# Examining the Lesbian, Gay, and Bisexual Identity Scale Among Members of an Alternative Sexuality Special Interest Group

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VOLUME 42, NUMBER 6

ONLINE FIRST

# Archives of
# SEXUAL
# BEHAVIOR

The Official Publication of the
International Academy of Sex Research

Springer

Available online
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## ORIGINAL PAPER

# Examining the Lesbian, Gay, and Bisexual Identity Scale Among Members of an Alternative Sexuality Special Interest Group

**Robert J. Cramer[1,5] · Frank D. Golom[2] · Tess M. Gemberling[3] · Kristen Trost[1] · Robin Lewis[4,5] · Susan Wright[6]**

**Abstract** The present study contributes to a growing body of literature developing psychometrically and theoretically grounded measures of sexual orientation minority identity. We tested psychometric properties and construct validity of a 27-item measure, the Lesbian, Gay, and Bisexual Identity Scale (LGBIS). The sample consisted of 475 adult (178 male, 237 female, 16 male-to-female, 14 female-to-male, and 30 gender queer persons) members of a special interest group, the National Coalition for Sexual Freedom. Participants completed a health needs questionnaire. Prominent findings included (1) confirmatory factor-analytic, internal consistency, and inter-correlation patterns support two LGBIS factor structures; (2) men, compared primarily to women, reported elevated scores on Acceptance Concerns, Concealment Motivation, Difficulty Process, and Negative Identity; (3) queer-identifying persons tended to report low Concealment Motivation, and high Identity Affirmation and Identity Centrality scores; (4) experimenting/fluid-identifying individuals tended toward higher Identity Uncertainty and Negative Identity, and lower Identity Centrality scores; (5) LGB community involvement was negatively associated with Concealment Motivation, Identity Uncertainty, and Negative Identity, and positively associated with Identity Superiority, Identity Affirmation, and Identity Centrality scores; and (6) Acceptance Concerns, Identity Uncertainty, and Internalized Homonegativity displayed significant positive associations with such mental health symptoms as general anxiety and posttraumatic stress. The LGBIS represents a useful approach to evaluating sexual orientation minority identity. Implications for identity theory, research, and practice are provided.

**Keywords** Sexual orientation ·
Lesbian, Gay, and Bisexual Identity Scale · Queer ·
BDSM · Mental health

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## Introduction

Sexual orientation identity represents one's attitude or feelings about sexual attraction and behavior, typically in the context of preexisting sexual categories (e.g., gay or lesbian; Levy, 2009). Historically, sexual orientation identity, particularly as it pertains to lesbian, gay, and bisexual (LGB) individuals, has been conceptualized in a number of distinct ways, including (1) stage and phase models of sexual orientation minority identity (e.g., Cass, 1979; Troiden, 1989), (2) socially based theories of sexual minority-specific stress, stigma, and health (e.g., Herek, Gillis, & Cogan, 2009; Meyer, 2013), and (3) queer theory and other social constructionist approaches (e.g., Galinsky et al., 2013; Jagose, 1996). The stage model approach (e.g., Cass, 1979; Troiden, 1989), though widely popular, has received mixed support in the literature (for a review, see Levy, 2009), leading sev-

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eral scholars to offer alternative perspectives for understanding sexual orientation identity. For instance, Herek et al. (2009) articulated three forms of stigma that can contribute to social and individual aspects of identity development. Those stigma types include (1) enacted stigma (i.e., experienced from one's social world; e.g., hate crime, anti-LGB policies); (2) internalized stigma (i.e., self-concept-related internalized heterosexist beliefs; e.g., "It is a sin to be gay or lesbian"); and (3) felt stigma (i.e., expectation of future negative social experiences; e.g., expecting discrimination). Meyer (2013) further specified distal (e.g., discrimination) and proximal (e.g., concealment of one's identity) minority-specific stressors that intersect with identity characteristics (e.g., prominence of one's sexual orientation identity). Queer theory and other constructionist approaches exist as well, where sexual orientation identity is seen as a culturally situated, fluid, and changeable phenomenon, and essentialist categories and stages are abandoned in favor of nonbinary expressions of sexual orientation identity (Levy, 2009).

Given vastly different conceptualizations of sexual orientation identity, the development of valid measures of sexual orientation identity remains a paramount concern. As several scholars have noted, categorical and simplistic dimensional approaches to the measurement of aspects of sexual orientation (e.g., Kinsey, Pomeroy, & Martin, 1948; Russell, Clarke, & Clary, 2009) are limited for a number of reasons, including (1) failure to capture a wide array of identities, (2) ignoring community-based aspects of identity, (3) inadequate understanding positive identity facets, and (4) lack of sufficient theoretical grounding.

Contemporary measurement perspectives are characterized by the dimensional assessment of different aspects of sexual orientation identity and include the social experiences of LGB individuals (e.g., prejudice, community involvement) as well as their self-views (e.g., internalized stigma, centrality of one's sexual to their identity), consistent with recent social psychological, stigma, and queer understandings of identity (Mohr & Fassinger, 2000; Mohr & Kendra, 2011). In fact, one exception to the overall lack of detailed measures of sexual orientation identity is recent research defining and measuring identity using the Lesbian, Gay, and Bisexual Identity Scale (LGBIS; Mohr & Kendra, 2011). Recent studies of the LGBIS have examined associations of identity with such correlates as physical health (Denton, Rostosky, & Danner, 2014), mental health (Meyer, 2013), and romantic functioning (Gemberling et al., 2015b).

