from LGB Identity Stress and Identity-Specific Spaces/Attributes

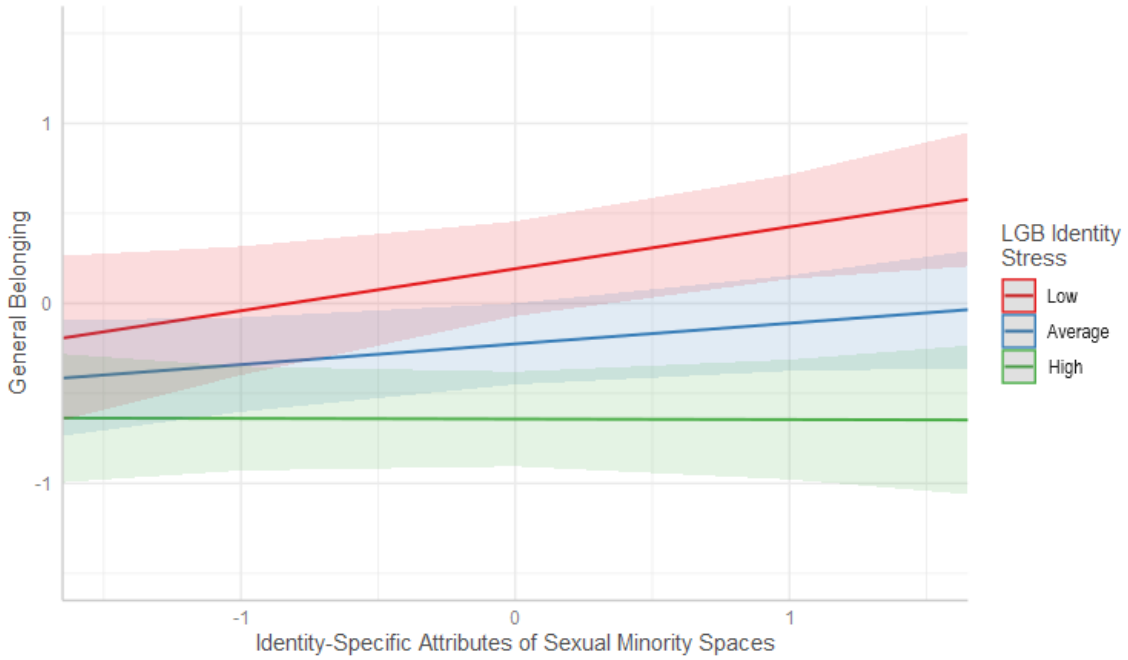
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.279	-0.546	-0.011	0.136	0.041
Age	0.104	-0.015	0.224	0.060	0.086
Gender: Woman	0.160	-0.100	0.421	0.132	0.226
Gender: Transman	-0.227	-0.884	0.429	0.333	0.496
Gender: Transwoman	-0.246	-1.357	0.864	0.564	0.662
Gender: Non-Binary	0.497	-0.442	1.436	0.477	0.298
Political Orientation	0.011	-0.130	0.152	0.071	0.879
Race: Asian	0.079	-0.419	0.578	0.253	0.754
Race: Black	-0.324	-0.701	0.052	0.191	0.091
Race: Hispanic/Latine	-0.151	-0.735	0.433	0.296	0.611
Race: Other	0.787	-0.277	1.852	0.540	0.146
Race: Multiracial	0.052	-0.330	0.433	0.193	0.790
Time in Community	0.005	-0.005	0.015	0.005	0.338
LGB Identity Stress	-0.414	-0.551	-0.277	0.069	< 0.001 ***
Identity-Specific Spaces	0.119	-0.016	0.253	0.068	0.084
Identity-Specific Attributes	0.120	-0.019	0.259	0.071	0.091
Stress × Spaces	0.072	-0.057	0.201	0.065	0.270
Stress × Attributes	-0.119	-0.237	-0.001	0.060	0.048 *
Spaces × Attributes	0.110	-0.018	0.238	0.065	0.091
Stress × Spaces × Attributes	-0.016	-0.113	0.082	0.050	0.755

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity stress, such that participants with more identity stress have lower belonging than participants with less identity stress, b = -0.414, 95% CI [-0.551, -0.277], $p < 0.001$, which was qualified by an interaction with identity-specific attributes of sexual minority spaces, b = -0.119, 95% CI [-0.237, -0.001], p = 0.048 (Figure 7).

Figure 7

General Belonging Based on LGB Identity Stress and Identity-Specific Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-specific attributes of sexual minority spaces relate to more belonging, when participants' LGB identity stress is low, b = 0.239, 95% CI [0.042, 0.435], p = 0.017. There was no relationship between attributes of sexual minority spaces and belonging when participants had high (b = 0.001, 95% CI

[-0.166, 0.168], $p = 0.990$) or average ($b = 0.120$, 95% CI [-0.019, 0.259], $p = 0.091$) identity stress.

Predicting Belonging from Identity-Specific Spaces/Attributes and Identity Integration. I ran a multiple linear regression predicting general belongingness based on the interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 20. This model only includes sexual minority participants.

Table 20

Regression Model Predicting Belonging from Identity Integration and Identity-Specific Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.139	-0.414	0.135	0.139	0.318
Age	0.133	0.011	0.256	0.062	0.033 *
Gender: Woman	0.221	-0.040	0.482	0.132	0.097
Gender: Transman	-0.499	-1.163	0.164	0.337	0.139
Gender: Transwoman	-0.855	-2.078	0.367	0.620	0.169
Gender: Non-Binary	0.075	-0.935	1.084	0.512	0.884
Political Orientation	0.101	-0.057	0.258	0.080	0.211
Race: Asian	0.011	-0.493	0.515	0.256	0.966
Race: Black	-0.381	-0.774	0.012	0.200	0.058
Race: Hispanic/Latine	0.010	-0.581	0.601	0.300	0.973
Race: Other	0.934	-0.155	2.023	0.553	0.093
Race: Multiracial	-0.130	-0.516	0.255	0.196	0.507
Time in Community	0.001	-0.009	0.011	0.005	0.838
LGBGIM Ingroup	0.279	0.133	0.424	0.074	< 0.001 ***
LGBGIM Outgroup	0.177	0.041	0.314	0.069	0.011 *
Identity-Specific Spaces	0.042	-0.090	0.173	0.067	0.531
Identity-Specific Attributes	0.240	0.106	0.374	0.068	< 0.001 ***
Ingroup × Outgroup	-0.081	-0.226	0.065	0.074	0.275
Ingroup × Spaces	0.045	-0.098	0.188	0.073	0.534
Outgroup × Spaces	0.019	-0.115	0.153	0.068	0.781
Ingroup × Attributes	0.097	-0.040	0.235	0.070	0.165
Outgroup × Attributes	-0.026	-0.172	0.120	0.074	0.727
Places × Attributes	0.115	-0.012	0.243	0.065	0.075
Ingroup × Outgroup × Places	-0.059	-0.203	0.084	0.073	0.414
Ingroup × Outgroup × Attributes	-0.056	-0.184	0.072	0.065	0.390
Ingroup × Places × Attributes	0.092	-0.042	0.225	0.068	0.178
Outgroup × Places × Attributes	0.034	-0.077	0.146	0.057	0.547
Ingroup × Outgroup × Places × Attributes	0.043	-0.081	0.166	0.063	0.496

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of ingroup LGB identity, such that higher ingroup identity is associated with more belonging than low ingroup identity, $b = 0.279$, 95% CI [0.133, 0.424], $p < 0.001$. The model also revealed a main effect of outgroup identity, such that higher outgroup identity is associated with more belonging than low outgroup identity, $b = 0.177$, 95% CI [0.041, 0.314], $p = 0.011$. The model also revealed a main effect of identity-specific attributes of sexual minority spaces, such that more attributes are associated with more belonging than fewer attributes, $b = 0.240$, 95% CI [0.106, 0.374], $p < 0.001$.

Models Predicting Belonging from Identity-Determined Spaces/Attributes

Predicting Belonging from Identity-Determined Spaces/Attributes and Sexual Identity Label. I ran a multiple linear regression predicting general belongingness based on the interaction between sexual identity label, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 21.

Table 21

Regression Model Predicting Belonging from Sexual Identity Labels and Identity-Determined Spaces/Attributes

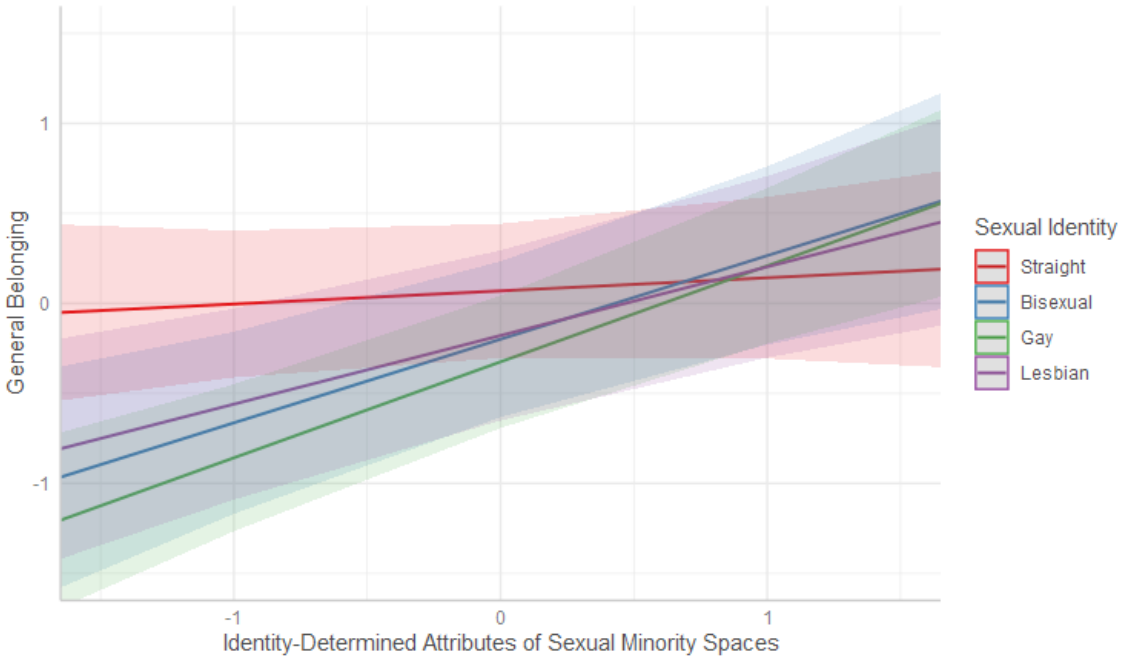
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.077	-0.234	0.323	0.142	0.591
Age	0.167	0.064	0.269	0.052	0.002 **
Gender: Woman	0.266	-0.004	0.535	0.137	0.053
Gender: Transman	-0.236	-0.874	0.402	0.324	0.468
Gender: Transwoman	-0.379	-1.468	0.710	0.554	0.494
Gender: Non-Binary	0.558	-0.362	1.479	0.468	0.234
Political Orientation	0.075	-0.027	0.177	0.052	0.151
Race: Asian	-0.016	-0.373	0.341	0.182	0.929
Race: Black	-0.004	-0.351	0.343	0.176	0.982
Race: Hispanic/Latine	0.189	-0.277	0.655	0.237	0.425
Race: Other	0.840	-0.233	1.912	0.545	0.125
Race: Multiracial	-0.090	-0.415	0.235	0.165	0.586
Time in Community	0.001	-0.007	0.009	0.004	0.871
Sexual Identity: Bisexual	-0.269	-0.504	0.094	0.151	0.076
Sexual Identity: Gay	-0.392	-0.477	0.201	0.165	0.019 *
Sexual Identity: Lesbian	-0.249	-0.547	0.120	0.166	0.135
Identity-Determined Spaces	-0.027	-0.286	0.154	0.103	0.795
Identity-Determined Attributes	0.071	-0.104	0.226	0.107	0.508
Bisexual × Spaces	0.043	-0.191	0.369	0.150	0.773
Gay × Spaces	-0.160	-0.410	0.303	0.158	0.313
Lesbian × Spaces	0.099	-0.208	0.500	0.158	0.530
Bisexual × Attributes	0.390	0.229	1.063	0.168	0.021 *
Gay × Attributes	0.459	0.279	0.860	0.150	0.002 **
Lesbian × Attributes	0.311	0.144	0.764	0.153	0.042 *
Spaces × Attributes	0.109	-0.078	0.240	0.109	0.319
Bisexual × Spaces × Attributes	0.083	-0.174	0.464	0.161	0.607
Gay × Spaces × Attributes	0.063	-0.166	0.429	0.150	0.675
Lesbian × Spaces × Attributes	-0.193	-0.544	0.131	0.149	0.195

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to straight. Race is compared to White. Gender is compared to man.

The model revealed an interaction between sexual identity and identity-determined attributes of sexual minority spaces for lesbian participants, $b = 0.311$, 95% CI [0.011, 0.612], $p = 0.042$, gay participants, $b = 0.459$, 95% CI [0.164, 0.754], $p = 0.002$, and bisexual participants, $b = 0.390$, 95% CI [0.060, 0.720], $p = 0.021$, shown in Figure 8.

Figure 8

General Belonging Based on Sexual Identity and Identity-Determined Attributes of Sexual Minority Spaces



Simple slopes analyses revealed that for lesbian, gay, and bisexual participants, more identity-determined attributes of sexual minority spaces related to higher belonging, $b = 0.383$, 95% CI [0.171, 0.594], $p < 0.001$ for lesbian participants, $b = 0.530$, 95% CI [0.327, 0.734], $p < 0.001$ for gay participants, and $b = 0.461$, 95% CI [0.210, 0.713], $p <$

0.001 for bisexual participants. For straight participants, identity-specific attributes of sexual minority spaces and belonging were not related, $b = 0.071$, 95% CI [-0.140, 0.283], $p = 0.508$.

Predicting Belonging from Identity-Determined Spaces/Attributes and LGBIS. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 22. This model only includes sexual minority participants.

Table 22

Regression Model Predicting Belonging from LGB Sexual Identity and Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.303	-0.564	-0.041	0.133	0.023
Age	0.082	-0.034	0.197	0.059	0.165
Gender: Woman	0.243	-0.003	0.489	0.125	0.053
Gender: Transman	-0.265	-0.891	0.360	0.317	0.404
Gender: Transwoman	-0.212	-1.305	0.881	0.555	0.703
Gender: Non-Binary	0.537	-0.366	1.440	0.458	0.242
Political Orientation	0.096	-0.045	0.236	0.071	0.181
Race: Asian	0.045	-0.432	0.522	0.242	0.853
Race: Black	-0.215	-0.580	0.150	0.185	0.247
Race: Hispanic/Latine	0.063	-0.486	0.611	0.278	0.823
Race: Other	0.799	-0.227	1.825	0.521	0.126
Race: Multiracial	0.036	-0.330	0.402	0.186	0.846
Time in Community	0.005	-0.004	0.015	0.005	0.289
LGB Identity (LGBIS)	0.332	0.197	0.467	0.068	< 0.001 ***
Identity-Determined Spaces	0.008	-0.125	0.141	0.068	0.908
Identity-Determined Attributes	0.383	0.255	0.511	0.065	< 0.001 ***
LGBIS × Spaces	-0.070	-0.198	0.058	0.065	0.283
LGBIS × Attributes	0.097	-0.023	0.217	0.061	0.113
Spaces × Attributes	0.101	-0.019	0.222	0.061	0.098
LGBIS × Spaces × Attributes	-0.043	-0.150	0.064	0.055	0.432

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity, such that participants with stronger sexual identities have higher belonging than participants with weaker sexual identities, $b = 0.332$, 95% CI [0.197, 0.467], $p < 0.001$. The model also reveals a main effect of attributes of sexual minority spaces, such that more attributes of sexual minority spaces related to higher belonging, $b = 0.383$, 95% CI [0.255, 0.511], $p < 0.001$. No other main effects or interactions emerged.

Predicting Belonging from Identity-Determined Spaces/Attributes and LGBIS Identity Development. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity development, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 23. This model only includes sexual minority participants.

Table 23

Regression Model Predicting Belonging from LGB Sexual Identity Development and Identity-Determined Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.310	-0.581	-0.039	0.137	0.025
Age	0.128	0.008	0.249	0.061	0.037 *
Gender: Woman	0.317	0.063	0.572	0.129	0.015 *
Gender: Transman	-0.315	-0.971	0.342	0.333	0.346
Gender: Transwoman	-0.393	-1.540	0.755	0.583	0.501
Gender: Non-Binary	0.523	-0.429	1.476	0.483	0.280
Political Orientation	0.022	-0.130	0.173	0.077	0.780
Race: Asian	-0.030	-0.528	0.469	0.253	0.907
Race: Black	-0.171	-0.557	0.215	0.196	0.384
Race: Hispanic/Latine	0.191	-0.382	0.764	0.291	0.512
Race: Other	0.714	-0.364	1.792	0.547	0.193
Race: Multiracial	-0.052	-0.435	0.331	0.194	0.789
Time in Community	0.004	-0.006	0.014	0.005	0.429
LGB Identity Development	0.087	-0.051	0.224	0.070	0.216
Identity-Determined Spaces	-0.020	-0.157	0.116	0.069	0.771
Identity-Determined Attributes	0.433	0.301	0.565	0.067	< 0.001 ***
Identity Dev × Spaces	-0.063	-0.198	0.071	0.068	0.353
Identity Dev × Attributes	0.093	-0.033	0.220	0.064	0.148
Spaces × Attributes	0.101	-0.024	0.226	0.063	0.112
Identity Dev × Spaces × Attributes	-0.054	-0.168	0.061	0.058	0.355

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of identity-determined attributes of sexual minority spaces, such that participants have higher belonging in communities high in attributes of sexual minority spaces than in communities with fewer attributes, $b = 0.433$, 95% CI [0.301, 0.565], $p < 0.001$. No other key effects emerged.

Predicting Belonging from Identity-Determined Spaces/Attributes and LGBIS Identity Stress. I ran a multiple linear regression predicting general belongingness based on the interaction between LGB sexual identity stress, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 24. This model only includes sexual minority participants.

Table 24

Regression Model Predicting Belonging from LGB Identity Stress and Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.290	-0.548	-0.031	0.131	0.028
Age	0.091	-0.022	0.204	0.057	0.115
Gender: Woman	0.191	-0.056	0.438	0.125	0.129
Gender: Transman	-0.227	-0.846	0.392	0.314	0.470
Gender: Transwoman	-0.136	-1.193	0.921	0.536	0.801
Gender: Non-Binary	0.604	-0.287	1.495	0.452	0.183
Political Orientation	0.045	-0.087	0.178	0.067	0.500
Race: Asian	0.097	-0.375	0.570	0.240	0.685
Race: Black	-0.170	-0.529	0.190	0.183	0.354
Race: Hispanic/Latine	0.054	-0.489	0.596	0.275	0.846
Race: Other	0.894	-0.120	1.908	0.515	0.084
Race: Multiracial	0.067	-0.295	0.428	0.184	0.717
Time in Community	0.005	-0.005	0.014	0.005	0.309
LGB Identity Stress	-0.372	-0.505	-0.240	0.067	< 0.001 ***
Identity-Determined Spaces	0.015	-0.119	0.149	0.068	0.826
Identity-Determined Attributes	0.351	0.219	0.483	0.067	< 0.001 ***
Stress × Spaces	0.036	-0.092	0.164	0.065	0.579
Stress × Attributes	-0.058	-0.182	0.065	0.063	0.354
Spaces × Attributes	0.094	-0.029	0.216	0.062	0.133
Stress × Spaces × Attributes	0.036	-0.074	0.147	0.056	0.516

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of identity-determined attributes of sexual minority spaces, such that participants have higher belonging in communities high in attributes of sexual minority spaces than in communities with fewer attributes, $b = 0.351$, 95% CI [0.219, 0.483], $p < 0.001$. The model also revealed a main effect of LGB identity stress, such that participants with more identity stress have lower belonging than participants with less identity stress, $b = -0.372$, 95% CI [-0.505, -0.240], $p < 0.001$.

Predicting Belonging from Identity-Determined Spaces/Attributes and Identity Integration. I ran a multiple linear regression predicting general belongingness based on the interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 25. This model only includes sexual minority participants.

Table 25

Regression Model Predicting Belonging from Identity Integration and Identity-Determined Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.182	-0.446	0.082	0.134	0.176
Age	0.102	-0.013	0.217	0.058	0.082
Gender: Woman	0.246	0.000	0.493	0.125	0.050
Gender: Transman	-0.280	-0.920	0.360	0.325	0.389
Gender: Transwoman	-0.635	-1.818	0.547	0.600	0.291
Gender: Non-Binary	0.103	-0.841	1.047	0.479	0.830
Political Orientation	0.143	-0.007	0.293	0.076	0.062
Race: Asian	0.026	-0.449	0.501	0.241	0.914
Race: Black	-0.234	-0.611	0.142	0.191	0.221
Race: Hispanic/Latine	0.099	-0.443	0.640	0.275	0.720
Race: Other	0.991	-0.047	2.029	0.527	0.061
Race: Multiracial	-0.117	-0.482	0.247	0.185	0.526
Time in Community	0.002	-0.008	0.011	0.005	0.716
LGBGIM Ingroup	0.301	0.157	0.445	0.073	< 0.001 ***
LGBGIM Outgroup	0.169	0.037	0.300	0.067	0.012 *
Identity-Determined Spaces	-0.061	-0.192	0.070	0.067	0.361
Identity-Determined Attributes	0.419	0.295	0.543	0.063	< 0.001 ***
Ingroup × Outgroup	-0.098	-0.234	0.039	0.069	0.160
Ingroup × Spaces	0.017	-0.123	0.157	0.071	0.815
Outgroup × Spaces	0.046	-0.085	0.178	0.067	0.489
Ingroup × Attributes	0.051	-0.081	0.182	0.067	0.448
Outgroup × Attributes	0.060	-0.068	0.189	0.065	0.356
Places × Attributes	0.068	-0.052	0.188	0.061	0.266
Ingroup × Outgroup × Places	-0.006	-0.145	0.134	0.071	0.936
Ingroup × Outgroup × Attributes	-0.079	-0.208	0.051	0.066	0.232
Ingroup × Places × Attributes	-0.003	-0.143	0.138	0.071	0.970
Outgroup × Places × Attributes	0.073	-0.027	0.173	0.051	0.151
Ingroup × Outgroup × Places × Attributes	0.036	-0.092	0.164	0.065	0.580

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of ingroup LGB identity, such that higher ingroup identity is associated with more belonging than low ingroup identity, $b = 0.301$, 95% CI [0.157, 0.445], $p < 0.001$. The model also revealed a main effect of outgroup identity, such that higher outgroup identity is associated with more belonging than low outgroup identity, $b = 0.169$, 95% CI [0.037, 0.300], $p = 0.012$. The model also revealed a main effect of identity-determined attributes of sexual minority spaces, such that more attributes are associated with more belonging than fewer attributes, $b = 0.419$, 95% CI [0.295, 0.543], $p < 0.001$.

Models Predicting Well-Being from Overall Spaces/Attributes

Predicting Well-Being from Overall Spaces/Attributes and Sexual Identity Label. I ran a multiple linear regression predicting general well-being based on the interaction between sexual identity label, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority space, outlined in Table 26.

Table 26

Regression Model Predicting Well-Being from Sexual Identity Labels and Overall Spaces/Attributes

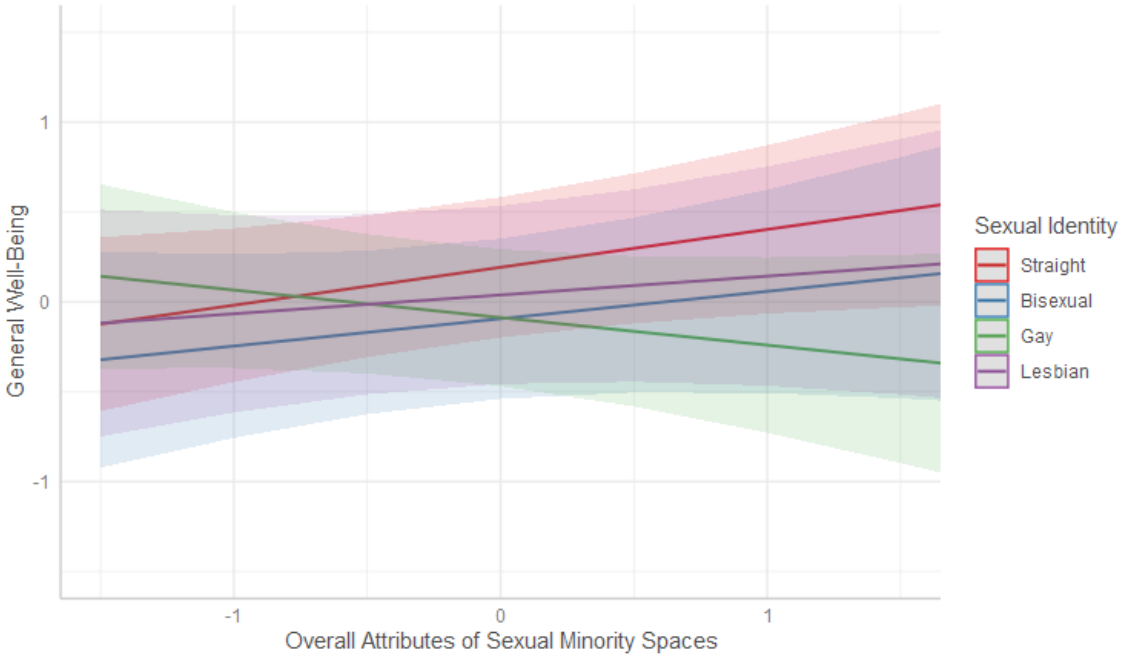
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.191	-0.101	0.483	0.148	0.198
Age	0.197	0.089	0.305	0.055	< 0.001 ***
Gender: Woman	-0.026	-0.308	0.256	0.143	0.856
Gender: Transman	-0.597	-1.284	0.091	0.349	0.089
Gender: Transwoman	-0.120	-1.259	1.019	0.579	0.836
Gender: Non-Binary	-0.209	-1.176	0.757	0.491	0.670
Political Orientation	0.090	-0.017	0.196	0.054	0.098
Race: Asian	-0.049	-0.422	0.325	0.190	0.798
Race: Black	-0.067	-0.421	0.287	0.180	0.709
Race: Hispanic/Latine	0.297	-0.195	0.790	0.250	0.236
Race: Other	0.510	-0.601	1.621	0.565	0.367
Race: Multiracial	-0.383	-0.725	-0.042	0.174	0.028 *
Time in Community	0.004	-0.005	0.012	0.004	0.409
Sexual Identity: Bisexual	-0.286	-0.588	0.016	0.154	0.063
Sexual Identity: Gay	-0.280	-0.613	0.053	0.169	0.099
Sexual Identity: Lesbian	-0.154	-0.495	0.188	0.174	0.376
Overall Spaces	0.085	-0.126	0.296	0.107	0.429
Overall Attributes	0.211	-0.011	0.432	0.112	0.062
Bisexual × Spaces	0.088	-0.194	0.371	0.144	0.539
Gay × Spaces	-0.205	-0.515	0.106	0.158	0.195
Lesbian × Spaces	0.221	-0.093	0.535	0.160	0.167
Bisexual × Attributes	-0.059	-0.435	0.318	0.191	0.760
Gay × Attributes	-0.364	-0.706	-0.022	0.174	0.037 *
Lesbian × Attributes	-0.106	-0.481	0.269	0.191	0.578
Spaces × Attributes	-0.050	-0.274	0.173	0.114	0.658
Bisexual × Spaces × Attributes	0.162	-0.159	0.484	0.163	0.321
Gay × Spaces × Attributes	0.110	-0.225	0.445	0.170	0.519
Lesbian × Spaces × Attributes	0.046	-0.291	0.383	0.171	0.789

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to straight. Race is compared to White. Gender is compared to man.

The model revealed an interaction between gay sexual identity and overall sexual minority attributes, b = -0.364, 95% CI [-0.706, -0.022], p = 0.037, shown in Figure 9.

Figure 9

General Well-Being Based on Sexual Identity and Sexual Minority Spaces



Simple slopes analyses revealed no significant slopes, though straight people were trending towards a pattern where more overall attributes of sexual minority spaces are related to higher well-being, b = 0.211, 95% CI [-0.011, 0.432], p = 0.062. For lesbian, gay, and bisexual participants, overall attributes of sexual minority spaces and well-being were not related (b = 0.104, 95% CI [-0.199, 0.408], p = 0.499 for lesbian; b = -0.153, 95% CI [-0.415, 0.108], p = 0.250 for gay; b = 0.152, 95% CI [-0.152, 0.456], p = 0.326 for bisexual).

Predicting Well-Being from Overall Spaces/Attributes and LGBIS. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 27. This model only includes sexual minority participants.

Table 27

Regression Model Predicting Well-Being from LGB Sexual Identity and Overall Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.034	-0.295	0.228	0.133	0.800
Age	0.160	0.041	0.280	0.060	0.008 **
Gender: Woman	-0.088	-0.339	0.163	0.128	0.492
Gender: Transman	-0.504	-1.155	0.146	0.330	0.128
Gender: Transwoman	0.356	-0.724	1.437	0.548	0.517
Gender: Non-Binary	-0.292	-1.222	0.637	0.472	0.536
Political Orientation	0.135	-0.009	0.278	0.073	0.066
Race: Asian	-0.028	-0.520	0.464	0.249	0.911
Race: Black	-0.212	-0.581	0.158	0.188	0.261
Race: Hispanic/Latine	-0.017	-0.591	0.557	0.291	0.953
Race: Other	0.435	-0.614	1.484	0.532	0.415
Race: Multiracial	-0.273	-0.653	0.108	0.193	0.160
Time in Community	0.006	-0.003	0.016	0.005	0.190
LGB Identity (LGBIS)	0.417	0.285	0.549	0.067	< 0.001 ***
Overall Spaces	0.123	0.007	0.238	0.059	0.037 *
Overall Attributes	0.035	-0.136	0.206	0.087	0.687
LGBIS × Spaces	0.099	-0.018	0.215	0.059	0.097
LGBIS × Attributes	0.165	-0.021	0.350	0.094	0.082
Places × Attributes	0.077	-0.063	0.217	0.071	0.279
LGBIS × Spaces × Attributes	0.048	-0.089	0.185	0.070	0.490

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity, such that participants with stronger sexual identities have higher well-being than participants with weaker sexual identities, $b = 0.417$, 95% CI [0.285, 0.549], $p < 0.001$. The model also revealed a main

effect of overall places, such that participants in communities with more overall sexual minority spaces had higher well-being than participants in communities with fewer overall sexual minority spaces, $b = 0.123$, 95% CI [0.007, 0.238], $p = 0.037$.

Predicting Well-Being from Overall Spaces/Attributes and LGBIS Identity Development. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity development, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 28. This model only includes sexual minority participants.

Table 28

Regression Model Predicting Well-Being from LGB Sexual Identity Development and Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.073	-0.355	0.210	0.144	0.614
Age	0.200	0.072	0.328	0.065	0.002 **
Gender: Woman	-0.008	-0.277	0.261	0.137	0.954
Gender: Transman	-0.679	-1.381	0.022	0.356	0.058
Gender: Transwoman	0.080	-1.080	1.241	0.589	0.891
Gender: Non-Binary	-0.332	-1.351	0.688	0.517	0.522
Political Orientation	0.068	-0.091	0.227	0.081	0.397
Race: Asian	-0.197	-0.726	0.331	0.268	0.463
Race: Black	-0.138	-0.538	0.262	0.203	0.497
Race: Hispanic/Latine	0.259	-0.353	0.871	0.310	0.405
Race: Other	0.285	-0.853	1.423	0.578	0.623
Race: Multiracial	-0.438	-0.847	-0.030	0.207	0.036 *
Time in Community	0.006	-0.004	0.017	0.005	0.239
LGB Identity Development	0.158	0.017	0.298	0.071	0.028 *
Overall Spaces	0.122	-0.003	0.247	0.064	0.056
Overall Attributes	0.013	-0.161	0.187	0.088	0.884
Identity Dev × Spaces	-0.019	-0.145	0.106	0.064	0.760
Identity Dev × Attributes	0.012	-0.174	0.198	0.095	0.897
Spaces × Attributes	0.048	-0.098	0.194	0.074	0.516
Identity Dev × Spaces × Attributes	0.050	-0.098	0.197	0.075	0.508

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity development, such that participants with more developed sexual identities have higher well-being than participants with less developed sexual identities, $b = 0.158$, 95% CI [0.017, 0.298], $p = 0.028$. No other key effects emerged.

Predicting Well-Being from Overall Spaces/Attributes and LGBIS Identity Stress. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity stress, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 29. This model only includes sexual minority participants.

Table 29

Regression Model Predicting Well-Being from LGB Identity Stress and Overall Spaces/Attributes

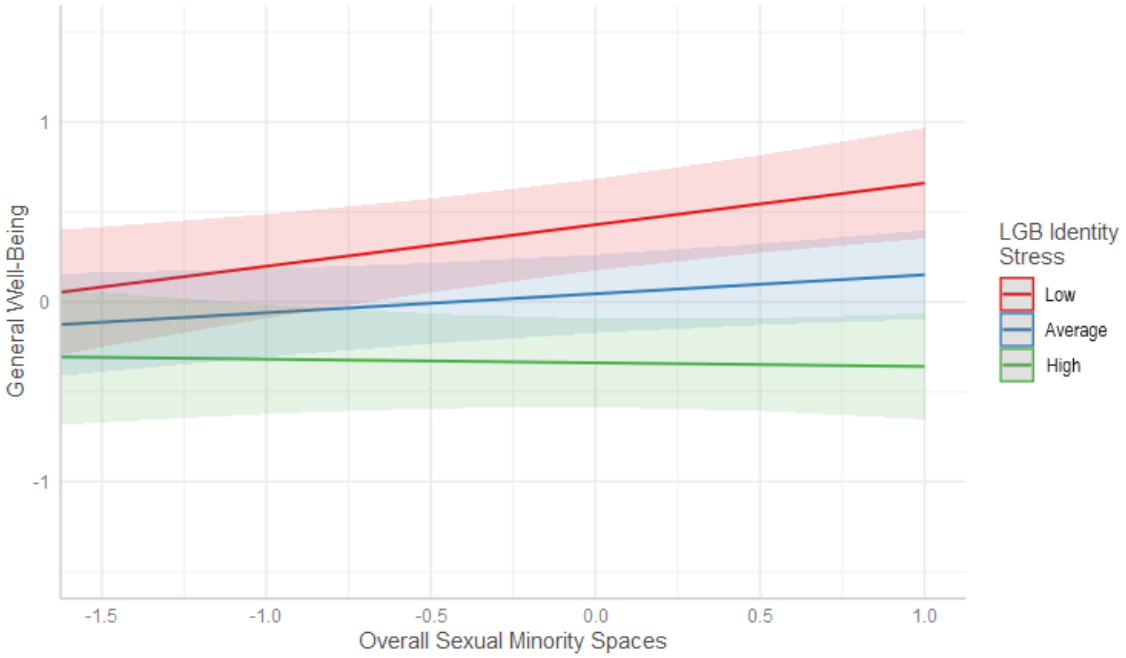
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.016	-0.276	0.244	0.132	0.902
Age	0.173	0.056	0.290	0.059	0.004 **
Gender: Woman	-0.167	-0.420	0.085	0.128	0.193
Gender: Transman	-0.550	-1.204	0.104	0.332	0.099
Gender: Transwoman	0.231	-0.826	1.289	0.537	0.667
Gender: Non-Binary	-0.223	-1.144	0.698	0.467	0.634
Political Orientation	0.050	-0.087	0.186	0.069	0.473
Race: Asian	0.004	-0.486	0.494	0.249	0.986
Race: Black	-0.141	-0.505	0.224	0.185	0.449
Race: Hispanic/Latine	-0.009	-0.582	0.563	0.291	0.974
Race: Other	0.517	-0.527	1.561	0.530	0.330
Race: Multiracial	-0.292	-0.669	0.085	0.191	0.128
Time in Community	0.006	-0.004	0.015	0.005	0.236
LGB Identity Stress	-0.384	-0.508	-0.260	0.063	< 0.001 ***
Overall Spaces	0.105	-0.010	0.220	0.058	0.072
Overall Attributes	-0.009	-0.183	0.164	0.088	0.917
Stress × Spaces	-0.126	-0.244	-0.008	0.060	0.037 *
Stress × Attributes	-0.025	-0.189	0.139	0.083	0.764
Spaces × Attributes	0.024	-0.118	0.165	0.072	0.741
Stress × Spaces × Attributes	0.067	-0.056	0.190	0.062	0.286

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model reveals a main effect of LGB identity stress, such that participants with more identity stress have lower well-being than participants with less identity stress, b = -0.384, 95% CI [-0.508, -0.260], $p < 0.001$, which was qualified by an interaction with overall sexual minority spaces, b = -0.126, 95% CI [-0.244, -0.008], p = 0.037 (Figure 10).

Figure 10

General Well-Being Based on LGB Identity Stress and Overall Sexual Minority Spaces



Simple slopes analysis revealed that more overall sexual minority spaces relate to more well-being, when participants' LGB identity stress is low, b = 0.231, 95% CI [0.074, 0.389], p = 0.004. There was no relationship between sexual minority spaces and well-being when participants had high (b = -0.020, 95% CI [-0.192, 0.151], p = 0.816) or average (b = 0.105, 95% CI [-0.010, 0.220], p = 0.072) identity stress.

Predicting Well-Being from Overall Spaces/Attributes and Identity Integration

Integration. I ran a multiple linear regression predicting general belongingness based on the interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, percent of overall sexual minority spaces, and degree of overall attributes of sexual minority spaces, outlined in Table 30. This model only includes sexual minority participants.

Table 30

Regression Model Predicting Well-Being from Identity Integration and Overall Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.051	-0.231	0.332	0.143	0.723
Age	0.215	0.090	0.341	0.064	< 0.001 ***
Gender: Woman	-0.096	-0.362	0.171	0.135	0.479
Gender: Transman	-0.762	-1.454	-0.070	0.351	0.031 *
Gender: Transwoman	-0.269	-1.503	0.965	0.626	0.668
Gender: Non-Binary	-0.752	-1.790	0.286	0.527	0.155
Political Orientation	0.120	-0.043	0.283	0.083	0.148
Race: Asian	-0.164	-0.684	0.356	0.264	0.536
Race: Black	-0.213	-0.611	0.184	0.202	0.292
Race: Hispanic/Latine	0.253	-0.343	0.849	0.302	0.403
Race: Other	0.511	-0.614	1.637	0.571	0.372
Race: Multiracial	-0.500	-0.902	-0.098	0.204	0.015 *
Time in Community	0.003	-0.007	0.013	0.005	0.581
LGBGIM Ingroup	0.249	0.108	0.389	0.071	< 0.001 ***
LGBGIM Outgroup	0.123	-0.018	0.265	0.072	0.087
Overall Spaces	0.106	-0.019	0.230	0.063	0.096
Overall Attributes	-0.011	-0.192	0.170	0.092	0.905
Ingroup × Outgroup	-0.088	-0.220	0.044	0.067	0.190
Ingroup × Spaces	0.119	-0.008	0.246	0.064	0.065
Outgroup × Spaces	0.093	-0.036	0.222	0.065	0.157
Ingroup × Attributes	0.059	-0.125	0.242	0.093	0.530
Outgroup × Attributes	0.008	-0.223	0.239	0.117	0.946
Places × Attributes	0.033	-0.115	0.181	0.075	0.660
Ingroup × Outgroup × Places	0.020	-0.109	0.149	0.065	0.759
Ingroup × Outgroup × Attributes	0.015	-0.173	0.202	0.095	0.879
Ingroup × Places × Attributes	0.023	-0.132	0.177	0.078	0.774
Outgroup × Places × Attributes	0.012	-0.136	0.160	0.075	0.875
Ingroup × Outgroup × Places × Attributes	-0.066	-0.221	0.090	0.079	0.406

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of ingroup LGB identity, such that higher ingroup identity is associated with more well-being than low ingroup identity, $b = 0.249$, 95% CI [0.108, 0.389], $p < 0.001$. No other key effects emerged.