The purpose of the present study is to add to the known psychometric data of the LGBIS (Mohr & Kendra, 2011) using a unique sample of members of the National Coalition for Sexual Freedom (NCSF). To the extent that the LGBIS factor structure(s) and validity are replicated or extended in the present study, we can be more confident in a dimensional understanding of sexual orientation minority identity that explicitly considers various psychological and community/cultural factors. Practically speaking, replication and extension of LGBIS psychometric properties offers promise of a strong, sound measure for broader sexual orientation identity research, a noted gap that persists to date (e.g., Ridolfo, Miller, & Maitland, 2012).

## Development of Models Across the LGIS and LGBIS[1]

Factor structure research in this area has examined several different models across both the Lesbian and Gay Identity Scale (LGIS) (Mohr & Fassinger, 2000) and the adapted later version, the LGBIS (Mohr & Kendra, 2011). Mohr and Fassinger (2000) reported support for a six-factor LGIS structure. Negative identity subscales included (1) Need for Privacy, (2) Need for Acceptance, (3) Internalized Homonegativity, (4) Difficult Process, and (5) Identity Confusion. One additional identity subscale was found: Identity Superiority. Importantly, Mohr and Fassinger characterized Superiority as worth studying, as it may be a by-product of or compensation for internalized prejudice. Mohr and Fassinger also identified a higher-order structure in which a single latent Negative Identity factor included just four of the five negative identity subscales, including Need for Privacy, Need for Acceptance, Internalized Homonegativity, and Difficult Process. Identity Confusion remained an independent subscale.

Mohr and Kendra (2011) updated the scale to address a number of LGIS limitations (e.g., exclusion of additional items related to positive aspects of having an LGB identity). In total, the LGBIS assesses sexual orientation minority identity with 27-items that comprise eight subscales: (1) Identity Centrality (degree to which sexual orientation is central to one's identity formation); (2) Identity Affirmation (degree to which one's LGB identity is associated with positive thoughts about one's own sexual orientation); (3) Concealment Motivation (similar to LGIS Need for Privacy); (4) Identity Uncertainty (similar to LGIS Identity Confusion); (5) Internalized Homonegativity; (6) Difficult Process; (7) Acceptance Concern (similar to LGIS Need for Acceptance); and (8) Identity Superiority (viewing sexual minority persons as favorable to heterosexuals). The eight subscales possessed acceptable internal consistency (.77–.89).

Although a number of studies have tested the underlying structure of the LGBIS, these studies have used slightly different versions of the measure, some translated to different languages, and have found support for different factor structures. Kemer, Demirtas, Pope, and Ummak (2017) examined a Turkish translated version of the LGBIS among a general adult sample, finding straightforward confirmatory factor-analytic support for the eight-factor Mohr and Kendra model. Importantly, Kemer et al. reported no additional factor structure tests nor higher-order factor variants of their supported model. In another cross-cultural sample, de Oliveira, Lopes, Costa,

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[1] In this section, we highlight only basic factor structures. The online supplement summarizes detailed factor-analytic strategies and adaptation of LGBIS measures over the series of studies.

and Nogueira (2012) examined a Portuguese adaptation of the LGBIS. Exploratory and confirmatory factor analyses were conducted, yielding a seven-factor structure with three variant models: (1) completely uncorrelated subscales, (2) partially correlated subscales, and (3) a higher-order factor structure (lowest level CFA fit).[2] Seven factors were reported: (1) Identity Centrality; (2) Identity Dissatisfaction (i.e., the degree to which individuals evaluate their LGB sexual orientation negatively); (3) Identity Uncertainty; (4) Concealment Motivation; (5) Difficult Process; (6) Stigma Sensitivity (i.e., the degree to which one experiences anxiety around rejection due to their sexual orientation); and (7) Identity Superiority.

Cramer, Golom, Burks, Stroud, and Graham (2017) evaluated a total of seven different models approximating the previous LGIS/LGBIS literature (de Oliveira et al., 2012; Mohr & Fassinger, 2000; Mohr & Kendra, 2011).[3] An acceptable fit for a model derived from Mohr and Fassinger (2000) was found, consisting of six factors, four of which loaded on a Negative Identity second-order factor (i.e., Difficult Process, Internalized Homonegativity, Need for Acceptance, and Need for Privacy). Identity Confusion and Identity Superiority remained independent factors. In light of the various models in the literature to date and support for six-, seven-, and eight-factor models, we turned to theory to further inform our expectations. At the very least, social psychological and stigma-based approaches to identity (Herek et al., 2009; Meyer, 2013) suggest a factor structure support for models that include a range of culturally based experiences defining LGB identity (e.g., Mohr & Kendra's (2011) eight-factor model).

**Demographics**

Demographic differences on the LGBIS have been investigated, although replication of most of these patterns is currently lacking. As a result, while we explore demographic patterns in an attempt to extend previous research, we acknowledge that associations between demographic variables and LGBIS dimensions may differ depending on the nature of the sample studied. In general, however, research suggests that minority individuals who experience enacted stigma via overt prejudice and discrimination may be more likely to demonstrate identity features like internalized stigma, as well as motivation to conceal one's identity (Herek et al., 2009).

Consistent with this notion, sexual minority men have reported higher scores on Internalized Homonegativity and Stigma Sensitivity than sexual minority women in previous LGBIS research (Balsam & Mohr, 2007). Additionally, bisexual individuals have reported higher scores on Identity Confusion than LG participants. de Oliveira et al. (2012) observed similar patterns;

bisexual individuals reported greater levels of Identity Uncertainty than LG participants (a pattern also found by Kemer et al., 2017), and men reported higher scores on Identity Dissatisfaction (Internalized Homonegativity) than women. Mohr and Kendra (2011) observed several significant associations, including negative associations between Acceptance Concerns and both public collective self-esteem and level of outness, a negative correlation between Concealment Motivation and level of outness, a negative association between Identity Superiority and interest in interacting with heterosexuals, and a positive association between Identity Affirmation and importance of identity.

Cramer et al. (2017) examined demographic differences of the higher-order Negative Identity factor, as well Identity Superiority and Identity Uncertainty. It was found that men reported greater Negative Identity compared to women, and African-American participants reported greater Negative Identity compared to whites. An interesting pattern was also observed in that biracial individuals reported a more positive identity (Cramer et al., 2017), suggesting that biracial identifying LGB adults may develop a more integrated sense of identity. These findings are somewhat noteworthy, as no significant racial differences on the LGBIS were found among sexual minority women in another sample (Balsam et al., 2015). Consistent with previous research (Sarno & Wright, 2013), however, bisexual individuals reported more Negative Identity and Identity Uncertainty compared to lesbians and gay men.

Mixed findings have been reported with regard to age and the LGBIS. Age was positively correlated with Negative Identity (Cramer et al., 2017), negatively related to Negative Identity (Galupo & Bauerband, 2016), and had no significant association with Internalized Homonegativity (Denton et al., 2014). Although consistent demographic patterns have not been found across previous research investigations, we expected participants who are more likely to experience enacted stigma (i.e., males, bisexuals, and racial minority participants) to demonstrate higher subscale scores on Concealment Motivation and Internalized Homonegativity. Additionally, to build on LGBIS knowledge in relation to social and community variables, we examined LGB community involvement, expecting this to be negatively related with Negative Identity.

**Mental Health**

The basic theoretical assumption underlying this set of analyses is that increased stigma or stress contributes to poorer mental health (Meyer, 2013). Supporting this notion, Internalized Homonegativity and Difficult Process are consistently associated with poor health outcomes such as sadness, depression, anxiety, negative affect, stress, and poor physical health (e.g., Brewster, Moradi, DeBlaere, & Velez, 2013; Feinstein, Goldfried, & Davila, 2012). On the other hand, Identity Affirmation was negatively associated with depression and sadness, among

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[2] For item changes from LGBIS, see online supplement.

[3] Cramer et al. imposed more stringent model estimates in the test of the eight-factor model (online supplement for details).

other indicators of poor well-being. The last subscale, Identity Superiority, was significantly positively associated with depression, anxiety, and stress (Cramer et al., 2017). It was hypothesized that Identity Superiority may function differently depending on context or circumstance (e.g., urban vs. college setting; Cramer et al., 2017). In all, extant findings suggest that Internalized Homonegativity and Difficult Process should be associated with poorer well-being, whereas other identity subscale associations with well-being may depend on setting or context.

## Sexuality- and Romantic Relationship-Related Constructs

Relatively less research has examined the LGBIS and sexuality-related constructs. However, from a sexual minority-specific stress and health perspective (Meyer, 2013), this domain is a vital area of functioning to assess in terms of sexual and social health. Individuals in an open relationship reported less motivation to conceal their sexual identity compared to single or dating individuals, and single individuals reported more Internalized Homonegativity and Identity Uncertainty compared to those in open or monogamous relationships (Gemberling et al., 2015b). With regard to other relationship variables, LGBIS Internalized Homonegativity was associated with decreases in both romantic attraction and relationship satisfaction among college students in same-sex relationships (Mohr & Daly, 2008). Motivation to conceal sexual identity was associated with more commitment to the relationship and less attachment avoidance. Identity Uncertainty was associated with less relationship satisfaction and commitment as well as more avoidance of intimacy. Identity Affirmation was associated with less attachment anxiety and avoidance (Gemberling et al., 2015b). These findings regarding relationships and sexuality suggest that higher levels of the negative identity (Mohr & Fassinger, 2000) factors (e.g., concealment of sexual minority identity) may be associated with poorer relationship functioning.

## The Present Study

The primary aim of the present study was to investigate the psychometric properties of the LGBIS, evaluating whether existing theory-based factor structures in the literature replicate in the present sample. We do so in a special interest group for sexual orientation minority persons, namely NCSF. Members of NCSF comprise people of alternative romantic relationships (e.g., polyamory) or sexual practices [e.g., bondage and discipline, dominance and submission, and sadomasochism (BDSM)]. This sample was selected in part because they represent a unique subgroup of sexual diversity, especially with regard to alternative sexual behaviors and public membership in a sexual advocacy organization. Their very public presence,

therefore, may contribute to both social advocacy (e.g., community involvement) and interpersonal (e.g., experiences of prejudice) aspects of identity. Additionally, although public stigma is often directed toward this group (Gemberling, Cramer, & Miller, 2015a; Wright, 2010), extant research suggests BDSM practitioners are no different from general adult samples in terms of health and well-being (e.g., Richters, de Visser, Rissel, Grulich, & Smith, 2008; Wismeijer & van Assen, 2013). The complex discourse concerning BDSM to date raises a clear need to conduct empirical work. We tested seven competing factor structures also evaluated by Cramer et al. (2017).

Specifically, we hypothesized that:

H1 An eight-factor structure consistent with Mohr and Kendra (2011) would display the best fit among seven models tested.