Models Predicting Well-Being from Identity-Specific Spaces/Attributes

Predicting Well-Being from Identity-Specific Spaces/Attributes and Sexual Identity Label. I ran a multiple linear regression predicting general well-being based on the interaction between sexual identity label, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 31.

Table 31

Regression Model Predicting Well-Being from Sexual Identity Labels and Identity-Specific Spaces/Attributes

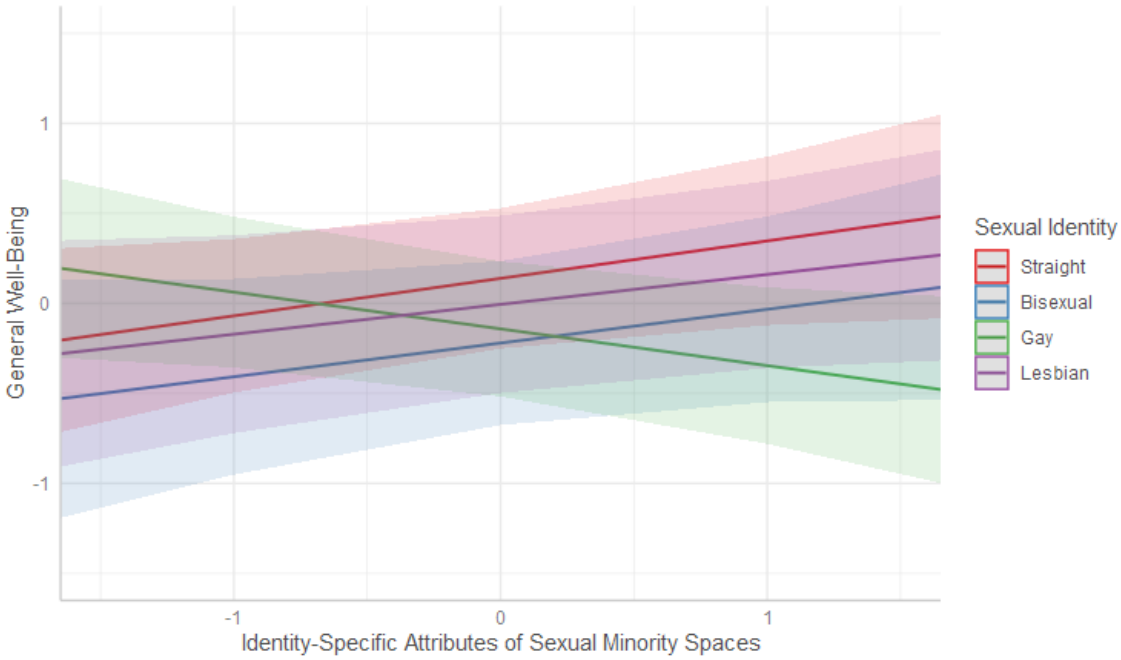
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.201	-0.091	0.493	0.148	0.177
Age	0.190	0.082	0.298	0.055	0.001 ***
Gender: Woman	-0.032	-0.313	0.249	0.143	0.824
Gender: Transman	-0.629	-1.296	0.038	0.339	0.065
Gender: Transwoman	-0.040	-1.167	1.088	0.573	0.945
Gender: Non-Binary	-0.279	-1.242	0.684	0.490	0.569
Political Orientation	0.093	-0.013	0.199	0.054	0.086
Race: Asian	-0.115	-0.488	0.259	0.190	0.545
Race: Black	-0.104	-0.458	0.251	0.180	0.565
Race: Hispanic/Latine	0.308	-0.189	0.805	0.253	0.224
Race: Other	0.519	-0.579	1.618	0.559	0.353
Race: Multiracial	-0.382	-0.720	-0.043	0.172	0.027 *
Time in Community	0.004	-0.005	0.012	0.004	0.389
Sexual Identity: Bisexual	-0.359	-0.671	-0.048	0.158	0.024 *
Sexual Identity: Gay	-0.280	-0.607	0.046	0.166	0.092
Sexual Identity: Lesbian	-0.145	-0.483	0.193	0.172	0.400
Identity-Specific Spaces	0.085	-0.125	0.296	0.107	0.425
Identity-Specific Attributes	0.208	-0.012	0.429	0.112	0.064
Bisexual × Spaces	0.034	-0.270	0.338	0.154	0.826
Gay × Spaces	-0.095	-0.400	0.210	0.155	0.542
Lesbian × Spaces	0.122	-0.196	0.440	0.162	0.450
Bisexual × Attributes	-0.022	-0.373	0.329	0.178	0.903
Gay × Attributes	-0.412	-0.710	-0.114	0.151	0.007 **
Lesbian × Attributes	-0.042	-0.348	0.263	0.155	0.785
Spaces × Attributes	-0.048	-0.271	0.175	0.113	0.673
Bisexual × Spaces × Attributes	0.183	-0.141	0.506	0.164	0.268
Gay × Spaces × Attributes	0.042	-0.250	0.335	0.149	0.775
Lesbian × Spaces × Attributes	0.041	-0.262	0.344	0.154	0.791

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to straight. Race is compared to White. Gender is compared to man.

The model revealed main effect of bisexual identity, such that bisexual participants had worse well-being than straight participants, b = -0.359, 95% CI [-0.671, -0.048], p = 0.024. The model also revealed an interaction between gay sexual identity and identity-specific attributes of sexual minority spaces, b = -0.412, 95% CI [-0.710, -0.114], p = 0.007, shown in Figure 11.

Figure 11

General Well-Being Based on Sexual Identity and Identity-Specific Attributes of Sexual Minority Spaces



Simple slopes analyses revealed that for gay participants, more identity-specific attributes of sexual minority spaces related to lower well-being, b = -0.204, 95% CI [-0.407, -0.001], p = 0.049. For lesbian, bisexual, and straight participants, identity-specific attributes of sexual minority spaces and well-being were not related (b = 0.166, 95% CI [-

0.044, 0.376], $p = 0.121$ for lesbian; $b = 0.186$, 95% CI [-0.084, 0.457], $p = 0.176$ for bisexual; $b = 0.208$, 95% CI [-0.012, 0.429], $p = 0.064$ for straight).

Predicting Well-Being from Identity-Specific Spaces/Attributes and LGBIS. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 32. This model only includes sexual minority participants.

Table 32

Regression Model Predicting Well-Being from LGB Sexual Identity and Identity-Specific Spaces/Attributes

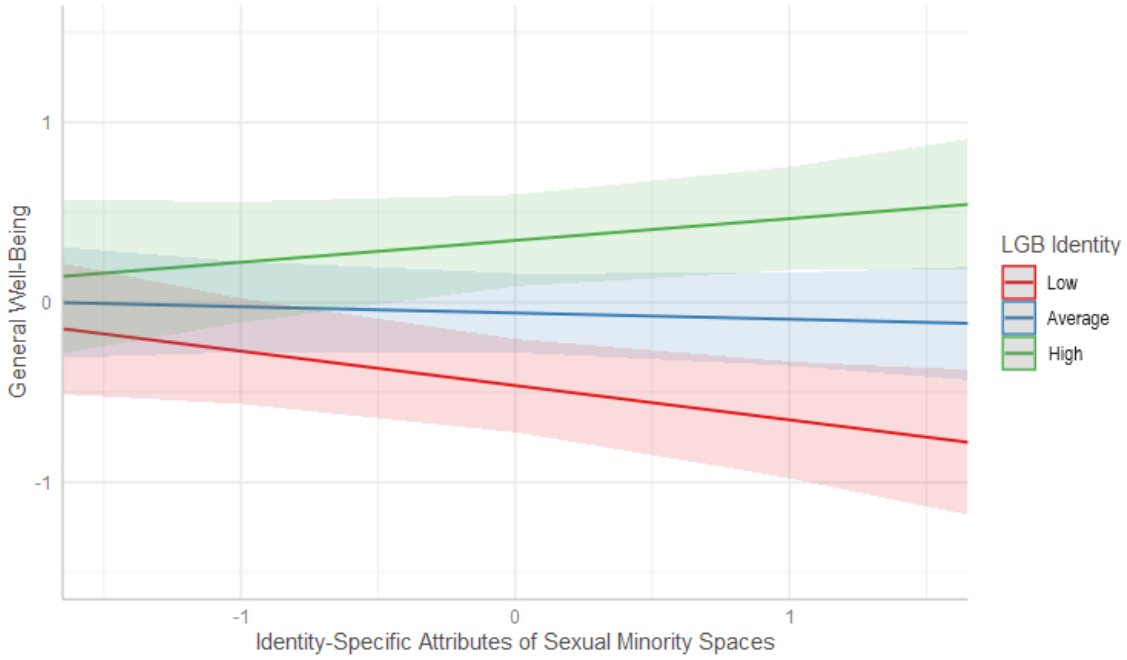
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.104	-0.365	0.158	0.133	0.436
Age	0.172	0.054	0.290	0.060	0.004 **
Gender: Woman	-0.121	-0.372	0.131	0.128	0.345
Gender: Transman	-0.493	-1.132	0.146	0.324	0.130
Gender: Transwoman	0.029	-1.079	1.138	0.563	0.958
Gender: Non-Binary	-0.338	-1.256	0.581	0.466	0.470
Political Orientation	0.096	-0.049	0.242	0.074	0.192
Race: Asian	-0.055	-0.542	0.432	0.247	0.824
Race: Black	-0.182	-0.548	0.184	0.186	0.327
Race: Hispanic/Latine	0.073	-0.498	0.644	0.290	0.802
Race: Other	0.324	-0.719	1.366	0.529	0.541
Race: Multiracial	-0.324	-0.698	0.051	0.190	0.090
Time in Community	0.006	-0.004	0.016	0.005	0.225
LGB Identity (LGBIS)	0.401	0.267	0.535	0.068	< 0.001 ***
Identity-Specific Spaces	0.194	0.064	0.324	0.066	0.004 **
Identity-Specific Attributes	-0.030	-0.161	0.102	0.067	0.658
LGBIS × Spaces	-0.053	-0.179	0.072	0.064	0.403
LGBIS × Attributes	0.156	0.039	0.274	0.060	0.010 **
Places × Attributes	0.120	-0.002	0.243	0.062	0.054
LGBIS × Spaces × Attributes	0.003	-0.093	0.099	0.049	0.958

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of identity-specific sexual minority spaces, such that participants in communities with more sexual minority spaces have higher well-being, $b = 0.194$, 95% CI [0.064, 0.324], $p = 0.004$. The model also revealed a main effect of LGB identity, such that participants with stronger sexual identities have higher well-being than participants with weaker sexual identities, $b = 0.401$, 95% CI [0.267, 0.535], $p < 0.001$, which was qualified by an interaction with identity-specific attributes of sexual minority spaces, $b = 0.156$, 95% CI [0.039, 0.274], $p = 0.010$ (Figure 12).

Figure 12

General Well-Being Based on LGB Identity and Identity-Specific Attributes of Sexual Minority Spaces



Simple slopes analyses revealed that for participants with weak LGB identity strength, more identity-specific attributes of sexual minority spaces are related to lower well-being, b = -0.186, 95% CI [-0.354, -0.018], p = 0.030. For participants with average LGB identity strength (b = -0.030, 95% CI [-0.161, 0.102], p = 0.658) or strong LGB identity strength (b = 0.127, 95% CI [-0.059, 0.312], p = 0.179), attributes of sexual minority spaces do not relate to well-being.

Predicting Well-Being from Identity-Specific Spaces/Attributes and LGBIS Identity Development. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity development, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 33. This model only includes sexual minority participants.

Table 33

Regression Model Predicting Well-Being from LGB Sexual Identity Development and Identity-Specific Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.119	-0.402	0.164	0.144	0.408
Age	0.211	0.082	0.339	0.065	0.001 **
Gender: Woman	0.001	-0.270	0.272	0.137	0.995
Gender: Transman	-0.662	-1.359	0.036	0.354	0.063
Gender: Transwoman	-0.048	-1.253	1.157	0.612	0.938
Gender: Non-Binary	-0.371	-1.378	0.637	0.511	0.470
Political Orientation	0.043	-0.117	0.203	0.081	0.597
Race: Asian	-0.147	-0.674	0.381	0.268	0.584
Race: Black	-0.152	-0.554	0.249	0.204	0.455
Race: Hispanic/Latine	0.237	-0.388	0.863	0.317	0.456
Race: Other	0.265	-0.870	1.400	0.576	0.646
Race: Multiracial	-0.412	-0.818	-0.007	0.206	0.046 *
Time in Community	0.006	-0.005	0.016	0.005	0.279
LGB Identity Development	0.146	0.002	0.290	0.073	0.046 *
Identity-Specific Spaces	0.154	0.018	0.290	0.069	0.027 *
Identity-Specific Attributes	0.007	-0.133	0.147	0.071	0.921
Identity Dev × Spaces	-0.038	-0.173	0.098	0.069	0.586
Identity Dev × Attributes	0.050	-0.090	0.189	0.071	0.481
Spaces × Attributes	0.058	-0.068	0.184	0.064	0.367
Identity Dev × Spaces × Attributes	-0.038	-0.158	0.082	0.061	0.531

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of LGB identity development, such that participants with more developed sexual identities have higher well-being than participants with less developed sexual identities, $b = 0.146$, 95% CI [0.002, 0.290], $p = 0.046$. The model also revealed a main effect of identity-specific sexual minority spaces, such that participants in communities with high levels of sexual minority spaces have higher well-being than participants in communities with low levels of sexual minority spaces, $b = 0.154$, 95% CI [0.018, 0.290], $p = 0.027$. No other key effects emerged.

Predicting Well-Being from Identity-Specific Spaces/Attributes and LGBIS Identity Stress. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity stress, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 34. This model only includes sexual minority participants.

Table 34

Regression Model Predicting Well-Being from LGB Identity Stress and Identity-Specific Spaces/Attributes

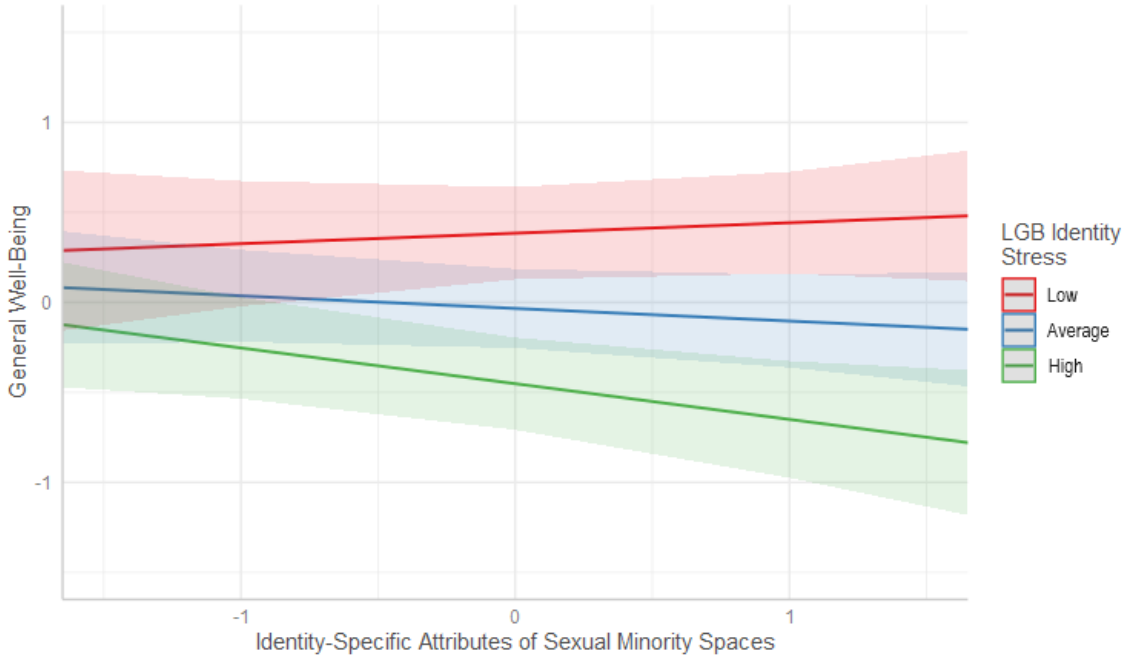
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.084	-0.344	0.176	0.132	0.525
Age	0.184	0.068	0.300	0.059	0.002 **
Gender: Woman	-0.185	-0.439	0.069	0.129	0.152
Gender: Transman	-0.433	-1.072	0.207	0.325	0.184
Gender: Transwoman	0.051	-1.030	1.133	0.549	0.925
Gender: Non-Binary	-0.287	-1.202	0.627	0.464	0.537
Political Orientation	0.029	-0.108	0.166	0.070	0.678
Race: Asian	-0.007	-0.492	0.478	0.246	0.977
Race: Black	-0.140	-0.507	0.226	0.186	0.451
Race: Hispanic/Latine	0.090	-0.479	0.659	0.289	0.756
Race: Other	0.411	-0.626	1.448	0.526	0.436
Race: Multiracial	-0.307	-0.678	0.064	0.188	0.105
Time in Community	0.005	-0.004	0.015	0.005	0.275
LGB Identity Stress	-0.417	-0.550	-0.284	0.068	< 0.001 ***
Identity-Specific Spaces	0.188	0.057	0.319	0.067	0.005 **
Identity-Specific Attributes	-0.066	-0.201	0.070	0.069	0.338
Stress × Spaces	0.022	-0.104	0.147	0.064	0.733
Stress × Attributes	-0.128	-0.243	-0.014	0.058	0.029 *
Spaces × Attributes	0.094	-0.031	0.218	0.063	0.139
Stress × Spaces × Attributes	-0.002	-0.098	0.093	0.048	0.964

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of identity-specific sexual minority spaces, such that participants in communities with high levels of sexual minority spaces have higher well-being than participants in communities with low levels of sexual minority spaces, *b* = 0.188, 95% CI [0.057, 0.319], *p* = 0.005. The model also revealed a main effect of LGB identity stress, such that participants with more identity stress have lower well-being than participants with less identity stress, *b* = -0.417, 95% CI [-0.550, -0.284], *p* < 0.001, which was qualified by an interaction with identity-specific attributes of sexual minority spaces, *b* = -0.128, 95% CI [-0.243, -0.014], *p* = 0.029 (Figure 13).

Figure 13

General Well-Being Based on LGB Identity Stress and Identity-Specific Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-specific attributes of sexual minority spaces relate to lower well-being, when participants' LGB identity stress is high, b = -0.194, 95% CI [-0.357, -0.032], p = 0.019. There was no relationship between attributes of sexual minority spaces and well-being when participants had low (b = 0.062, 95% CI [-0.129, 0.254], p = 0.521) or average (b = -0.066, 95% CI [-0.201, 0.070], p = 0.338) identity stress.

Predicting Well-Being from Identity-Specific Spaces/Attributes and Identity Integration. I ran a multiple linear regression predicting general belongingness based on the interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, percent of identity-specific sexual minority spaces, and degree of identity-specific attributes of sexual minority spaces, outlined in Table 35. This model only includes sexual minority participants.