H2 Male (compared to female), bisexual (compared to other sexual orientation minorities), and racial minority (compared to white) participants will report higher levels of Internalized Homonegativity and Concealment Motivation.

H3 Greater LGB community involvement will be positively associated with Identity Affirmation and negatively associated with Negative Identity.

H4 Internalized Homonegativity and Difficult Process will be positively associated with indicators of poor mental health. Identity Affirmation will display negative associations with indicators of poor mental health.

H5 Single romantic relationship status (compared to being in any long-term, committed relationship) will be associated with higher Internalized Homonegativity, Identity Uncertainty and Concealment Motivation.

## Method

### Participants

A total of 475 sexual orientation minority members of NCSF who consented to take part in the study were included in analyses.[4] Table 1 contains frequency and descriptive data. The sample was approximately half female, 37.5% male, with equal portions of transgender and gender queer individuals. Racial composition was heavily white (88.0%), with no other single race accounting for more than two percent of the sample. Categorical sexual identity labels in descending order of frequency were: bisexual, gay, no preference, experimenting/fluid, no label,

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[4] A total of 521 sexual orientation minority-identifying persons started the survey, but a total of 46 dropped out prior to completion of the LGBIS and other measures of interest (with most ceasing participation prior to providing sufficient demographic information for basic between-groups analyses between the analyzed group and those who dropped out).

**Table 1** Descriptive statistics for all variables of interest

| Variable | Frequency (%) | Mean (SD) |
|---|---|---|
| Demographics | | |
| Age (in years) | – | 40.21 (13.82) |
| Gender | | |
| Male | 178 (37.5) | – |
| Female | 237 (49.9) | – |
| Male-to-female | 16 (3.4) | – |
| Female-to-male | 14 (2.9) | – |
| Gender queer/nonconforming | 30 (6.3) | – |
| Race | | |
| White | 418 (88.0) | – |
| African-American | 7 (1.5) | – |
| Asian American | 8 (1.7) | – |
| Hispanic | 9 (1.9) | – |
| Native American | 1 0.2) | – |
| Jewish | 2 (0.4) | – |
| Other (unspecified) | 3 (0.6) | – |
| Multiracial | 27 (5.7) | – |
| Sexual orientation | | |
| Gay | 100 (21.1) | – |
| Lesbian | 21 (4.4) | – |
| Bisexual | 221 (46.5) | – |
| No label | 27 (5.7) | – |
| No preference | 55 (11.6) | – |
| Experimenting/fluid | 28 (5.9) | – |
| Sexual orientation queer | 23 (4.8) | – |
| LGB community involvement | – | 2.54 (1.22) |
| Lesbian, Gay, and Bisexual Scale (subscale means) | | |
| Acceptance Concerns | – | 2.45 (1.23) |
| Concealment Motivation | – | 3.18 (1.54) |
| Identity Uncertainty | – | 1.84 (1.04) |
| Internalized Homonegativity | – | 1.47 (0.78) |
| Difficult Process | – | 2.76 (1.41) |
| Identity Superiority | – | 1.75 (0.96) |
| Identity Affirmation | – | 4.62 (1.13) |
| Identity Centrality | – | 3.68 (1.34) |
| Negative Identity[a] | – | 2.48 (0.91) |
| Sexuality and romantic relationship experiences | | |
| Number of sexual partners (past year) | – | 5.37 (15.65) |
| Number of romantic partners (past year) | – | 1.78 (2.73) |
| Relationship status | | |
| Single | 107 (22.5) | – |
| Casually dating | 35 (7.4) | – |
| In a relationship | 120 (25.3) | – |
| Monogamous marriage/ lifelong commitment | 137 (28.8) | – |
| Open/poly relationship | 15 (3.1) | – |
| Open/poly marriage | 41 (8.6) | – |
| Other (unspecified) | 20 (4.2) | – |

**Table 1** continued

| Variable | Frequency (%) | Mean (SD) |
|---|---|---|
| Mental health | | |
| Depression (DASS-21 subscale total) | – | 4.68 (5.19) |
| Anxiety (DASS-21 subscale total) | – | 3.12 (3.68) |
| Stress (DASS-21 subscale total) | – | 5.53 (4.22) |
| Posttraumatic stress (PCL-C total) | – | 34.54 (15.05) |
| Suicide (SBQ-R total) | – | 8.01 (3.56) |
| Average weekly alcohol use | – | 2.27 (3.82) |
| Average weekly drug use | – | 0.52 (1.87) |

[a]Negative Identity is an item mean from a tabulation of four LGBIS subscales

sexual orientation queer, and lesbian. Participants represented a diverse array of romantic relationship configurations.

## Procedure

Participants were recruited through NCSF. Specifically, advertisements for the study were posted on the NCSF Web site and sent through the NCSF email listserv. The study was described as an investigation into the victimization experiences, health, and well-being of BDSM practitioners. All interested individuals were directed to a SurveyMonkey page, which hosted the consent form and respective questionnaires. Participants were required to be at least 18 years of age with a minimum tenth grade education. Data were collected during the fall of 2015.

## Measures

### Demographics

Participants were asked to indicate their age, gender, sexual orientation, and race. With the exception of age, all response options were multiple choice. Due to a few small cell sizes, sexual orientation identity labels for experimenting, fluid, or flexible identities were collapsed into a larger subcategory. Table 1 contains summary data for measures of interest.

### Lesbian, Gay, and Bisexual Identity Scale (LGBIS)

The LGBIS (Mohr & Kendra, 2011) measures eight dimensions of a lesbian, gay, bisexual, or other sexual minority identity. The dimensions are: (1) Concealment Motivation (3 items, present $\alpha = .87$); (2) Identity Uncertainty (4 items, present $\alpha = .80$); (3) Internalized Homonegativity (3 items, present $\alpha = .80$); (4) Difficult Process (3 items, present $\alpha = .78$); (5) Acceptance Concerns (3 items, present $\alpha = .73$); (6) Identity Superiority (3 items, present $\alpha = .78$); (7) Identity Centrality (5 items, present

$\alpha = .88$); and (8) Identity Affirmation (3 items, present $\alpha = .83$). Scores are tabulated by obtaining the mean item response for each subscale. In the present study, the majority of LGBIS negative identity subscale item means were below the midpoint (with Concealment Motivation approximating the midpoint; Identity Superiority was also below the midpoint), while both positive identity subscales were above the midpoint. Validity patterns of the LGBIS in other sexual orientation minority samples are summarized in the literature review.

### LGB Community Involvement

LGB community involvement was recorded using a five-point rating scale (1 = not involved, 5 = very involved), where higher scores denote greater levels of involvement.

### Sexuality and Romantic Relationship Experiences

Participants were also asked to indicate their relationship status (for response categories, see Table 1), as well as number of recent romantic and sexual partners. Participants checked the relationship status option that most closely approximated their status.

### Mental Health

Three internalizing symptoms, specifically depression (7 items, present $\alpha = .93$), anxiety (7 items, present $\alpha = .81$), and stress (7 items, present $\alpha = .84$), were assessed through the Depression Anxiety Stress Scales-21 (DASS-21; Osman et al., 2012). DASS-21 subscale scores are obtained by summing items for each subscale. In a sample of LGB-identifying adults, the DASS-21 demonstrated high internal consistency values across subscales (range .85–.91), large positive subscale inter-correlations ($r$ range .75–.83), large positive correlations with negative affect ($r$ range .62–.65), and small-to-moderate negative correlations with indicators of positive emotional well-being (e.g., positive affect; $r$ range, − .11 to − .45; Cramer et al., 2017). Posttraumatic stress symptoms were gauged through the Posttraumatic Stress Disorder Checklist—Civilian (PCL-C, 17 items, present $\alpha = .94$; Conybeare, Behar, Solomon, Newman, & Borkovec, 2012). The total PCL-C score represents a sum of the 17 items. In a sample of lesbian-identifying Latina individuals, the PCL-C demonstrated high internal consistency ($\alpha = .96$), a small positive correlation with a measure of perceived discrimination ($r = .29$), and large positive correlation with a measure of depressive symptoms ($r = .64$; Cerezo, 2016).

Suicidality, addressing past thoughts, threats, and attempts as well as future likelihood, was evaluated through the Suicidal Behaviors Questionnaire-Revised (SBQ-R, 4 items, present $\alpha = .75$; Osman et al., 2001). SBQ-R total score is obtained by summing responses to all items. In a sample of transgender-identifying community members (94% sexual orientation minor-

ity identifying), the SBQ-R total score displayed acceptable internal consistency ($\alpha = .76$), small positive correlations with indicators of minority stress (e.g., internalized heterosexism; $r$ range .29–.44), and a large positive correlation with a measure of depression ($r = .69$; Tebbe & Moradi, 2016). Based on cut-scores in source articles, means were in subclinical ranges for all DASS-21 and PCL-C scores; the mean score of approximately eight for the SBQ-R indicates elevated suicide risk when compared to normative general adult samples (Osman et al., 2001).

Weekly substance use was measured by two free-response questions (one for alcohol and one for drugs) asking: "On average, how many [alcoholic drinks do you have/times do you use illegal drugs] per week?"

## Results

### Data Analysis

No items contained missing responses. Univariate skewness and kurtosis were examined for all items in light of empirical data that violations can bias maximum likelihood estimation (Yuan, Bentler, & Zhang, 2005). Seven LGBIS items exceeded cutoffs for normality (i.e., skewness > 2 or < − 2; and/or kurtosis > 2 or < − 2): LGBIS items 2, 7, 8, 14, 20, 22, and 27. A two-step process was used to correct data. First, outliers (i.e., values with a $z$-score ± 3.3 away from the mean) were winsorized (i.e., reduced to $z$-score values of ± 3.3; Lien & Balakrishnan, 2005). Winsorizing was selected rather than dropping extreme outliers because the process has approximately the same effects on parameter estimation (Lien & Balakrishnan, 2005) while retaining the maximum sample size for CFA (for sample size considerations in CFA, see Wolf et al., 2013). Second, for the six items still displaying skewness issues, transformations were implemented in accordance with recommendations in the literature (Field, 2013). The following methods were used: square root for Items 2, 7, and 22, logarithm (base 10) for Items 14 and 20, and reciprocal for Item 27. All items achieved normality.