Table 35

Regression Model Predicting Well-Being from Identity Integration and Identity-Specific Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.030	-0.252	0.311	0.143	0.835
Age	0.207	0.081	0.333	0.064	0.001 **
Gender: Woman	-0.098	-0.366	0.170	0.136	0.471
Gender: Transman	-0.747	-1.427	-0.067	0.345	0.031 *
Gender: Transwoman	0.086	-1.167	1.340	0.636	0.892
Gender: Non-Binary	-0.839	-1.874	0.197	0.525	0.112
Political Orientation	0.134	-0.028	0.296	0.082	0.105
Race: Asian	-0.162	-0.679	0.354	0.262	0.536
Race: Black	-0.231	-0.634	0.172	0.205	0.261
Race: Hispanic/Latine	0.255	-0.350	0.861	0.307	0.407
Race: Other	0.487	-0.630	1.604	0.567	0.391
Race: Multiracial	-0.485	-0.880	-0.089	0.201	0.017 *
Time in Community	0.002	-0.008	0.013	0.005	0.679
LGBGIM Ingroup	0.244	0.094	0.393	0.076	0.002 **
LGBGIM Outgroup	0.097	-0.043	0.237	0.071	0.175
Identity-Specific Spaces	0.101	-0.034	0.236	0.068	0.140
Identity-Specific Attributes	0.049	-0.089	0.186	0.070	0.486
Ingroup × Outgroup	-0.014	-0.163	0.136	0.076	0.858
Ingroup × Spaces	0.070	-0.077	0.217	0.075	0.347
Outgroup × Spaces	0.133	-0.005	0.271	0.070	0.059
Ingroup × Attributes	0.034	-0.107	0.175	0.072	0.635
Outgroup × Attributes	-0.057	-0.207	0.092	0.076	0.452
Places × Attributes	0.089	-0.041	0.219	0.066	0.180
Ingroup × Outgroup × Places	0.039	-0.108	0.186	0.075	0.601
Ingroup × Outgroup × Attributes	-0.015	-0.146	0.116	0.066	0.824
Ingroup × Places × Attributes	-0.013	-0.150	0.125	0.070	0.857
Outgroup × Places × Attributes	0.042	-0.073	0.156	0.058	0.473
Ingroup × Outgroup × Places × Attributes	-0.066	-0.192	0.060	0.064	0.304

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of ingroup LGB identity, such that higher ingroup identity is associated with more well-being than low ingroup identity, $b = 0.244$, 95% CI [0.094, 0.393], $p = 0.002$. No other key effects emerged.

Models Predicting Well-Being from Identity-Determined Spaces/Attributes

Predicting Well-Being from Identity-Determined Spaces/Attributes and Sexual Identity Label. I ran a multiple linear regression predicting general well-being based on the interaction between sexual identity label, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 36.

Table 36

Regression Model Predicting Well-Being from Sexual Identity Labels and Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.188	-0.103	0.479	0.148	0.205
Age	0.190	0.083	0.297	0.054	< 0.001 ***
Gender: Woman	-0.027	-0.307	0.254	0.143	0.851
Gender: Transman	-0.586	-1.250	0.078	0.338	0.084
Gender: Transwoman	0.017	-1.116	1.151	0.576	0.976
Gender: Non-Binary	-0.172	-1.130	0.785	0.487	0.723
Political Orientation	0.099	-0.007	0.205	0.054	0.068
Race: Asian	-0.055	-0.427	0.316	0.189	0.769
Race: Black	-0.031	-0.392	0.329	0.183	0.864
Race: Hispanic/Latine	0.243	-0.242	0.727	0.246	0.325
Race: Other	0.494	-0.622	1.609	0.567	0.385
Race: Multiracial	-0.344	-0.682	-0.007	0.172	0.046 *
Time in Community	0.003	-0.005	0.012	0.004	0.428
Sexual Identity: Bisexual	-0.350	-0.659	-0.040	0.157	0.027 *
Sexual Identity: Gay	-0.300	-0.639	0.038	0.172	0.082
Sexual Identity: Lesbian	-0.134	-0.475	0.206	0.173	0.438
Identity-Determined Spaces	0.082	-0.128	0.293	0.107	0.441
Identity-Determined Attributes	0.209	-0.011	0.429	0.112	0.063
Bisexual × Spaces	0.035	-0.273	0.343	0.156	0.824
Gay × Spaces	-0.224	-0.547	0.100	0.164	0.174
Lesbian × Spaces	0.086	-0.238	0.409	0.165	0.603
Bisexual × Attributes	-0.032	-0.375	0.312	0.175	0.856
Gay × Attributes	0.016	-0.291	0.322	0.156	0.920
Lesbian × Attributes	-0.005	-0.317	0.308	0.159	0.977
Spaces × Attributes	-0.052	-0.275	0.170	0.113	0.645
Bisexual × Spaces × Attributes	0.157	-0.173	0.487	0.168	0.350
Gay × Spaces × Attributes	0.129	-0.179	0.437	0.156	0.410
Lesbian × Spaces × Attributes	0.047	-0.257	0.351	0.155	0.761

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to straight. Race is compared to White. Gender is compared to man.

The model revealed main effect of bisexual identity, such that bisexual participants had lower well-being than straight participants, b = -0.350, 95% CI [-0.659, -0.040], p = 0.027. No other reliable effects emerged.

Predicting Well-Being from Identity-Determined Spaces/Attributes and LGBIS. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 37. This model only includes sexual minority participants.

Table 37

Regression Model Predicting Well-Being from LGB Sexual Identity and Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.114	-0.382	0.154	0.136	0.402
Age	0.151	0.033	0.269	0.060	0.013 *
Gender: Woman	-0.102	-0.353	0.150	0.128	0.428
Gender: Transman	-0.551	-1.191	0.089	0.325	0.091
Gender: Transwoman	0.159	-0.960	1.278	0.568	0.780
Gender: Non-Binary	-0.263	-1.188	0.661	0.469	0.575
Political Orientation	0.119	-0.025	0.262	0.073	0.105
Race: Asian	-0.030	-0.518	0.458	0.248	0.902
Race: Black	-0.128	-0.502	0.246	0.190	0.502
Race: Hispanic/Latine	0.113	-0.449	0.674	0.285	0.692
Race: Other	0.411	-0.639	1.462	0.533	0.441
Race: Multiracial	-0.293	-0.668	0.082	0.190	0.125
Time in Community	0.007	-0.003	0.017	0.005	0.166
LGB Identity (LGBIS)	0.374	0.236	0.512	0.070	< 0.001 ***
Identity-Specific Spaces	0.102	-0.035	0.238	0.069	0.143
Identity-Specific Attributes	0.118	-0.013	0.248	0.066	0.078
LGBIS × Spaces	-0.032	-0.164	0.099	0.067	0.631
LGBIS × Attributes	0.119	-0.003	0.242	0.062	0.057
Places × Attributes	0.069	-0.055	0.192	0.062	0.274
LGBIS × Spaces × Attributes	-0.010	-0.120	0.100	0.056	0.855

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of LGB identity, such that participants with stronger sexual identities have higher well-being than participants with weaker sexual identities, $b = 0.374$, 95% CI [0.236, 0.512], $p < 0.001$. No other main effects or interactions emerged.

Predicting Well-Being from Identity-Determined Spaces/Attributes and LGBIS Identity Development. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity development, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 38. This model only includes sexual minority participants.

Table 38

Regression Model Predicting Well-Being from LGB Sexual Identity and Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.122	-0.402	0.158	0.142	0.392
Age	0.194	0.069	0.318	0.063	0.002 **
Gender: Woman	-0.007	-0.271	0.257	0.134	0.958
Gender: Transman	-0.604	-1.284	0.075	0.345	0.081
Gender: Transwoman	0.039	-1.149	1.226	0.603	0.949
Gender: Non-Binary	-0.288	-1.273	0.698	0.500	0.566
Political Orientation	0.060	-0.097	0.216	0.080	0.453
Race: Asian	-0.135	-0.651	0.381	0.262	0.606
Race: Black	-0.100	-0.500	0.300	0.203	0.623
Race: Hispanic/Latine	0.244	-0.349	0.837	0.301	0.418
Race: Other	0.264	-0.851	1.380	0.566	0.641
Race: Multiracial	-0.408	-0.804	-0.011	0.201	0.044 *
Time in Community	0.006	-0.005	0.016	0.005	0.270
LGB Identity Development	0.150	0.008	0.292	0.072	0.039 *
Identity-Determined Spaces	0.082	-0.059	0.223	0.072	0.255
Identity-Determined Attributes	0.173	0.037	0.310	0.069	0.013 *
Identity Dev × Spaces	-0.084	-0.223	0.055	0.070	0.236
Identity Dev × Attributes	0.090	-0.041	0.221	0.066	0.177
Spaces × Attributes	0.071	-0.059	0.200	0.066	0.284
Identity Dev × Spaces × Attributes	-0.056	-0.174	0.063	0.060	0.354

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of LGB identity development, such that participants with more developed sexual identities have higher well-being than participants with less developed sexual identities, $b = 0.150$, 95% CI [0.008, 0.292], $p = 0.039$. The model also revealed a main effect of identity-determined attributes of sexual minority spaces, such that participants in communities with high levels of attributes of sexual minority spaces have higher well-being than participants in communities with low levels of attributes, $b = 0.173$, 95% CI [0.037, 0.310], $p = 0.013$. No other key effects emerged.

Predicting Well-Being from Identity-Determined Spaces/Attributes and LGBIS Identity Development. I ran a multiple linear regression predicting general well-being based on the interaction between LGB sexual identity stress, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 39. This model only includes sexual minority participants.

Table 39

Regression Model Predicting Well-Being from LGB Identity Stress and Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.112	-0.379	0.155	0.135	0.408
Age	0.166	0.049	0.282	0.059	0.006 **
Gender: Woman	-0.161	-0.415	0.094	0.129	0.216
Gender: Transman	-0.529	-1.168	0.109	0.324	0.104
Gender: Transwoman	0.198	-0.893	1.289	0.554	0.721
Gender: Non-Binary	-0.191	-1.110	0.729	0.467	0.683
Political Orientation	0.058	-0.079	0.194	0.069	0.405
Race: Asian	0.021	-0.467	0.509	0.248	0.932
Race: Black	-0.080	-0.451	0.291	0.188	0.672
Race: Hispanic/Latine	0.101	-0.459	0.661	0.284	0.723
Race: Other	0.524	-0.522	1.571	0.531	0.325
Race: Multiracial	-0.282	-0.655	0.091	0.189	0.138
Time in Community	0.007	-0.003	0.016	0.005	0.171
LGB Identity Stress	-0.364	-0.501	-0.227	0.070	< 0.001 ***
Identity-Determined Spaces	0.091	-0.047	0.229	0.070	0.197
Identity-Determined Attributes	0.109	-0.027	0.245	0.069	0.115
Stress × Spaces	-0.008	-0.140	0.125	0.067	0.910
Stress × Attributes	-0.120	-0.247	0.008	0.065	0.065
Spaces × Attributes	0.072	-0.055	0.198	0.064	0.265
Stress × Spaces × Attributes	-0.028	-0.142	0.085	0.058	0.623

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of LGB identity stress, such that participants with more identity stress have lower well-being than participants with less identity stress, b = -0.364, 95% CI [-0.501, -0.227], $p < 0.001$. No other key effects emerged.

Predicting Well-Being from Identity-Determined Spaces/Attributes and Identity Integration. I ran a multiple linear regression predicting general belongingness based on the interaction between LGBGIM ingroup identity, LGBGIM outgroup identity, percent of identity-determined sexual minority spaces, and degree of identity-determined attributes of sexual minority spaces, outlined in Table 40. This model only includes sexual minority participants.

Table 40

Regression Model of Well-Being Based on Identity Integration and Identity-Determined Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.030	-0.314	0.254	0.144	0.833
Age	0.185	0.061	0.308	0.063	0.004 **
Gender: Woman	-0.057	-0.322	0.208	0.135	0.673
Gender: Transman	-0.540	-1.228	0.148	0.349	0.123
Gender: Transwoman	0.352	-0.920	1.623	0.645	0.587
Gender: Non-Binary	-0.605	-1.620	0.410	0.515	0.242
Political Orientation	0.159	-0.002	0.320	0.082	0.053
Race: Asian	-0.150	-0.661	0.361	0.259	0.563
Race: Black	-0.101	-0.506	0.304	0.205	0.624
Race: Hispanic/Latine	0.195	-0.387	0.777	0.295	0.510
Race: Other	0.652	-0.464	1.769	0.567	0.251
Race: Multiracial	-0.469	-0.862	-0.077	0.199	0.019 *
Time in Community	0.004	-0.007	0.014	0.005	0.482
LGBGIM Ingroup	0.221	0.066	0.376	0.079	0.005 **
LGBGIM Outgroup	0.089	-0.052	0.231	0.072	0.213
Identity-Determined Spaces	0.035	-0.106	0.176	0.072	0.628
Identity-Determined Attributes	0.182	0.049	0.316	0.068	0.008 **
Ingroup × Outgroup	-0.048	-0.195	0.099	0.075	0.522
Ingroup × Spaces	0.069	-0.082	0.220	0.076	0.369
Outgroup × Spaces	0.102	-0.040	0.243	0.072	0.158
Ingroup × Attributes	0.033	-0.109	0.174	0.072	0.650
Outgroup × Attributes	0.075	-0.063	0.214	0.070	0.284
Places × Attributes	0.030	-0.099	0.160	0.066	0.646
Ingroup × Outgroup × Places	-0.003	-0.153	0.147	0.076	0.964
Ingroup × Outgroup × Attributes	-0.044	-0.183	0.096	0.071	0.538
Ingroup × Places × Attributes	0.072	-0.080	0.223	0.077	0.351
Outgroup × Places × Attributes	0.072	-0.035	0.180	0.054	0.185
Ingroup × Outgroup × Places × Attributes	-0.063	-0.201	0.074	0.070	0.365

Note. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Sexual identity is compared to gay. Race is compared to White. Gender is compared to man.

The model revealed a main effect of ingroup LGB identity, such that higher ingroup identity is associated with more well-being than low ingroup identity, $b = 0.221$, 95% CI [0.066, 0.376], $p = 0.005$. The model also revealed a main effect of identity-determined attributes of sexual minority spaces, such that more attributes are associated with more well-being than fewer attributes, $b = 0.182$, 95% CI [0.049, 0.316], $p = 0.008$.

Findings related to belonging are summarized in Table 41 and findings related to well-being are summarized in Table 42.

Table 41

Summary of Study 2 Belonging Findings

Sexual Minority Space Type	***Identity Measure***	***Space Effects***	***Attribute Effects***	***Identity Effects***	***Space × Attribute Effects***	***Space × Identity Effects***	***Attribute × Identity Effects***
Overall	Label	–	–	Lower belonging for gay than straight	–	Lesbian: more belonging when more spaces	–
Overall	LGBIS	More belonging when more spaces	–	More belonging when higher LGBIS	–	–	–
Overall	Id Dev	–	–	--	–	–	–
Overall	Id Stress	–	–	More belonging when less identity stress	High attributes: more belonging when more spaces	–	–
Overall	LGBGIM	–	–	More belonging when more ingroup and outgroup identity	–	–	–
Specific	Label	–	–	Lower belonging for gay than straight	–	–	Lesbian, bisexual: more belonging when more attributes
Specific	LGBIS	–	–	–	High attributes: more belonging when more spaces	Average or high LGBIS: more belonging when more spaces	–
Specific	Id Dev	–	More belonging when more attributes	–	–	–	–
Specific	Id Stress	–	–	More belonging when less identity stress	–	–	Low identity stress: more belonging when more attributes

Specific	LGBGIM	–	More belonging when more attributes	More belonging when more ingroup and outgroup identity	–	–	–
Determined	Label	–	–	Lower belonging for gay than straight	–	–	LGB: more belonging when more attributes
Determined	LGBIS	–	More belonging when more attributes	More belonging when higher LGBIS	–	–	–
Determined	Id Dev	–	More belonging when more attributes	–	–	–	–
Determined	Id Stress	–	More belonging when more attributes	More belonging when less identity stress	–	–	–
Determined	LGBGIM	–	More belonging when more attributes	More belonging when more ingroup and outgroup identity	–	–	–

Table 42

Summary of Study 2 Well-Being Findings.

Sexual Minority Space Type	*Identity Measure*	*Space Effects*	*Attribute Effects*	*Identity Effects*	*Space × Attribute Effects*	*Space × Identity Effects*	*Attribute × Identity Effects*
Overall	Label	–	–	–	–	–	–
Overall	LGBIS	–	–	More well-being when higher LGBIS	–	–	–
Overall	Id Dev	–	–	More well-being when higher identity development	–	–	–
Overall	Id Stress	–	–	Lower well-being when more identity stress	–	Low identity stress: more well-being when more spaces	–
Overall	LGBGIM	–	–	More well-being when more ingroup identity	–	–	–
Specific	Label	–	–	Lower well-being for bisexual than straight	–	–	Gay: lower well-being when more attributes
Specific	LGBIS	More well-being when more spaces	–	More well-being when higher LGBIS	–	–	Low LGBIS: lower well-being when more attributes
Specific	Id Dev	More well-being when more spaces	–	More well-being when more identity development	–	–	–
Specific	Id Stress	More well-being when more spaces	–	Lower well-being when more identity stress	–	–	High identity stress: lower well-being when more attributes
Specific	LGBGIM	–	–	More well-being when more ingroup identity	–	–	–
Determined	Label	–	–	Lower well-being for	–	–	–

				bisexual than straight			
Determined	LGBIS	–	–	More well-being when higher LGBIS	–	–	–
Determined	Id Dev	More well-being when more spaces	–	More well-being when more identity development	–	–	–
Determined	Id Stress	–	–	Lower well-being when more identity stress	–	–	–
Determined	LGBGIM	–	More well-being when more attributes	More well-being when more ingroup identity	–	–	–

Study 2 Discussion

Study 2 examined the how sexual identity, sexual minority spaces, and attributes of sexual minority spaces interact to predict belonging and well-being. Across 30 regression models, I found evidence that sexual minority spaces and attributes of sexual minority spaces relate to positive outcomes for sexual minority people. In many instances, more attributes of sexual minority spaces and more sexual minority spaces related to higher belonging and well-being for sexual minority people. Some nuances in these patterns emerged. First, some models revealed a pattern that for sexual minority spaces to relate to belonging, the attributes of sexual minority spaces had to be above average. Second, and counter to my hypotheses, some models revealed a pattern that higher sexual minority spaces relate to higher belonging only when participants had strong identities and low identity stress. Third, some puzzling results emerged, such as more attributes of sexual minority spaces relating to worse well-being for those with weak LGB identities and high identity stress.

I found that belonging was related to sexual minority spaces and attributes more often than well-being was related. However, sexual minority attributes related to more belonging, whereas sexual minority spaces related to more well-being. Additionally, identity-specific and identity-determined attributes predicted belonging and well-being outcomes more frequently than overall attributes, in line with my predictions. Overall, Study 2 provides evidence for sexual minority spaces and attributes relating to positive outcomes for sexual minority people.

Study 3

Sexual minority spaces may provide direct benefits to LGBQ people, as examined in Study 2, but sexual minority spaces may also reflect and reinforce the culture and attitudes at a regional level. Many psychological phenomena, including intergroup bias, cluster in regions, leading to regional variation that is then perpetuated by the people and establishments in the region (Rentfrow et al., 2008). In the same way, LGBQ people clustered in regions, leading to the establishment of sexual minority spaces (Esterberg, 1996), which then serve as a cue of gay friendliness. Sexual minority spaces cue gay friendliness to like-minded outsiders, who selectively migrate to regions with sexual minority spaces, and to those in the community who adapt to match the regional gay friendliness (Rentfrow et al., 2008). Study 3 examined the relationships between sexual minority spaces and LGBQ health at the regional level.

Methods

Materials & Procedure

Study 3 relied on archival data to analyze the relationship between sexual minority spaces and LGBQ well-being. I examined these relationships at the state level.

Regional Sexual Minority Spaces. I used the list developed in Study 1 and used in Study 2 to establish what sexual minority spaces and attributes of sexual minority spaces are (Table 6 and Table 7). I outline the data sources I used below and summarize the constructs and their data sources in Table 43.

U.S. Census Business Data. The U.S. Census collects data from County Business Patterns and Nonemployer Statistics to establish the number of businesses and employees

in different fields (https://www.census.gov/data/tables/2021/econ/nonemployer-statistics/2021-combined-report.html). I used this data from 2021 to find the number of nightclubs, retail stores, bookstores, restaurants, museums, people working in sports, and independent artists.