We examined seven confirmatory factor analysis models. Latent variable and other correlation patterns were specified as follows. If a model's correlations were either not reported or were mixed by subgroup analysis, we did not specify inter-correlations based on those studies. Rather, we mirrored patterns in models tested by Cramer et al. (2017) in order to remain consistent with their theoretically driven tests of LGBIS factor structures. In the instance-specific subscale, correlation patterns were reported and consistent in the source article (e.g., de Oliveira et al., 2012 partial correlated factors model), latent or subscale correlations followed these specific patterns. We tested

approximations of seven-factor structures from the literature[5] including (1) six-factor model (Mohr & Fassinger, 2000); (2) six-factor LGIS-based model with higher-order factor (Mohr & Fassinger, 2000; Cramer et al., 2017); (3) seven-factor partially correlated model (de Oliveira et al., 2012); (4) seven-factor uncorrelated model (de Oliveira et al., 2012); (5) seven-factor model with one higher-order identity factor (de Oliveira et al., 2012); (6) eight-factor model (Kemer et al., 2017; Mohr & Kendra, 2011); (7) eight-factor model with two higher-order factors (Mohr & Kendra, 2011). Approximating factor structures became necessary because the present study administered the LGBIS 27-item version as summarized in Appendix of Mohr and Kendra (2011). Because Mohr and Kendra revised item content from the original LGIS, and cross-cultural administrations sometimes used differing item sets (e.g., de Oliveira et al., 2012), it became necessary to approximate some factor structures using our available data. In doing so, we used the LGBIS items or subscales that most closely matched the content in that respective subscale. More detail can be found in the online supplement.

In line with established convention in the statistical literature (e.g., Kline, 2005), we report at least four model fit indices, with the following set used to guide model interpretation: $\chi^2$, comparative fit index (CFI), root-mean-square error of approximation (RMSEA), Bayesian information criterion (BIC), Tucker–Lewis index (TLI), and standardized root-mean-square residual (SRMR). The following criteria were used to assess models with adequate-to-acceptable fit (Hu & Bentler, 1999; Kline, 2005): CFI > .90; RMSEA < .10; TLI > .90; SRMR < .10. BIC does not have recommended cut-scores; rather, lower BIC scores reflect better fit when comparing nested models (Preacher & Merkle, 2012). Because the Chi-square difference test can be inflated by sample size (Kline, 2011), we used further approaches to discriminate between models displaying approximately equal levels of adequate-to-acceptable fit. Specifically, Kline (2011), in line with empirical data in the statistical literature (e.g., Meade, Johnson, & Braddy, 2008), suggests evaluating change of relative fit indices (e.g., CFI) minor differences reflect equivalent fit between models.

Gender, sexual orientation, race differences, and relationship status in LGBIS scores were evaluated via either *t* tests or ANOVAs, whereas age, LGB community involvement, mental health, and number of partners were examined with bivariate correlations. Bonferroni corrections were applied to each set of between-groups comparisons (.05/9 analyses), yielding a *p* value cutoff of .005.

## H1: LGBIS Factor Structure

We hypothesized support for Mohr and Kendra's (2011) eight-factor structure compared to six other LGBIS/LGIS factor structures reported in the literature. Table 2 contains a summary of fit indices. Models 3, 4, 5, and 7 were immediately dropped due to poor model fit (for fit indices, see Table 2). Models 1 and 2 both displayed adequate fit; however, Model 1 is subsumed under or nested within Model 2. Therefore, Model 2 was retained over Model 1 because of the added theoretical value of the higher-order Negative Identity factor. Supporting hypothesis 1, Model 6 also displayed adequate fit. Given that neither Models 6 nor 2 was nested within the other, and their fit was approximately equivalent, both were retained for further analyses. Importantly, Model 6 includes the two independent subscales in model two (i.e., Identity Uncertainty and Identity Superiority) and therefore are repetitive between models. Moving forward, the Negative Identity higher-order factor from Model 2 (Mohr & Fassinger, 2000) and eight subscales in Model 6 (Mohr & Kendra, 2011) were used for validity analyses.

Model 2 contained the following additional notable results. All items loaded significantly (loading range .53–89, all *p*s < .001) in expected directions. The four subscales (Need for Acceptance/Acceptance Concerns, Need for Privacy/Concealment Motivation, Difficult Process, and Internalized Homonegativity) loading on Negative Identity were all significant (all *p*s < .001) and in expected directions (loading range, .54–.79). Model 6 contained the additional notable findings. All items loaded significantly (loading range, .48–.93, all *p*s < .001) in expected directions.

Table 4 contains correlations among the 8 factor model subscales and Negative Identity higher-order factor. Most significant correlations were in expected directions with the following departures. Identity Superiority displayed a nonsignificant association with Negative Identity as well as several negative identity subscales (cf. Cramer et al., 2017), and a significant positive association with Acceptance Concerns.

## H2: Demographic Correlates[6]

We hypothesized that males, bisexuals, and racial minorities would display higher Internalized Homonegativity and Concealment Motivation. Gender displayed significant associations with the following six LGBIS scales: Acceptance Concerns ($F[4, 470] = 4.66$, $p = .001$), Concealment Motivation ($F[4, 470] = 4.71$, $p = .001$), Difficult Process ($F[4, 470] =$

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[5] For exact items, subscales, and analytic approaches for each model, see online supplement.

[6] Only significant between-groups analyses are reported for categorical correlates for H2, H3, and H5; full set of statistical tests are available from the corresponding author upon request.

**Table 2** LGBIS confirmatory factor analysis fit statistics

| Model description | $\chi^2$/df | $\chi^2$ | df | RMSEA (95% CI) | CFI | BIC | TLI | SRMR |
|---|---|---|---|---|---|---|---|---|
| Model 1: Six-factor model[a] | 2.67 | 376.35* | 141 | .06 (.05, .07) | .94 | 678.35 | .92 | .06 |
| Model 2: Six-factor model with single higher-order factor[a] | 2.93 | 424.29* | 145 | .06 (.06, .07) | .92 | 701.64 | .91 | .07 |
| Model 3: Seven-factor model, partially correlated[b] | 4.14 | 1085.98* | 262 | .08 (.08, .09) | .84 | 1474.24 | .82 | .13 |
| Model 4: Seven-factor model, uncorrelated[b] | 5.69 | 1565.06* | 275 | .10 (.09, .10) | .75 | 1873.23 | .73 | .19 |
| Model 5: Seven-factor model with higher-order factor[b] | 4.14 | 1110.28* | 268 | .08 (.08, .09) | .84 | 1461.59 | .82 | .11 |
| Model 6: Eight-factor model[c] | 2.62 | 794.72* | 303 | .06 (.05, .06) | .92 | 1256.97 | .91 | .08 |
| Model 7: Eight-factor model with two higher-order factors[c] | 3.12 | 981.85* | 315 | .07 (.06, .07) | .89 | 1370.13 | .88 | .10 |

RMSEA Root-mean square error of approximation, CFI comparative fit index, BIC Bayesian information criterion, TLI Tucker–Lewis index, SRMR standardized root-mean-square residual

[a] Based on Mohr and Fassinger (2000)

[b] Based on de Oliveira et al. (2012)

[c] Based on Mohr and Kendra (2011)

*p < .001

7.57, $p < .001$), Identity Superiority ($F[4, 470] = 11.09$, $p < .001$), Identity Centrality ($F[4, 470] = 7.97$, $p < .001$), and Negative Identity ($F[4, 470] = 4.66$, $p < .001$). Referring to Table 3 and partially consistent with our hypothesis, males reported elevated Acceptance Concerns, Concealment Motivation, Difficulty Process, and Negative Identity scores. The only other notable gender-based pattern is females reporting lesser Centrality and Superiority in comparison with some other gender minority persons. Contrary to expectations, no significant differences in scores were observed by race. Age was only significantly negatively (and modestly) associated with Acceptance Concerns and Identity Uncertainty.

Sexual orientation displayed significant associations with the following eight LGBIS scales: Concealment Motivation ($F[6, 468] = 7.29$, $p < .001$), Identity Uncertainty ($F[6, 468] = 13.34$, $p < .001$), Internalized Homonegativity ($F[6, 468] = 3.46$, $p = .002$), Difficult Process ($F[6, 468] = 3.61$, $p = .002$), Identity Superiority ($F[6, 468] = 6.71$, $p < .001$), Identity Affirmation ($F[6, 468] = 4.86$, $p < .001$), Identity Centrality ($F[6, 468] = 15.71$, $p < .001$), and Negative Identity ($F[6, 468] = 4.46$, $p < .001$). Table 3 contains subscale comparisons by sexual orientation subgroups. Contrary to expectations, bisexual participants did not display notably elevated Identity Uncertainty, Internalized Homonegativity or other scores. The following notable patterns were observed: (1) queer-identifying persons tended to report low Concealment Motivation, and high Identity Affirmation and Identity Centrality, (2) experimenting/fluid-identifying individuals tended toward higher Identity Uncertainty and Negative Identity, and lower Identity Centrality, and (3) gay male participants reported higher Identity Superiority compared to many other groups, although this average was still below the scale midpoint.

### H3: LGB Community Involvement

We expected LGB community involvement to be positively associated with Identity Affirmation. LGB community involvement was negatively associated with Concealment Motivation, Identity Uncertainty, and Negative Identity, and positively associated with Identity Superiority, Identity Affirmation (supporting our hypothesis), and Identity Centrality (see Table 4).

### H4: Mental Health Correlates

Overall, we hypothesized that higher levels of Internalized Homonegativity and Difficult Process would be associated with poorer mental health. We expected positive mental health to be associated with Identity Affirmation. We found that Acceptance Concerns, Identity Uncertainty, and Internalized Homonegativity (partially confirming expectations) displayed significant negative associations with many internalizing symptoms of mental health (see Table 4). However, these associations were modest in size. Moreover, several LGBIS subscales displayed little in the way of a correlation with mental health; likewise, alcohol/drug use and suicide risk displayed little meaningful correlation with LGBIS subscales. Contrary to expectations, Identity Affirmation displayed little to no meaningful correlation with mental health indictors (see Table 4).

### H5: Romantic Relationship and Sexuality Correlates

We posited that a single romantic relationship status would be associated with higher Internalized Homonegativity, Identity Uncertainty, and Concealment Motivation. Relationship status displayed significant associations with two LGBIS scales: Iden-

**Table 3** LGBIS subscale comparisons for significant differences in categorical demographic and sexuality/romantic relationship variable