LGBTQ Bar Data; Mattson, 2021. I sourced data from the author of a paper on LGBTQ bars in the U.S. from 1971 to 2023 (Mattson, 2021). The researchers relied on the Damron Guides, a gay travel guide, and from Google searches and contacting bars. They sorted the bars into primarily male bars, primarily female bars, and mixed gender bars. I used data from 2019, 2021, and 2023 and I operationalized the primarily male bars as gay bars, the primarily female bars as lesbian bars, and all the bars as LGBTQ bars.

Lesbian Bar Project. The Lesbian Bar Project maintains an active record of lesbian bars in the U.S. (https://www.lesbianbarproject.com/). I quantified the number of lesbian bars on the website as of May 2024.

Wikipedia. I used data from Wikipedia to capture data on state parks (https://en.wikipedia.org/wiki/Lists_of_state_parks_by_U.S._state), national parks (https://en.wikipedia.org/wiki/List_of_national_parks_of_the_United_States), women's sports teams (https://en.wikipedia.org/wiki/Prominent_women%27s_sports_leagues_in_the_United_States_and_Canada), women's marches (https://en.wikipedia.org/wiki/List_of_2017_Women%27s_March_locations), and women's festivals (https://en.wikipedia.org/wiki/Category:Women%27s_festivals; https://en.wikipedia.org/wiki/List_of_women%27s_film_festivals).

U.S. Bureau of Economic Analysis. The US Bureau of Economic Analysis (by way of https://jabberwocking.com/chart-of-the-day-the-most-outdoorsy-state-is/) calculates the value that state outdoor recreation contributes to the state economy by percentage of GDP in 2022. This captures how "outdoorsy" a state is.

Cultural Currents Institute. The Cultural Currents Institute collected data from national sources (NOAA, National Parks, etc.) that captured the states' public land, shoreline, skiable land, trail miles, and public lakes (https://www.culturalcurrents.institute/insights/best-states-for-nature-lovers).

Lambda Legal. Lambda Legal collects a list of support groups by state on their website (https://legacy.lambdalegal.org/know-your-rights/article/youth-regional-organizations-by-state). I quantified the number of currently active support groups per state.

PFLAG. PFLAG is a national organization for support groups for LGBTQ people and their families (https://pflag.org/findachapter/). I counted the number of active chapters per state in 2024.

Movement Advancement Project. The Movement Advancement Project collects data related to LGBTQ+ related issues. The Movement Advancement Project collects information about community centers (https://www.lgbtmap.org/policy-and-issue-analysis/2022-lgbtq-community-center-survey-report), which I used to quantify the number of community centers per state. They also maintain a tally of policies that help or harm sexual minority people and create a score for each state that reflects the sum of positive laws minus the sum of negative laws (https://www.lgbtmap.org/equality-

maps/equality-maps). I used the overall tally of sexual orientation-based laws to reflect inclusive and accepting places.

Yelp API via ZomaSleep. Zoma Sleep collected the number of coffeeshops per state using Yelp's API (https://zomasleep.com/blog/most-awake-city).

Mister B&B. Mister B&B is a gay travel website that collects data on gay spaces. I used data from Mister B&B to collect the number of gay pride events (https://www.misterbandb.com/gay-events/united-states/gay-pride) and gay saunas/bathhouses (https://www.misterbandb.com/gay-guide/united-states/58-saunas-cruising).

GayPrideCalendar. GayPrideCalendar.com maintains a list of pride events by city (https://www.gaypridecalendar.com/byname).

Statista. Statista uses data from the Health and Fitness Association to determine the number of health clubs per state (https://www.statista.com/statistics/1183595/health-clubs-by-state/).

Women's College Directory. Women's College Directory hosts a list of all women's colleges in the U.S. (https://www.womenscolleges.org/colleges).

Google Trends. Google Trends data collects the number of Google searches of different topics at the state level (https://trends.google.com/home?hl=en-US). I used the number of Google searches for "National Coming Out Day" in the last five years as a proxy for people who want to come out and be open with no concealment.

Uniform Crime Reporting. The FBI maintains a record of anti-sexuality hate crimes for many law enforcement agencies across the U.S.

(https://cde.ucr.cjis.gov/LATEST/webapp/#/pages/explorer/crime/hate-crime). I recorded the number of anti-LGB hate crimes per state from 2018-2022, the five most recent years of data collection. I also adjusted for the percent of law enforcement agencies that did not participate in the crime reporting by dividing the number of hate crimes by the percent of law enforcement agencies participating to create a weighted amount.

Project Implicit. Project Implicit collected data on personality as a part of their Race IAT (https://osf.io/52qxl/), with individual questions from the Big Five Inventory that capture the traits of quiet, fun and loud, and artsy.

Williams Institute. The Williams Institute captures the proportion of LGBT people per state, which can be broken up by percent of LGBT men or LGBT women (https://williamsinstitute.law.ucla.edu/visualization/lgbt-stats/?topic=LGBT#density). They source this data from Gallup Polls. I used the percentage of LGBT women to capture the population of lesbian women and the percentage of LGBT men to capture the population of gay men. Though this measure will also capture other LGBT people and not only gay men or lesbian women, because of its nationally representativeness, I used this as a proxy for the number of gay men and lesbian women.

U.S. Census. The U.S. Census collects the number of same-sex households in each state and which households are male-male or female-female (https://data.census.gov/table/ACSDT5Y2020.B11009?q=same-sex%20couples&g=010XX00US$0400000&y=2020). I used the number of male same-sex partner households for an estimate of gay men and the number of female same-sex partner household for an estimate of lesbian women.

Table 43

Regional Sexual Minority Spaces and Attributes of Sexual Minority Spaces

Variable	*Operationalization*	*Data Source*	*Years*
Gay Bars	Mostly male bars	Mattson, 2021	2019-2023
Lesbian Bars	Mostly female/lesbian bars	Mattson, 2021 Lesbian Bar Project	2019-2023 2024
LGBTQ Bars	All LGBTQ bars	Mattson, 2021	2019-2023
Nightclubs	All drinking establishments	Census Business Data	2021
Outdoor Spaces	GDP from outdoor recreation; public land, skiable land, shoreline miles, public lakes; state and national parks	U.S. Bureau of Economic Analysis Cultural Currents Institute State/National Parks Wikipedia	2022 2020 2024
LGBTQ Support Group	LGBTQ support groups	Lambda Legal PFLAG	2024 2024
LGBTQ Community Center	Community Center Project	Movement Advancement Project	2022
Coffeeshops and Cafes	Coffeeshops	ZomaSleep/Yelp API	2024
Retail Stores	Retail businesses	Census Business Data	2021
Bookstores	Bookstore businesses	Census Business Data	2021
Pride Events	Pride events	Mister b&b GayPrideCalendar	2024 2024
Bathhouses	Gay saunas and bathhouses	Mister b&b	2024
Gyms	Health clubs	Health and Fitness Association from Statista	2019
Restaurants	Restaurants	Census Business Data	2021
Museums	Museums	Census Business Data	2021
Sporting Events	People working in sports	Census Business Data	2021
Women's Sports	Number of sports teams	Women's Sports Wikipedia	2024
Women's Events	Women's colleges; women's march attendance	Women's College Directory Women's March Wikipedia	2024 2017
Inclusive and Accepting	Tally of pro- vs. anti-LGB policies	Movement Advancement Project Policies	2024
Open and No Concealment	"National Coming Out Day" searches	Google Trends	2019-2024
Safe	Sexuality-based hate crimes	Uniform Crime Reporting	2018-2022
Quiet	Big Five Inventory prompts of quietness	Project Implicit	2006-2015
Fun and Loud	Big Five Inventory prompts of extraversion	Project Implicit	2006-2015

Artsy and Creative	Big Five Inventory prompts of appreciation of arts; independent artists	Project Implicit Census Business Data	2006-2015 2022
Population of Lesbian Women	LGBT women; female-female households	Williams Institute U.S. Census	2012-2017 2020
Population of Gay Men	LGBT men; male-male households	Williams Institute U.S. Census	2012-2017 2020

LGBQ Well-Being. I used two sources to capture LGB well-being. First, I used the Household Pulse Survey. The Household Pulse Survey collects data on anxiety and depression, based on participants' sexual identity and state for all 50 states and Washington D.C. (United States Census Bureau, 2023b). I used this data to capture the mental health of the LGB people living in a region, based on sexual identity as gay or lesbian, bisexual, or straight. Higher anxiety and depression values reflect more symptoms of anxiety and depression. Because the Household Pulse Survey does not separate out lesbian and gay people, I also used data on LGB youth from the Youth Risk Behavior Survey (CDC, 2021), which collects general mental health data on lesbian, gay, and bisexual youth, across 26 states (Arizona, Arkansas, Connecticut, Colorado, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Michigan, Mississippi, Nebraska, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Oklahoma, Pennsylvania, Rhode Island, Texas, Utah, Vermont, Virginia, West Virginia). Higher values reflect more mental health symptoms.

Data Analysis

I scaled the number of spaces according to populations, by dividing the number of sexual minority spaces in a state by the state's population. For size-based data, such as state park acreage, I scaled the size of the state, by dividing by states' acreage. For places and attributes that I am using multiple data sources to capture (e.g., artsy, LGBTQ community centers), I combined the multiple sources into an average index if the sources are sufficiently intercorrelated (alpha > 0.7). For support groups, which were not

correlated, I summed up the number of PFLAGs and other support groups. I then standardized the numeric data.

I quantified the number of community spaces and attributes in a few ways. First, I averaged the scales for sexual minority spaces in a state, regardless of its related sexual identity, to create a measure of overall sexual minority spaces in a community. I will create this value for each state. Second, I averaged the scales of identity-specific sexual minority spaces based on sexual identity, so that each state has a value for lesbian spaces, gay spaces, and bisexual spaces. Third, I averaged the scales of identity-determined sexual minority spaces, which are the identity-specific spaces that were commonly mentioned by previous participants with that identity, such as the gay spaces commonly mentioned by gay participants, and so on for bisexual and lesbian spaces. I created this value for each state, so that each state has a value for lesbian-determined lesbian spaces, gay-determined gay spaces, and bisexual-determined bisexual spaces. I also created scales for combined gay/lesbian-specific spaces and gay/lesbian-determined spaces, to complement the Household Pulse Survey that combined gay and lesbian people. I repeated this for the attributes of sexual minority spaces as well.

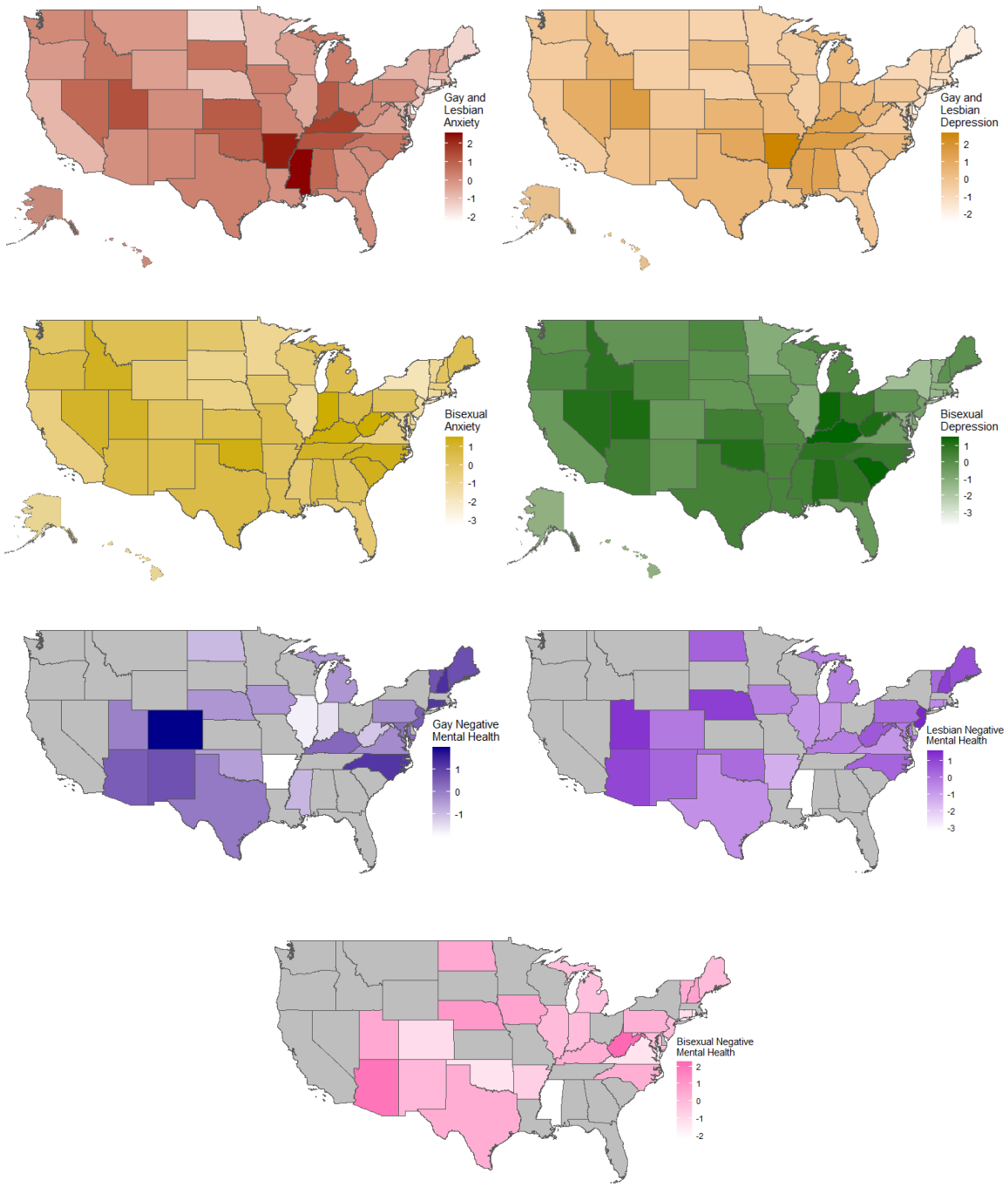
I then created state-level measures of LGB people's anxiety and depression, for gay or lesbian people and for bisexual people. I also created state-level measures of LGB youth's mental health, for gay, lesbian, and bisexual people.

I tested each regression model for spatial dependencies based on Moran's *I*. For models with p-values above 0.05, I ran a traditional OLS regression. For models with Moran's *I*s with p below 0.05, I ran a spatial regression (Ebert et al., 2022). I ran all

regressions in RStudio to evaluate how the multiples measures of sexual minority spaces predict LGB well-being (Figure 14).

Figure 14

Regional Estimates of Sexual Minority Mental Health



Each regression model interacted an index of sexual minority spaces with its matched index of attributes of sexual minority spaces to predict state-level gay, lesbian, and bisexual mental health. In each model, I controlled for straight people's mental health. I preregistered all methods, analyses, and hypotheses before starting data collection, which can be found on https://osf.io/grvxm/.

Hypotheses

I hypothesized that states with higher levels of sexual minority spaces and attributes of sexual minority spaces will have sexual minority people with lower levels of anxiety, depression, and mental health symptoms. I hypothesized that this effect will be stronger for identity-specific spaces than for overall spaces. I hypothesized that this effect will be stronger for adult mental health than for youth mental health.

Results

Models Predicting Mental Health from Overall Spaces/Attributes

Predicting Lesbian and Gay Anxiety from Overall Spaces/Attributes. I ran a regression predicting lesbian and gay people's anxiety from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight people's anxiety. The model was not spatially dependent (Moran I = -0.020, p = 0.389), so I report the results of the traditional regression in Table 44.

Table 44

Regression Model Predicting Lesbian/Gay Anxiety from Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.033	-0.257	0.192	0.112	0.770
Overall Places	-0.570	-1.336	0.197	0.381	0.141
Overall Attributes	-0.816	-1.504	-0.127	0.342	0.021 *
Straight Anxiety	0.376	0.136	0.620	0.120	0.003 **
Places × Attributes	0.272	-0.380	0.923	0.324	0.406

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight anxiety, such that lesbian and gay people's anxiety is positively related to straight people's anxiety, $b = 0.376$, 95% CI [0.136, 0.620], $p = 0.003$. The model also revealed a main effect of overall attributes of sexual minority spaces, such that more attributes are related to lower anxiety for lesbian and gay people, $b = -0.816$, 95% CI [-1.504, -0.127], $p = 0.021$.

Predicting Bisexual Anxiety from Overall Spaces/Attributes. I ran a regression predicting bisexual people's anxiety from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight people's anxiety. The model was spatially dependent (Moran $I = 0.301$, $p < 0.001$), so I report the results of the spatial regression in Table 45.

Table 45

Regression Model Predicting Bisexual Anxiety from Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.026	-0.215	0.164	0.097	0.789
Overall Places	-0.492	-1.146	0.163	0.334	0.141
Overall Attributes	-0.342	-0.926	0.242	0.298	0.251
Straight Anxiety	0.249	0.033	0.464	0.110	0.024 *
Places × Attributes	-0.175	-0.733	0.383	0.285	0.539

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight anxiety, such that bisexual people's anxiety is positively related to straight people's anxiety, $b = 0.249$, 95% CI [0.033, 0.464], $p = 0.024$. No other effects emerged.

Predicting Lesbian and Gay Depression from Overall Spaces/Attributes. I ran a regression predicting lesbian and gay people's depression from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight people's depression. The model was not spatially dependent (Moran $I = 0.069$, $p = 0.107$), so I report the results of the traditional regression in Table 46.

Table 46

Regression Model Predicting Lesbian/Gay Depression from Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.022	-0.225	0.181	0.101	0.830
Overall Places	-0.447	-1.159	0.265	0.354	0.212
Overall Attributes	-0.978	-1.608	-0.348	0.313	0.003 **
Straight Depression	0.391	0.158	0.625	0.116	0.002 **
Places × Attributes	0.182	-0.422	0.786	0.300	0.547

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight depression, such that lesbian and gay people's depression is positively related to straight people's depression, $b = 0.391$, 95% CI [0.158, 0.625], $p = 0.002$. The model also revealed a main effect of overall attributes of sexual minority spaces, such that more attributes are related to lower depression for lesbian and gay people, $b = -0.978$, 95% CI [-1.608, -0.348], $p = 0.003$.

Predicting Bisexual Depression from Overall Spaces/Attributes. I ran a regression predicting bisexual people's depression from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight

people's depression. The model was spatially dependent (Moran $I = 0.331$, $p < 0.001$), so I report the results of the spatial regression in Table 47.

Table 47.

Regression Model Predicting Bisexual Depression from Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.000	-0.162	0.162	0.083	0.998
Overall Places	-0.377	-0.948	0.194	0.291	0.196
Overall Attributes	-0.646	-1.158	-0.133	0.261	0.014 *
Straight Depression	0.215	0.015	0.414	0.102	0.035 *
Places × Attributes	-0.284	-0.771	0.203	0.248	0.254

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight depression, such that bisexual people's depression is positively related to straight people's depression, $b = 0.215$, 95% CI [0.015, 0.414], $p = 0.035$. The model also revealed a main effect of overall attributes of sexual minority spaces, such that more attributes are related to lower depression for bisexual people, $b = -0.646$, 95% CI [-1.158, -0.133], $p = 0.014$.

Predicting Gay Negative Mental Health Symptoms from Overall Spaces/Attributes. I ran a regression predicting gay people's mental health symptoms from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran $I = -0.043$, $p = 0.442$), so I report the results of the traditional regression in Table 48.

Table 48.

Regression Model Predicting Gay Mental Health Symptoms from Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.177	-0.277	0.632	0.218	0.426
Overall Places	0.462	-0.982	1.906	0.694	0.513
Overall Attributes	1.616	0.241	2.991	0.661	0.023 *
Straight Symptoms	-0.087	-0.429	0.256	0.165	0.605
Places × Attributes	-0.968	-3.547	1.612	1.240	0.444

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of overall attributes of sexual minority spaces, such that more attributes are related to more negative mental health symptoms for gay people, $b = 1.616$, 95% CI [0.241, 2.991], $p = 0.023$.

Predicting Lesbian Negative Mental Health Symptoms from Overall Spaces/Attributes. I ran a regression predicting lesbian people's mental health symptoms from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran $I = 0.058$, $p = 0.244$), so I report the results of the traditional regression in Table 49.

Table 49.

Regression Model Predicting Lesbian Mental Health Symptoms from Overall Spaces/Attributes

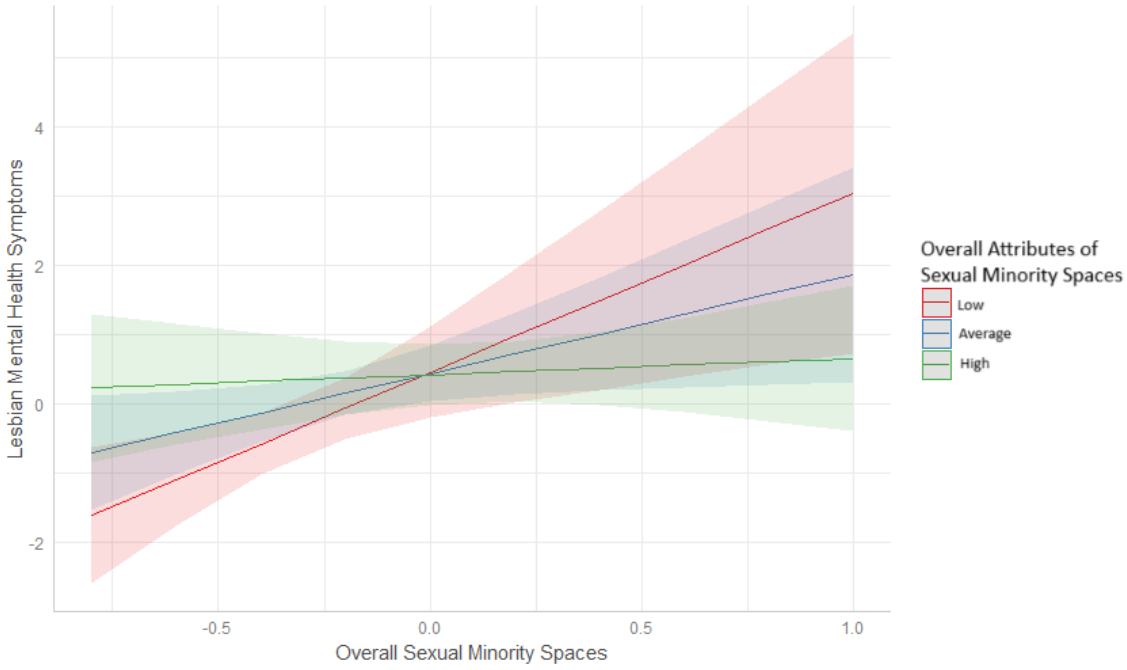
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.438	0.051	0.825	0.186	0.029 *
Overall Places	1.324	0.094	2.554	0.592	0.036 *
Overall Attributes	-0.054	-1.226	1.117	0.563	0.924
Straight Symptoms	0.641	0.349	0.932	0.140	< 0.001 ***
Places × Attributes	-3.512	-5.710	-1.314	1.057	0.003 **

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight people's mental health symptoms, such that more mental health symptoms for straight people related to more mental health symptoms for lesbian women, $b = 0.641$, 95% CI [0.349, 0.932], $p < 0.001$. The model also revealed a main effect of overall sexual minority spaces, $b = 1.324$, 95% CI [0.094, 2.554], $p = 0.036$, which was qualified by an interaction with overall attributes of sexual minority spaces, $b = -3.512$, 95% CI [-5.710, -1.314], $p = 0.003$ (Figure 15).

Figure 15

Lesbian Mental Health Symptoms Based on Overall Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more overall attributes of sexual minority spaces relate to higher mental health symptoms for lesbian women when the states have low overall attributes of sexual minority spaces, $b = 2.604$, 95% CI [0.838, 4.371], $p =$

0.006, or average overall attributes of sexual minority spaces, b = 1.420, 95% CI [0.159, 2.681], p = 0.029. When states had high overall attributes of sexual minority spaces, sexual minority spaces did not relate to mental health symptoms, b = 0.235, 95% CI [-0.840, 1.311], p = 0.654.

Predicting Bisexual Negative Mental Health Symptoms from Overall Spaces/Attributes. I ran a regression predicting bisexual people's mental health symptoms from the interaction of overall sexual minority spaces and overall attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran I = -0.052, p = 0.461), so I report the results of the traditional regression in Table 50.

Table 50

Regression Model Predicting Bisexual Mental Health Symptoms from Overall Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	0.074	-0.373	0.521	0.215	0.735
Overall Places	0.126	-1.295	1.546	0.683	0.856
Overall Attributes	-0.437	-1.789	0.916	0.650	0.509
Straight Symptoms	0.671	0.334	1.007	0.162	< 0.001 ***
Places × Attributes	-0.901	-3.438	1.637	1.220	0.469

Note. * p < 0.05, ** p < 0.01, *** p < 0.001

The model revealed a main effect of straight people's mental health symptoms, such that more mental health symptoms for straight people related to more mental health symptoms for bisexual people, b = 0.671, 95% CI [0.334, 1.007], p < 0.001. No other effects emerged.

Models Predicting Mental Health from Identity-Specific Spaces/Attributes

Predicting Lesbian and Gay Anxiety from Identity-Specific Spaces/Attributes.

I ran a regression predicting lesbian and gay people's anxiety from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's anxiety. The model was not spatially dependent (Moran I = -0.014, p = 0.360), so I report the results of the traditional regression in Table 51.

Table 51

Regression Model Predicting Lesbian/Gay Anxiety from Identity-Specific Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.052	-0.273	0.169	0.110	0.638
Identity-Specific Places	-0.812	-1.608	-0.015	0.396	0.046 *
Identity-Specific Attributes	-0.735	-1.415	-0.055	0.338	0.035 *
Straight Anxiety	0.346	0.107	0.584	0.118	0.005 **
Places × Attributes	0.424	-0.226	1.074	0.323	0.196

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight anxiety, such that lesbian and gay people's anxiety is positively related to straight people's anxiety, b = 0.346, 95% CI [0.107, 0.584], p = 0.005. The model also revealed a main effect of identity-specific attributes of sexual minority spaces, such that more attributes are related to lower anxiety for lesbian and gay people, b = -0.735, 95% CI [-1.415, -0.055], p = 0.035. Finally, the model also revealed a main effect of identity-specific sexual minority spaces, such that more spaces are related to lower anxiety for lesbian and gay people, b = -0.812, 95% CI [-1.608, -0.015], p = 0.046.

Predicting Bisexual Anxiety from Identity-Specific Spaces/Attributes. I ran a regression predicting bisexual people's anxiety from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's anxiety. The model was spatially dependent (Moran I = 0.375, $p < 0.001$), so I report the results of the spatial regression in Table 52.

Table 52

Regression Model Predicting Bisexual Anxiety from Identity-Specific Spaces/Attributes

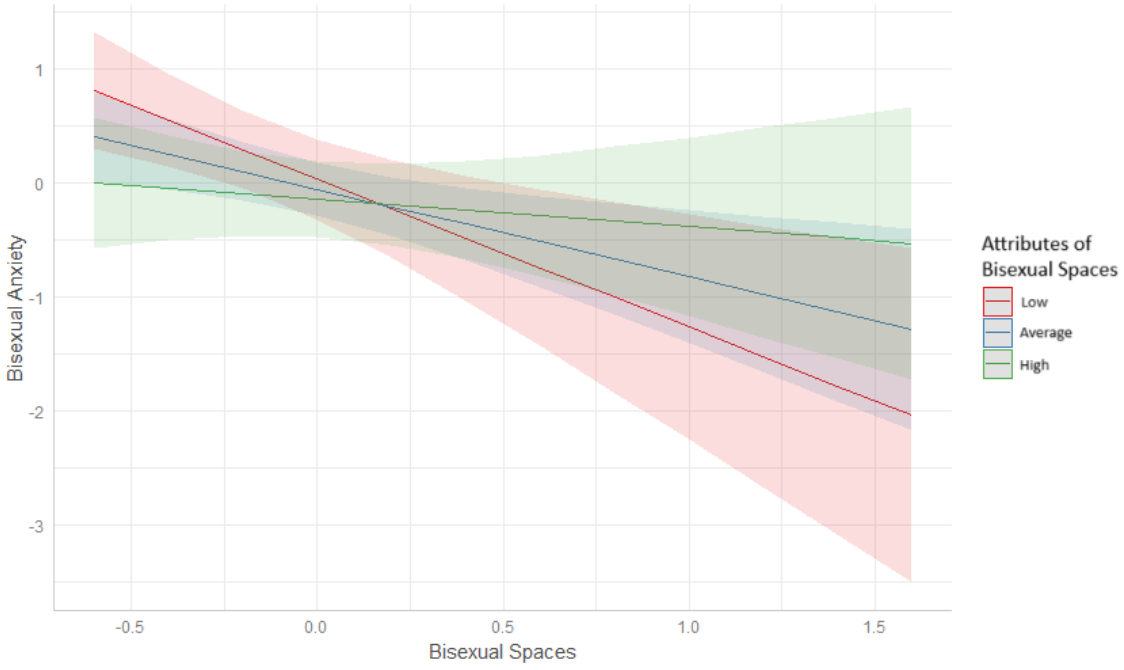
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.120	-0.310	0.070	0.097	0.215
Identity-Specific Places	-0.619	-1.056	-0.181	0.223	0.006 **
Identity-Specific Attributes	-0.200	-0.840	0.440	0.327	0.540
Straight Anxiety	0.162	-0.065	0.390	0.116	0.162
Places × Attributes	1.818	0.358	3.278	0.745	0.015 **

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of identity-specific sexual minority spaces, b = -0.619, 95% CI [-1.056, -0.181], p = 0.006, which was qualified by an interaction with identity-specific attributes, b = 1.818, 95% CI [0.358, 3.278], p = 0.015 (Figure 16).

Figure 16

Bisexual Anxiety Based on Identity-Specific Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-specific sexual minority spaces relate to lower anxiety for bisexual people when the states have low identity-specific attributes of sexual minority spaces, b = -1.303, 95% CI [-2.113, -0.473], p = 0.003, or average identity-specific attributes of sexual minority spaces, b = -0.769, 95% CI [-1.298, -0.241], p = 0.005. When states had high identity-specific attributes of sexual minority spaces, sexual minority spaces did not relate to bisexual people's anxiety, b = -0.236, 95% CI [-0.974, 0.502], p = 0.523.

Predicting Lesbian and Gay Depression from Identity-Specific Spaces/Attributes. I ran a regression predicting lesbian and gay people's depression

from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's depression. The model was not spatially dependent (Moran $I = 0.082$, $p = 0.082$), so I report the results of the traditional regression in Table 53.

Table 53

Regression Model Predicting Lesbian/Gay Depression from Identity-Specific Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.042	-0.242	0.158	0.099	0.672
Identity-Specific Places	-0.690	-1.434	0.055	0.370	0.069
Identity-Specific Attributes	-0.922	-1.543	-0.301	0.308	0.004 **
Straight Depression	0.354	0.121	0.587	0.116	0.004 **
Places × Attributes	0.347	-0.258	0.953	0.301	0.254

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight depression, such that lesbian and gay people's depression is positively related to straight people's depression, $b = 0.354$, 95% CI [0.121, 0.587], $p = 0.004$. The model also revealed a main effect of identity-specific attributes of sexual minority spaces, such that more attributes are related to lower depression for lesbian and gay people, $b = -0.922$, 95% CI [-1.543, -0.301], $p = 0.004$.

Predicting Bisexual Depression from Identity-Specific Spaces/Attributes. I ran a regression predicting bisexual people's depression from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's depression. The model was spatially dependent (Moran $I = 0.421$, $p < 0.001$), so I report the results of the spatial regression in Table 54.

Table 54

Regression Model Predicting Bisexual Depression from Identity-Specific Spaces/Attributes

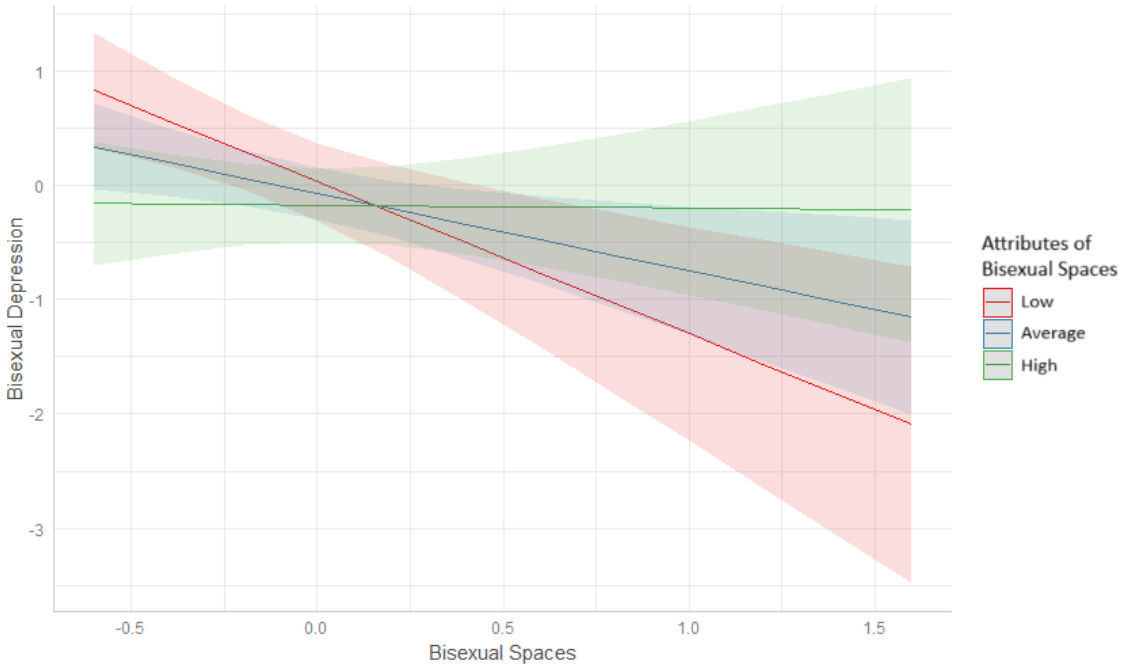
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.135	-0.308	0.038	0.088	0.126
Identity-Specific Places	-0.554	-0.958	-0.150	0.206	0.007 **
Identity-Specific Attributes	-0.139	-0.740	0.463	0.307	0.651
Straight Depression	0.156	-0.066	0.377	0.113	0.168
Places × Attributes	2.468	1.143	3.793	0.676	< 0.001 ***

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of identity-specific sexual minority spaces, b = -0.554, 95% CI [-0.958, -0.150], p = 0.007, which was qualified by an interaction with identity-specific attributes, b = 2.468, 95% CI [1.143, 3.793], $p < 0.001$ (Figure 17).

Figure 17

Bisexual Depression Based on Identity-Specific Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-specific sexual minority spaces relate to lower depression for bisexual people when the states have low identity-specific attributes of sexual minority spaces, b = -1.338, 95% CI [-2.130, -0.546], p = 0.001, or average identity-specific attributes of sexual minority spaces, b = -0.678, 95% CI [-1.188, -0.167], p = 0.010. When states had high identity-specific attributes of sexual minority spaces, sexual minority spaces did not relate to bisexual people's depression, b = -0.018, 95% CI [-0.726, 0.690], p = 0.960.

Predicting Gay Negative Mental Health Symptoms from Identity-Specific Spaces/Attributes. I ran a regression predicting gay people's mental health symptoms from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran I = 0.133, p = 0.123), so I report the results of the traditional regression in Table 55.

Table 55

Regression Model Predicting Gay Mental Health Symptoms from Identity-Specific Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.193	-0.426	0.812	0.298	0.523
Identity-Specific Places	0.886	-0.567	2.339	0.699	0.219
Identity-Specific Attributes	0.542	-0.991	2.075	0.737	0.470
Straight Symptoms	-0.144	-0.581	0.293	0.210	0.501
Places × Attributes	-1.069	-4.803	2.665	1.796	0.558

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

No reliable effects emerged.

Predicting Lesbian Negative Mental Health Symptoms from Identity-Specific Spaces/Attributes. I ran a regression predicting lesbian people's mental health

symptoms from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran $I = 0.142$, $p = 0.127$), so I report the results of the traditional regression in Table 56.

Table 56

Regression Model Predicting Lesbian Mental Health Symptoms from Identity-Specific Spaces/Attributes

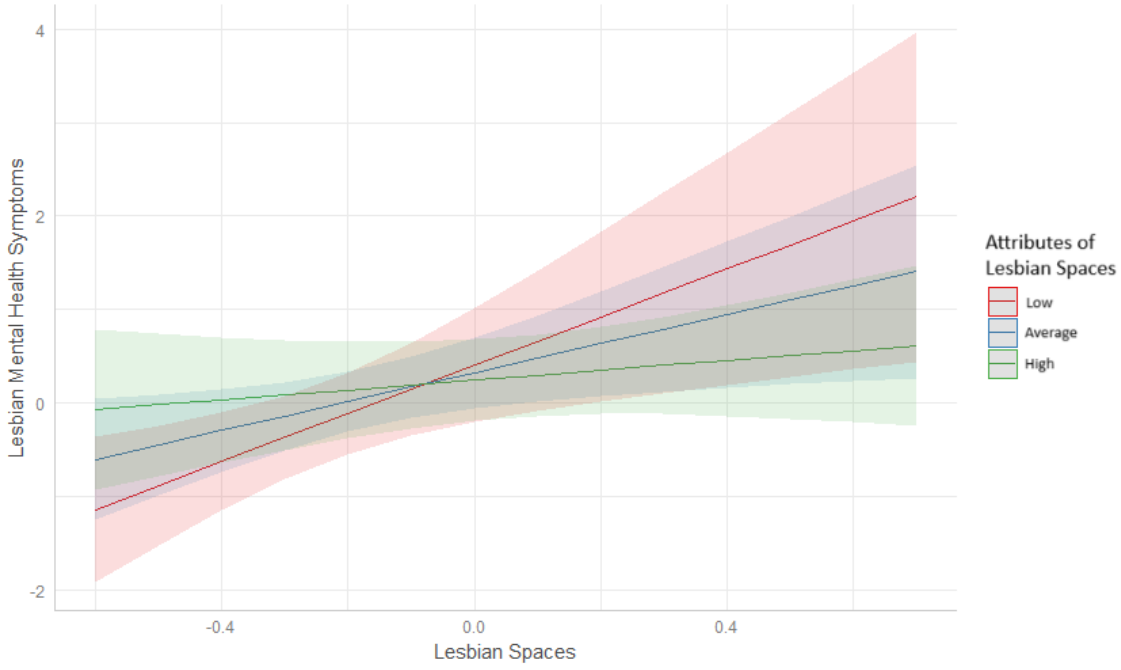
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.317	-0.050	0.685	0.177	0.087
Identity-Specific Places	1.477	0.225	2.728	0.602	0.023 *
Identity-Specific Attributes	-0.191	-1.085	0.704	0.430	0.662
Straight Symptoms	0.582	0.270	0.894	0.150	< 0.001 ***
Places × Attributes	-2.435	-4.391	-0.478	0.941	0.017 *

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight people's mental health symptoms, such that more mental health symptoms for straight people related to more mental health symptoms for lesbian women, $b = 0.582$, 95% CI [0.270, 0.894], $p < 0.001$. The model also revealed a main effect of overall sexual minority spaces, $b = 1.477$, 95% CI [0.225, 2.728], $p = 0.023$, which was qualified by an interaction with identity-specific attributes of sexual minority spaces, $b = -2.435$, 95% CI [-4.391, -0.478], $p = 0.017$ (Figure 18).

Figure 18

Lesbian Mental Health Symptoms Based on Identity-Specific Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-specific attributes of sexual minority spaces relate to higher mental health symptoms for lesbian women when the states have low identity-specific attributes of sexual minority spaces, b = 2.584, 95% CI [0.756, 4.412], p = 0.008, or average identity-specific attributes of sexual minority spaces, b = 1.556, 95% CI [0.275, 2.837], p = 0.020. When states had high identity-specific attributes of sexual minority spaces, sexual minority spaces did not relate to mental health symptoms, b = 0.527, 95% CI [-0.616, 1.671], p = 0.348.

Predicting Bisexual Negative Mental Health Symptoms from Identity-Specific Spaces/Attributes. I ran a regression predicting bisexual people's mental health

symptoms from the interaction of identity-specific sexual minority spaces and identity-specific attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran I = 0.049, p = 0.307), so I report the results of the traditional regression in Table 57.

Table 57

Regression Model Predicting Bisexual Mental Health Symptoms from Identity-Specific Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.101	-0.547	0.346	0.215	0.643
Identity-Specific Places	-0.356	-1.471	0.758	0.536	0.513
Identity-Specific Attributes	-0.141	-1.872	1.590	0.832	0.867
Straight Symptoms	0.642	0.290	0.995	0.169	0.001 **
Places × Attributes	1.113	-2.192	4.418	1.589	0.491

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight people's mental health symptoms, such that more mental health symptoms for straight people related to more mental health symptoms for bisexual people, b = 0.642, 95% CI [0.290, 0.995], p = 0.001. No other effects emerged.

Models Predicting Mental Health from Identity-Determined Spaces/Attributes

Predicting Lesbian and Gay Anxiety from Identity-Determined Spaces/Attributes.

I ran a regression predicting lesbian and gay people's anxiety from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's anxiety. The model was not spatially dependent (Moran I = -0.023, p = 0.397), so I report the results of the traditional regression in Table 58.

Table 58

Regression Model Predicting Lesbian/Gay Anxiety from Identity-Determined Spaces/Attributes

Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.044	-0.262	0.174	0.108	0.686
Identity-Determined Places	-0.772	-1.500	-0.045	0.361	0.038 *
Identity-Determined Attributes	-0.658	-1.141	-0.174	0.240	0.009 **
Straight Anxiety	0.334	0.092	0.576	0.120	0.008 **
Places × Attributes	0.409	-0.379	1.198	0.392	0.301

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight anxiety, such that lesbian and gay people's anxiety is positively related to straight people's anxiety, $b = 0.334$, 95% CI [0.092, 0.576], $p = 0.008$. The model also revealed a main effect of identity-determined attributes of sexual minority spaces, such that more attributes are related to lower anxiety for lesbian and gay people, $b = -0.658$, 95% CI [-1.141, -0.174], $p = 0.009$. Finally, the model also revealed a main effect of identity-determined sexual minority spaces, such that more spaces are related to lower anxiety for lesbian and gay people, $b = -0.772$, 95% CI [-1.500, -0.045], $p = 0.038$.

Predicting Bisexual Anxiety from Identity-Determined Spaces/Attributes. I ran a regression predicting bisexual people's anxiety from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's anxiety. The model was spatially dependent (Moran $I = 0.377$, $p < 0.001$), so I report the results of the spatial regression in Table 59.

Table 59

Regression Model Predicting Bisexual Anxiety from Identity-Determined Spaces/Attributes

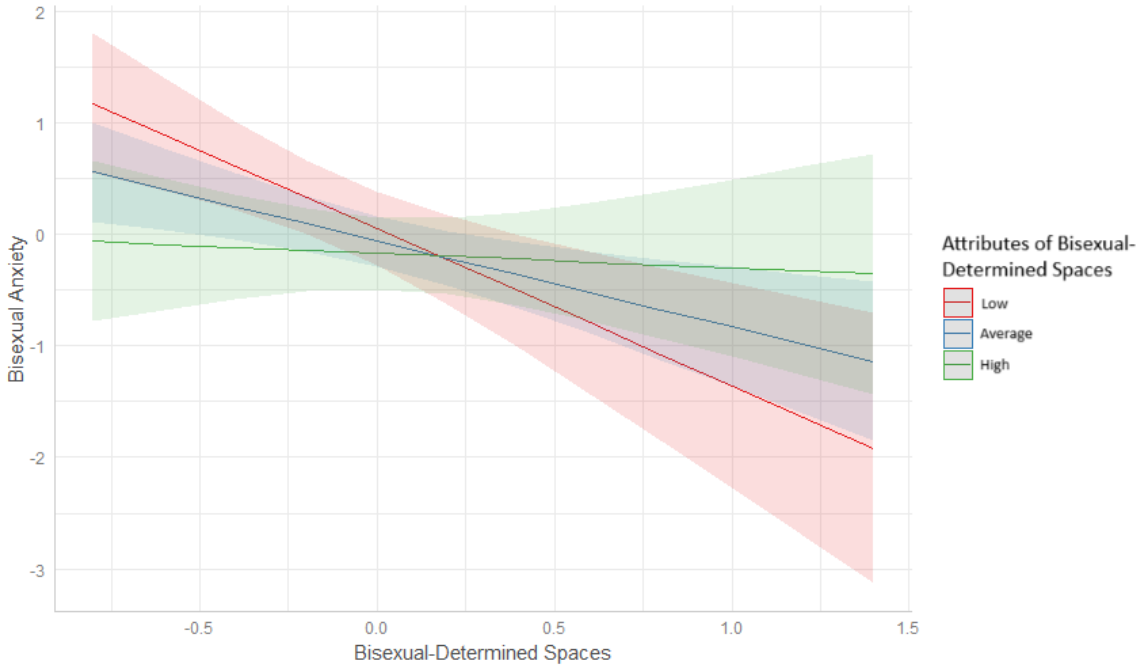
Variable	*Estimate*	*Lower CI*	*Upper CI*	*Std. Error*	*p-value*
Intercept	-0.121	-0.306	0.063	0.094	0.197
Identity-Determined Places	-0.621	-1.020	-0.222	0.204	0.002 **
Identity-Determined Attributes	-0.279	-0.889	0.331	0.311	0.370
Straight Anxiety	0.174	-0.047	0.395	0.113	0.122
Places × Attributes	2.094	0.571	3.618	0.777	0.007 **

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of identity-determined sexual minority spaces, $b = -0.621$, 95% CI [-1.020, -0.222], $p = 0.002$, which was qualified by an interaction with identity-specific attributes, $b = 2.094$, 95% CI [0.571, 3.618], $p = 0.007$ (Figure 19).

Figure 19

Bisexual Anxiety Based on Identity-Determined Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-determined sexual minority spaces relate to lower anxiety for bisexual people when the states have low identity-determined attributes of sexual minority spaces, b = -1.413, 95% CI [-2.195, -0.632], p = 0.001, or average identity-determined attributes of sexual minority spaces, b = -0.769, 95% CI [-1.252, -0.287], p = 0.002. When states had high identity-determined attributes of sexual minority spaces, sexual minority spaces did not relate to bisexual people's anxiety, b = -0.125, 95% CI [-0.892, 0.641], p = 0.744.

Predicting Lesbian and Gay Depression from Identity-Determined Spaces/Attributes. I ran a regression predicting lesbian and gay people's depression from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's depression. The model was not spatially dependent (Moran I = 0.089, p = 0.071), so I report the results of the traditional regression in Table 60.

Table 60

Regression Model Predicting Lesbian/Gay Depression from Identity-Determined Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.028	-0.230	0.174	0.100	0.780
Identity-Determined Places	-0.703	-1.406	0.001	0.350	0.050
Identity-Determined Attributes	-0.685	-1.132	-0.238	0.222	0.003 **
Straight Depression	0.357	0.116	0.598	0.120	0.005 **
Places × Attributes	0.268	-0.480	1.016	0.371	0.474

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight depression, such that lesbian and gay people's depression is positively related to straight people's depression, b = 0.357, 95% CI [0.116, 0.598], p = 0.005. The model also revealed a main effect of identity-

determined attributes of sexual minority spaces, such that more attributes are related to lower depression for lesbian and gay people, b = -0.685, 95% CI [-1.132, -0.238], p = 0.003.

Predicting Bisexual Depression from Identity-Determined Spaces/Attributes. I ran a regression predicting bisexual people's depression from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's depression. The model was spatially dependent (Moran I = 0.445, p < 0.001), so I report the results of the spatial regression in Table 61.

Table 61

Regression Model Predicting Bisexual Depression from Identity-Determined Spaces/Attributes

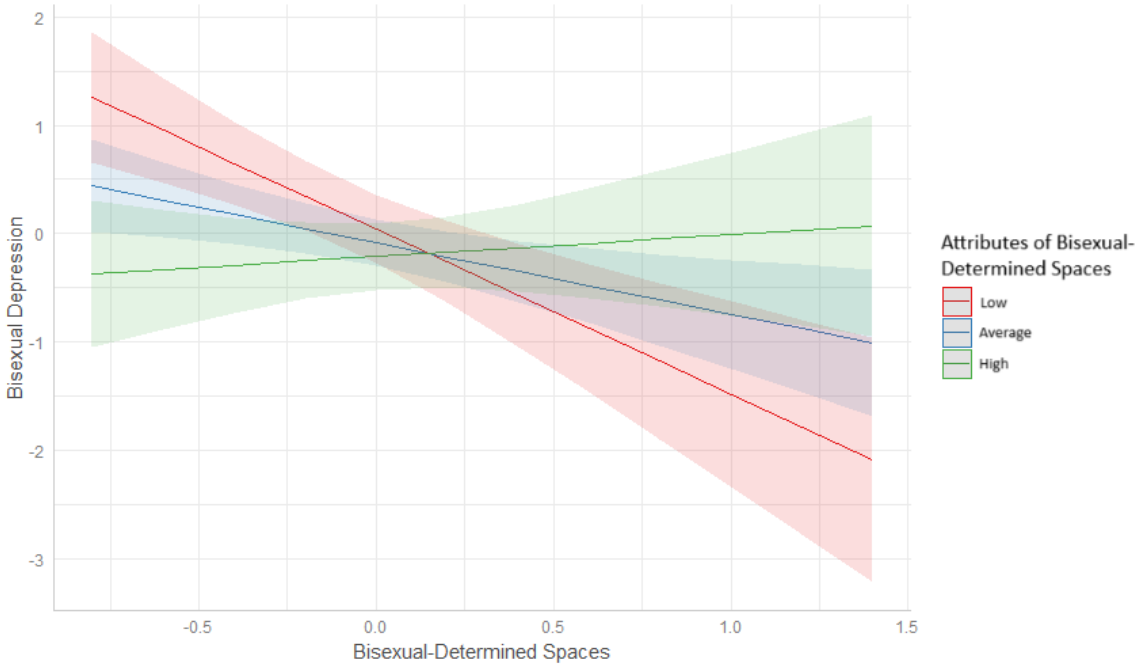
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	-0.144	-0.306	0.019	0.083	0.084
Identity-Determined Places	-0.533	-0.888	-0.177	0.182	0.003 **
Identity-Determined Attributes	-0.234	-0.791	0.322	0.284	0.409
Straight Depression	0.159	-0.048	0.367	0.106	0.132
Places × Attributes	3.029	1.687	4.371	0.685	< 0.001 ***

Note. * p < 0.05, ** p < 0.01, *** p < 0.001

The model revealed a main effect of identity-determined sexual minority spaces, b = -0.533, 95% CI [-0.888, -0.177], p = 0.003, which was qualified by an interaction with identity-specific attributes, b = 3.029, 95% CI [1.687, 4.371], p < 0.001 (Figure 20).

Figure 20

Bisexual Depression Based on Identity-Determined Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-determined attributes of sexual minority spaces relate to lower depression for bisexual people when the states have low identity-determined attributes of sexual minority spaces, b = -1.530, 95% CI [-2.262, -0.797], $p < 0.001$, or average identity-determined attributes of sexual minority spaces, b = -0.659, 95% CI [-1.114, -0.203], p = 0.006. When states had high identity-determined attributes of sexual minority spaces, sexual minority spaces did not relate to bisexual people's depression, b = 0.212, 95% CI [-0.506, 0.930], p = 0.555.

Predicting Gay Negative Mental Health Symptoms from Identity-Determined Spaces/Attributes. I ran a regression predicting gay people's mental health

symptoms from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran I = 0.043, p = 0.256), so I report the results of the traditional regression in Table 62.

Table 62

Regression Model Predicting Gay Mental Health Symptoms from Identity-Determined Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.032	-0.490	0.553	0.251	0.901
Identity-Determined Places	0.127	-1.023	1.277	0.553	0.821
Identity-Determined Attributes	1.051	0.102	1.999	0.456	0.032 *
Straight Symptoms	-0.087	-0.452	0.279	0.176	0.628
Places × Attributes	0.124	-1.777	2.026	0.914	0.893

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of identity-determined attributes of sexual minority spaces, such that more attributes are related to more mental health symptoms for gay people, b = 1.051, 95% CI [0.102, 1.999], p = 0.032.

Predicting Lesbian Negative Mental Health Symptoms from Identity-Determined Spaces/Attributes. I ran a regression predicting lesbian people's mental health symptoms from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran I = 0.098, p = 0.166), so I report the results of the traditional regression in Table 63.

Table 63

Regression Model Predicting Lesbian Mental Health Symptoms from Identity-Determined Spaces/Attributes

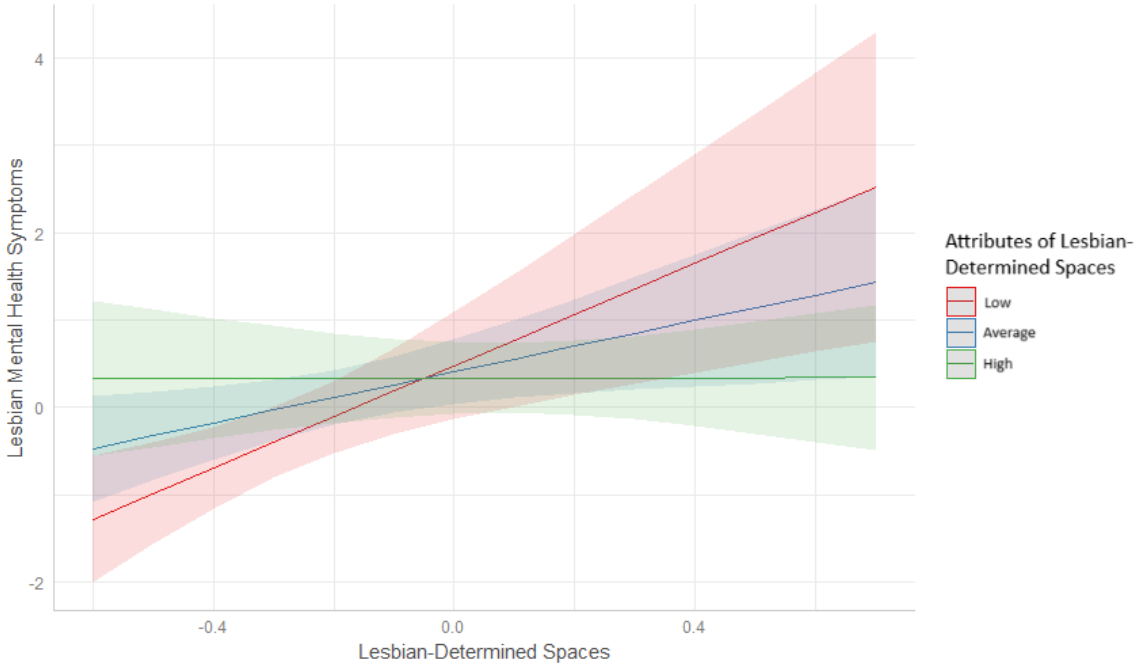
Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.410	0.038	0.781	0.179	0.032 *
Identity-Determined Places	1.490	0.276	2.705	0.584	0.019 *
Identity-Determined Attributes	-0.134	-0.830	0.563	0.335	0.694
Straight Symptoms	0.615	0.325	0.905	0.140	< 0.001 ***
Places × Attributes	-2.748	-4.474	-1.022	0.830	0.003 **

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight people's mental health symptoms, such that more mental health symptoms for straight people related to more mental health symptoms for lesbian women, $b = 0.615$, 95% CI [0.325, 0.905], $p < 0.001$. The model also revealed a main effect of identity-determined sexual minority spaces, $b = 1.490$, 95% CI [0.276, 2.705], $p = 0.019$, which was qualified by an interaction with identity-determined attributes of sexual minority spaces, $b = -2.748$, 95% CI [-4.474, -1.022], $p = 0.003$ (Figure 21).

Figure 21

Lesbian Mental Health Symptoms Based on Identity-Determined Sexual Minority Spaces and Attributes of Sexual Minority Spaces



Simple slopes analysis revealed that more identity-determined attributes of sexual minority spaces relate to higher mental health symptoms for lesbian women when the states have low identity-determined attributes of sexual minority spaces, b = 2.925, 95% CI [1.131, 4.718], p = 0.003, or average identity-determined attributes of sexual minority spaces, b = 1.464, 95% CI [0.256, 2.671], p = 0.020. When states had high identity-determined attributes of sexual minority spaces, sexual minority spaces did not relate to mental health symptoms, b = 0.003, 95% CI [-1.173, 1.179], p = 0.995.

Predicting Bisexual Negative Mental Health Symptoms from Identity-Determined Spaces/Attributes. I ran a regression predicting bisexual people's mental

health symptoms from the interaction of identity-determined sexual minority spaces and identity-determined attributes of sexual minority spaces, controlling for straight people's mental health symptoms. The model was not spatially dependent (Moran I = -0.007, p = 0.415), so I report the results of the traditional regression in Table 64.

Table 64

Regression Model Predicting Bisexual Mental Health Symptoms from Identity-Determined Spaces/Attributes

Variable	***Estimate***	***Lower CI***	***Upper CI***	***Std. Error***	***p-value***
Intercept	0.151	-0.331	0.633	0.232	0.522
Identity-Determined Places	0.548	-0.820	1.917	0.658	0.414
Identity-Determined Attributes	-1.113	-2.742	0.517	0.783	0.170
Straight Symptoms	0.544	0.166	0.921	0.182	0.007 **
Places × Attributes	-1.037	-4.841	2.768	1.829	0.577

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The model revealed a main effect of straight people's mental health symptoms, such that more mental health symptoms for straight people related to more mental health symptoms for bisexual people, b = 0.544, 95% CI [0.166, 0.921], p = 0.007. No other effects emerged.

All Study 3 results are outlined in Table 65.

Table 65

Summary of Findings from Study 3

Type of Spaces and Attributes	*Sexual Orientation*	*Outcome*	*Space Effects*	*Attribute Effects*	*Attribute × Space Effects*
Overall	Gay/Lesbian	Anxiety	–	Lower anxiety when more attributes	–
Overall	Bisexual	Anxiety	–	–	–
Overall	Gay/Lesbian	Depression	–	Lower anxiety when more attributes	–
Overall	Bisexual	Depression	–	Lower depression when more attributes	–
Overall	Gay	Negative Mental Health	–	Worse mental health when more attributes	–
Overall	Lesbian	Negative Mental Health	–	–	Attributes average, low: worse mental health when more spaces
Overall	Bisexual	Negative Mental Health	–	–	–
Specific	Gay/Lesbian	Anxiety	Lower anxiety when more spaces	Lower anxiety when more attributes	–
Specific	Bisexual	Anxiety	–	–	Attributes average, low: lower anxiety when more spaces
Specific	Gay/Lesbian	Depression	–	Lower depression when more attributes	–
Specific	Bisexual	Depression	–	–	Attributes average, low: lower depression when more spaces
Specific	Gay	Negative Mental Health	–	–	–
Specific	Lesbian	Negative Mental Health	–	–	Attributes average, low: worse mental health when more spaces
Specific	Bisexual	Negative Mental Health	–	–	–
Determined	Gay/Lesbian	Anxiety	Lower anxiety when more spaces	Lower anxiety when more attributes	–
Determined	Bisexual	Anxiety	–	–	Attributes average, low: lower anxiety when more spaces
Determined	Gay/Lesbian	Depression	–	Lower depression when more attributes	–

Determined	Bisexual	Depression	–	–	Attributes average, low: lower depression when more spaces
Determined	Gay	Mental Health Symptoms	–	Worse mental health when more attributes	–
Determined	Lesbian	Mental Health Symptoms	–	–	Attributes average, low: worse mental health when more spaces
Determined	Bisexual	Mental Health Symptoms	–	–	–

Study 3 Discussion

Study 3 examined how regional sexual minority spaces and attributes of sexual minority spaces relate to sexual minority people's mental health at the state level. I examined both youth and adult mental health. Sexual minority adults largely showed a consistent, predicted pattern. More state-level attributes of sexual minority spaces related to lower anxiety and depression for lesbian and gay people in those states, and the presence of state-level identity-specific and identity-determined spaces related to lower anxiety for gay and lesbian people in those states. Bisexual health followed a different pattern: in states with average or low attributes of sexual minority spaces, more state-level, identity-specific or identity-determined sexual minority spaces related to lower anxiety and depression of bisexual people in those states.

For youth, however, the effects were largely counter to my hypotheses. For bisexual youth, I found that their mental health was unrelated to sexual minority spaces and attributes. Gay youth, counterintuitively, had worse mental health when their states had more sexual minority attributes. Finally, lesbian youth in states with low or average attributes of sexual minority spaces had worse mental health when there were more sexual minority spaces. These results do not fit my previous hypotheses and may reflect different needs for spaces than sexual minority adults.

General Discussion

The present set of studies examined sexual minority spaces, starting with how people perceive sexual minority spaces for different sexual identities and then examining how sexual minority people's well-being relates to sexual minority spaces in their

communities. In Study 1, I examined how people perceive five different sexual minority spaces: LGBTQ+, queer, gay, lesbian, and bisexual. Across these five types of sexual minority spaces, many similarities emerged, with bars, nightclubs, and inclusive and accepting places perceived as spaces for each of the types of sexual minority spaces. However, some differences also emerged, and numerous spaces were reported only for certain types of sexual minority spaces. The differences between spaces for each sexual identity allowed for a further examination in Studies 2 and 3 that compared how sexual minority spaces for all sexual identities compared to spaces specifically for certain sexual minority people (e.g., lesbian women in lesbian spaces).

Study 2 examined how sexual minority spaces and sexual identity interacted and related to differences in belonging and well-being. I examined the effects of sexual minority spaces, which are places associated with sexual minority people, and attributes of sexual minority spaces, which are traits and attributes associated with spaces for sexual minority people, separately. Overall, I found evidence that sexual minority spaces and attributes are related to higher belonging and well-being, though this effect comes up more for spaces and attributes that are specific to a sexual identity (e.g., lesbian spaces) or determined by the ingroup (e.g., lesbian spaces reported by lesbian participants). Further, sexual minority spaces related more to well-being outcomes, whereas sexual minority attributes related more to belonging outcomes. There was also a pattern of results that found that sexual minority spaces relate to higher belonging and well-being, but only when the places are high in attributes of sexual minority spaces. These nuanced

results provide greater insight into how sexual minority people's communities relate to their well-being.

Study 3 then examined the relationship between sexual minority spaces and well-being on a regional level. Using archival data from a multitude of sources, I found that sexual minority spaces and attributes both related to mental health. For adults, more attributes of sexual minority spaces were related to lower anxiety and depression, in many cases. Sexual minority spaces were also related to lower anxiety for gay and lesbian participants, but only when the spaces were identity-specific or identity-determined. A pattern also emerged, only for bisexual participants, that in regions that were low in attributes of sexual minority spaces, more spaces were related to fewer symptoms of anxiety and depression. For sexual minority youth, a few patterns emerged, all of them inconsistent with previous hypotheses.

Individual-Level Sexual Minority Spaces & Sexual Identity

Study 2 examined the relationships between sexual minority spaces and attributes at the individual level, by probing participants' community spaces and attributes and examining their belonging and well-being. This analysis also dove into sexual identity and how sexual identity development and integration interacted with sexual minority spaces and attributes to predict belonging and well-being. Overall, community sexual minority spaces and attributes related to belonging and well-being: 13 of 15 belonging models and 6 of 15 well-being models showed an effect of sexual minority spaces or attributes. These effects were more common for identity-specific sexual minority spaces and attributes (80% of models) and for identity-determined sexual minority spaces and

attributes (70% of models), compared to overall sexual minority spaces (40% of models), which was in line with hypotheses. Interestingly, sexual minority attributes were more commonly related to belonging whereas sexual minority spaces were more commonly related to well-being. This pattern may reflect different mechanisms for belonging and well-being, such that belonging is related to the overall attributes and perceptions of the community, whereas well-being is less related to the attributes and relies instead upon the tangible benefits of sexual minority spaces. Future research should examine the mechanisms underlying these relationships.

Study 2 also examined sexual minority spaces and attributes in the context of sexual identity label, sexual identity strength, sexual identity development, sexual identity stress, and sexual identity integration. For sexual identity label, in line with hypotheses, I found two effects that sexual minority people report higher belonging when there are more spaces and attributes, compared to straight people. I also found that, in many cases, more developed and integrated identities related to higher belonging and well-being, in line with previous research (e.g., Fingerhut et al., 2005).

However, I found no evidence for my prediction that sexual minority spaces and attributes would have stronger relationships with belonging and well-being for sexual minority people with low identity development and high stress. Instead, I found some limited evidence that people with low identity stress have higher belonging when there are more attributes, but not people with high identity stress. People with high identity stress and low LGB identity, in contrast, have lower well-being in communities high in sexual minority attributes, compared to communities low in attributes. This finding may

highlight an important paradox, such that people who are uncertain about and stressed by their sexual identity do not fit gay friendly places that are high in sexual minority attributes, based on the stage their identity is in, which leads to lower well-being. Further, these attributes may signal a positivity that people high in identity stress and low in sexual identity may not be ready to embrace, leading to further mental turmoil. Future research should examine these relationships more fully and test these mechanisms further.

Region-Level Sexual Minority Spaces & Age Differences

Study 3 examined the relationship between sexual minority spaces and sexual minority well-being at the regional level, looking at state-by-state differences in spaces, attributes, and mental health. I examined both adult mental health, operationalized as anxiety and depression, and youth mental health, operationalized by frequency of negative mental health symptoms. For adult mental health, I found evidence for a consistent relationship between sexual minority spaces and attributes and sexual minority mental health across 11 of 12 models. More sexual minority attributes at the state-level related to lower anxiety and depression for gay and lesbian people in those states, across all models. Higher amounts of identity-specific and identity-determined sexual minority spaces also related to lower anxiety for lesbian and gay people.

For bisexual people's mental health, a different pattern emerged, such that more identity-specific and identity-determined spaces related to lower anxiety and depression, but only when states had low or average attributes of sexual minority spaces. This pattern contrasts with a pattern from the individual-level, that found that belonging and well-

being were positively related to sexual minority spaces only when attributes of sexual minority spaces are high. This contrast may reflect a difference in how these constructs are conceptualized at individual-level, compared to the region-level.

For sexual minority youth, there is a less consistent and less intuitive pattern of results. Of the nine models of youth mental health, five produced an effect. For gay youth, mental health is worse when there are more attributes of sexual minority spaces. For lesbian youth, mental health is worse when there are more sexual minority spaces, but only when states are low in attributes of sexual minority spaces. For bisexual youth, no effects emerged. These findings are in sharp contrast to adult mental health, which largely shows the exact opposite trend. These results may reflect a pattern that I previously found at the individual level. At the individual level, people with high identity stress and low sexual identity had lower well-being in communities high in sexual minority attributes, compared to communities low in attributes. Youth, who may not have fully developed their identities yet and may be experiencing identity-related stress, may not feel like they fit their states that are high in sexual minority attributes and spaces. Additionally, many sexual minority spaces are associated with drinking, which restricts youth's ability to engage with the spaces, leading to thwarted belonging and negative mental health. Future research should examine these relationships more fully.

Implications

The present research presents the first comprehensive examination of sexual minority spaces and sexual minority spaces by sexual identity label. This work can provide important information for researchers who are trying to study sexual minority

people and their community spaces. The research also provides further evidence for the benefits of person-environment fit, by showing that sexual minority people have higher belonging, well-being, and mental health in environments that fit their sexual identity. This work contributes to the field by providing important research about sexual minority people's mental health, related to sexual minority spaces, sexual identity, and person-environment fit.

This research also provides information for people outside of academia, specifically those who want to make their communities and environments more accepting to sexual minority people and promote their mental health. This research provides evidence to city planners and politicians about the public health importance of sexual minority spaces, showing that these spaces have cultural value as well as potential mental health benefits for sexual minority people. The findings also show that attributes of sexual minority spaces also relate to important outcomes for sexual minority people. This finding is particularly important for those who may want to make their community more positive for sexual minority people but do not have the power to create entirely new spaces. Instead, people can make their spaces in line with attributes of sexual minority spaces, which also relates to more belonging and more positive mental health.

Limitations

Despite the many positive aspects of this research, there are also limitations that should be addressed. First, participant samples in this study were drawn from CloudResearch and the undergraduate subject pool, Sona, both of which may not be representative of any given population. Further, for Study 1, participants failed to meet a

consensus on sexual minority spaces, even for the most mentioned spaces, which may mean that my list of spaces is not fully accurate. Despite these challenges, many of the sexual minority spaces identified were backed by previous literature on spaces, or are known culturally in the sexual minority community, giving the spaces further validity.

Second, in Study 2, I relied upon participants throughout the country who reported about their communities. Though this method led to my ability to examine these questions based on what spaces and attributes people had in their communities, I was unable to collect exactly matched comparisons to straight people in those same communities. In analyses, I compared people based on the sexual minority spaces in their community, but I was unable to account for the overall mental health in that region. Further, I was unable to account for broader structural impacts, such as state-level LGBTQ policies or political affiliation. This may have led to some unfair comparisons, and it also excludes the influences beyond one's community. However, the results still showed some evidence of the benefits of sexual minority spaces, and future work can examine how more distal environments may relate to well-being as well.

Third, for Study 3, I relied upon archival data for operationalizations of sexual minority spaces and attributes. For some spaces and attributes, finding appropriate archival data that matched the spaces or attributes was straightforward and accurate (e.g., using Census data to capture bookstores). For other spaces and attributes, particularly the attributes, finding appropriate data was an additional challenge. I made a few decisions on how to capture some spaces and attributes, such as outdoor spaces, open and no concealment, and artsy, that may not perfectly reflect the attributes at a state-level.

However, I worked to find multiple unique sources for each space and attribute to improve validity, and by creating scales for space and attribute types, I hoped to capture these constructs sufficiently well.

Conclusion

Sexual minority spaces are important for sexual minority people, but little research has been done to capture their importance in a quantitative way. Further, sexual minority spaces are different based on the identity they serve, and little work has been done to extensively establish these differences. The present research examined sexual minority spaces for each sexual identity type and then examined how these spaces relate to well-being on the individual- and regional-levels. Overall, sexual minority spaces that are tailored to a specific sexual identity tend to produce stronger outcomes than general spaces, however, across the board, there is strong evidence to suggest that sexual minority spaces and attributes of sexual minority spaces relate to higher belonging, higher well-being, lower anxiety, and lower depression among sexual minority people. As sexual minority people continue to face high stress, understanding how spaces and attributes of spaces may improve their mental health is crucial in providing the best outcomes possible for sexual minority people.

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Appendix A

The General Belongingness Scale (GBS; Malone et al., 2012)

1. When I am with other people, I feel included
2. I have close bonds with family and friends
3. I feel like an outsider
4. I feel as if people do not care about me
5. I feel accepted by others
6. Because I do not belong, I feel distant during the holiday season
7. I feel isolated from the rest of the world
8. I have a sense of belonging
9. When I am with other people, I feel like a stranger
10. I have a place at the table with others
11. I feel connected with others
12. Friends and family do not involve me in their plans

Subscales:
Acceptance/Inclusion Items: 1, 2, 5, 8, 10, 11
Rejection/Exclusion Items (Reverse-Scored): 3, 4, 6, 7, 9, 12

Participants respond on a 7-point Likert scale from “Strongly Disagree” to “Strongly

Agree”

Appendix B

The General Well Being Schedule (GWB; Fazio, 1977)

1. How have you been feeling in general?
   5 _____ In excellent spirits
   4 _____ In very good spirits
   3 _____ In good spirits mostly
   2 _____ I've been up and down in spirits a lot
   1 _____ In low spirits mostly
   0 _____ In very low spirits
2. Have you been bothered by nervousness or your "nerves"?
   0 _____ Extremely so—to the point where I could not work or take care of things
   1 _____ Very much so
   2 _____ Quite a bit
   3 _____ Some—enough to bother me
   4 _____ A little
   5 _____ Not at all
3. Have you been in firm control of your behavior, thoughts, emotions, or feelings?
   5 _____ Yes, definitely so
   4 _____ Yes, for the most part
   3 _____ Generally so
   2 _____ Not too well
   1 _____ No, and I am somewhat disturbed
   0 _____ No, and I am very disturbed
4. Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile?
   0 _____ Extremely so—to the point I have just about given up
   1 _____ Very much so
   2 _____ Quite a bit
   3 _____ Some—enough to bother me
   4 _____ A little bit
   5 _____ Not at all
5. Have you been under or felt you were under any strain, stress, or pressure?
   0 _____ Yes—almost more than I could bear
   1 _____ Yes—quite a bit of pressure
   2 _____ Yes—some, more than usual
   3 _____ Yes—some, but about usual
   4 _____ Yes—a little
   5 _____ Not at all
6. How happy, satisfied, or pleased have you been with your personal life?
   5 _____ Extremely happy—couldn't have been more satisfied or pleased
   4 _____ Very happy
   3 _____ Fairly happy

2 _____ Satisfied—pleased
1 _____ Somewhat dissatisfied
0 _____ Very dissatisfied

7. Have you had reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory?
   5 _____ Not at all
   4 _____ Only a little
   3 _____ Some, but not enough to be concerned
   2 _____ Some, and I've been a little concerned
   1 _____ Some, and I am quite concerned
   0 _____ Much, and I'm very concerned
8. Have you been anxious, worried, or upset?
   0 _____ Extremely so—to the point of being sick, or almost sick
   1 _____ Very much so
   2 _____ Quite a bit
   3 _____ Some—enough to bother me
   4 _____ A little bit
   5 _____ Not at all
9. Have you been waking up fresh and rested?
   5 _____ Every day
   4 _____ Most every day
   3 _____ Fairly often
   2 _____ Less than half the time
   1 _____ Rarely
   0 _____ None of the time
10. Have you been bothered by any illness, bodily disorder, pain, or fears about your health?
    0 _____ All the time
    1 _____ Most of the time
    2 _____ A good bit of the time
    3 _____ Some of the time
    4 _____ A little of the time
    5 _____ None of the time
11. Has your daily life been full of things that are interesting to you?
    5 _____ All the time
    4 _____ Most of the time
    3 _____ A good bit of the time
    2 _____ Some of the time
    1 _____ A little of the time
    0 _____ None of the time
12. Have you felt downhearted and blue?
    0 _____ All of the time
    1 _____ Most of the time
    2 _____ A good bit of the time

3 _____ Some of the time
4 _____ A little of the time
5 _____ None of the time

13. Have you been feeling emotionally stable and sure of yourself?
    5 _____ All of the time
    4 _____ Most of the time
    3 _____ A good bit of the time
    2 _____ Some of the time
    1 _____ A little of the time
    0 _____ None of the time
14. Have you felt tired, worn out, used up, or exhausted?
    0 _____ All of the time
    1 _____ Most of the time
    2 _____ A good bit of the time
    3 _____ Some of the time
    4 _____ A little of the time
    5 _____ None of the time
15. How concerned or worried about your health have you been? (10-Not at all concerned – 0-Very Concerned)
16. How relaxed or tense have you been? (10-Very relaxed – 0-Very tense)
17. How much energy, pep, and vitality have you felt? (0-No energy at all, listless – 10-Very energetic, dynamic)
18. How depressed or cheerful have you been? (0-Very Depressed – 10-Very Cheerful)

Sum score from all questions.

Appendix C

The Lesbian, Gay, & Bisexual Identity Scale (LGBIS; Mohr & Kendra, 2012)

1. I prefer to keep my same-sex romantic relationships rather private.
2. If it were possible, I would choose to be straight.
3. I'm not totally sure what my sexual orientation is.
4. I keep careful control over who knows about my same-sex romantic relationships.
5. I often wonder whether others judge me for my sexual orientation.
6. I am glad to be an LGB person.
7. I look down on heterosexuals.
8. I keep changing my mind about my sexual orientation.
9. I can't feel comfortable knowing that others judge me negatively for my sexual orientation.
10. I feel that LGB people are superior to heterosexuals.
11. My sexual orientation is an insignificant part of who I am.
12. Admitting to myself that I'm an LGB person has been a very painful process.
13. I'm proud to be part of the LGB community.
14. I can't decide whether I am bisexual or homosexual.
15. My sexual orientation is a central part of my identity.
16. I think a lot about how my sexual orientation affects the way people see me.
17. Admitting to myself that I'm an LGB person has been a very slow process.
18. Straight people have boring lives compared with LGB people.
19. My sexual orientation is a very personal and private matter.
20. I wish I were heterosexual.
21. To understand who I am as a person, you have to know that I'm LGB.
22. I get very confused when I try to figure out my sexual orientation.
23. I have felt comfortable with my sexual identity just about from the start.
24. Being an LGB person is a very important aspect of my life.
25. I believe being LGB is an important part of me.
26. I am proud to be LGB.
27. I believe it is unfair that I am attracted to people of the same sex.

Subscales:
Acceptance Concerns Items: 5, 9, 16
Concealment Motivation Items: 1, 4, 19
Identity Uncertainty Items: 3, 8, 14, 22
Internalized Homonegativity Items: 2, 20, 27
Difficult Process Items: 12, 17, 23
Identity Superiority Items: 7, 10, 18
Identity Affirmation Items: 6, 13, 26
Identity Centrality Items: 11, 15, 21, 24, 25
Note: Underlined items should be reverse scored.

Participants rate items on a 1-6 scale (“Disagree Strongly,” “Disagree,” “Disagree Somewhat,” “Agree Somewhat,” “Agree,” “Agree Strongly”).

Appendix D

The Lesbian, Gay, & Bisexual Group Identity Measure (LGBGIM; Adapted from:

Phinney, 1992; Sarno & Mohr, 2016)

1. I have spent time trying to find out more about the LGB community.
2. I am active in organizations or social groups that include mostly LGB people.
3. I have a clear sense of my sexual orientation and what it means for me.
4. I like meeting and getting to know people whose sexual orientations are different from my own.
5. I think a lot about how my life will be affected by my sexual orientation.
6. I am happy that I am a member of the LGB community.
7. I sometimes feel it would be better if different sexual orientations didn't try to mix together.
8. I am not very clear about the role of my sexual orientation in my life.
9. I often spend time with people whose sexual orientations are different from my own.
10. I really have not spent much time trying to learn more about the culture and history of the LGB community.
11. I have a strong sense of belonging to the LGB community.
12. I understand pretty well what my sexual orientation means to me, in terms of how to relate to my own community and other communities.
13. In order to learn more about LGB culture, I have often talked to other people about LGB culture.
14. I have a lot of pride in the LGB community and its accomplishments.
15. I don't try to become friends with people whose sexual orientations are different from my own.
16. I participate in LGB cultural practices such as pride events, benefits, or marches.
17. I am involved in activities with people whose sexual orientations are different from my own.
18. I feel a strong attachment towards the LGB community.
19. I enjoy being around people whose sexual orientations are different from my own.
20. I feel good about being a part of the LGB community.

Subscales:
Affirmation and Belonging Items: 6, 11, 14, 18, 20
Identity Achievement: 1, 3, 5, 8, 10, 12, 13
Behavioral Engagement: 2, 16
Other-Group Orientation: 4, 7, 9, 15, 17, 19
Note: Underlined items should be reverse-coded.

Participants rate scales on a 1-4 scale ("Strongly Disagree," "Somewhat Disagree," "Somewhat Agree," "Strongly Agree")