| Variable | Means (SDs) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | AC | CM | IU | IH | DP | IS | IA | IC | NI |
| **Gender** | | | | | | | | | |
| Male | $2.70_a$ (1.26) | $3.52_{ab}$ (1.65) | 1.84 (1.12) | 1.58 (0.88) | $3.13_a$ (1.40) | $1.97_a$ (0.97) | 4.48 (1.18) | $3.91_a$ (1.35) | $2.73_a$ (0.90) |
| Female | 2.26 (1.17) | $3.08_a$ (1.43) | 1.80 (0.94) | 1.42 (0.75) | $2.45_a$ (1.32) | $1.47_{abc}$ (0.79) | 4.65 (1.06) | $3.37_{ab}$ (1.29) | $2.30_a$ (0.90) |
| Male-to-female | 2.87 (1.22) | 2.77 (1.60) | 2.08 (1.42) | 1.37 (0.58) | 3.14 (1.51) | $2.39_b$ (1.60) | 4.98 (1.08) | 3.77 (1.32) | 2.54 (0.96) |
| Female-to-male | 2.40 (1.10) | 2.50 (1.33) | 1.86 (0.97) | 1.26 (0.49) | 2.19 (1.41) | 2.00 (1.26) | 4.48 (1.43) | 4.20 (1.39) | 2.09 (0.53) |
| Gender queer/nonconforming | 2.84 (1.28) | $2.58$ $(1.34_b)$ | 2.03 (1.13) | 1.38 (0.62) | 3.07 (1.43) | $2.08_c$ (1.18) | 5.10 (1.14) | $4.47_b$ (1.18) | 2.47 (0.86) |
| **Sexual orientation** | | | | | | | | | |
| Gay | 2.77 (1.26) | $2.81_a$ (1.41) | $1.41_{abc}$ (0.78) | 1.50 (0.89) | $3.16_a$ (1.52) | $2.17_{abcd}$ (1.04) | 4.76 (1.14) | $4.42_{abcd}$ (1.30) | 2.56 (0.92) |
| Lesbian | 2.31 (1.25) | $2.21_b$ (1.14) | $1.88_d$ (1.13) | $1.09_a$ (0.24) | 2.36 (1.06) | 2.16 (1.38) | $5.17_a$ (1.07) | $4.41_{ef}$ (1.03) | $2.00_a$ (0.71) |
| Bisexual | 2.33 (1.20) | $3.51_{abcd}$ (1.56) | $1.80_e$ (0.91) | 1.48 (0.71) | 2.69 (1.32) | $1.59_a$ (0.82) | $4.48_b$ (1.13) | $3.31_{aeg}$ (1.19) | 2.50 (0.91) |
| No label | 2.68 (1.25) | $3.46_e$ (1.55) | $2.30_a$ (1.36) | 1.44 (0.69) | 2.69 (1.63) | $1.48_b$ (0.82) | 4.41 (1.19) | $3.31_{bh}$ (1.23) | 2.57 (0.88) |
| No preference | 2.39 (1.16) | 2.94 (1.28) | $1.95_{bf}$ (1.03) | 1.51 (0.90) | $2.40_a$ (1.32) | $1.59_c$ (0.89) | 4.73 (1.00) | $3.61_c$ (1.44) | $2.31_b$ (0.91) |
| Experimenting/fluid | 3.02 (1.38) | $3.73_{cf}$ (1.73) | $3.16_{cdefg}$ (1.34) | $1.90_{ab}$ (1.06) | 3.30 (1.48) | $1.44_d$ (0.71) | $4.17_{ac}$ (1.13) | $2.98_{dfi}$ (1.23) | $2.99_{abc}$ (0.97) |
| Sexual orientation queer | 2.29 (1.00) | $2.16_{def}$ (1.35) | $1.67_g$ (0.87) | $1.06_b$ (0.22) | 2.24 (1.35) | 2.01 (1.22) | $5.43_{bc}$ (0.71) | $4.83_{ghi}$ (0.99) | $1.94_c$ (0.62) |
| **Relationship status** | | | | | | | | | |
| Single | 2.74 (1.25) | 3.19 (1.63) | 1.93 (1.13) | 1.67 (1.04) | 3.09 (1.44) | 1.94 (1.09) | 4.50 (1.20) | 3.83 (1.37) | 2.67 (0.99) |
| Casually dating | 2.74 (1.28) | 3.35 (1.47) | 2.23 (1.21) | 1.47 (0.80) | $3.51_{abc}$ (1.61) | 1.86 (1.10) | 5.05 (0.97) | 4.05 (1.38) | 2.77 (0.99) |
| In a relationship | 2.53 (1.24) | 3.15 (1.41) | 2.04 (1.14) | 1.40 (0.64) | $2.60_a$ (1.35) | 1.71 (0.92) | 4.64 (1.03) | 3.44 (1.34) | 2.42 (0.88) |
| Monogamous marriage/lifelong commitment | 2.33 (1.25) | 3.40 (1.68) | 1.69 (0.91) | 1.46 (0.75) | $2.61_b$ (1.36) | 1.62 (0.79) | 4.56 (1.20) | 3.58 (1.36) | 2.45 (0.92) |
| Open/poly relationship | 2.29 (1.08) | 2.80 (1.49) | 1.65 (0.79) | 1.36 (0.55) | $2.46_c$ (1.37) | 1.83 (1.15) | 4.69 (1.25) | 3.98 (1.45) | 2.23 (0.74) |
| Open/poly marriage | 2.28 (1.10) | 2.78 (1.20) | 1.41 (0.60) | 1.23 (0.59) | 2.57 (1.38) | 1.57 (0.78) | 4.80 (0.81) | 3.86 (1.17) | 2.22 (0.77) |
| Other (unspecified) | 1.93 (0.84) | 2.67 (1.27) | 1.28 (0.62) | 1.35 (0.41) | 2.27 (0.76) | 1.49 (0.69) | 4.58 (1.02) | 3.48 (1.34) | 2.05 (0.54) |

Means (SDs) only presented for LGBIS subscales displaying significant associations with each demographic or sexuality/romantic variable. Subgroup categories with matching subscripts within an LGBIS subscale are significantly different—where only one subscript is present, that demographic category differs from all others

AC Acceptance Concerns, CM Concealment Motivation, IU Identity Uncertainty, IH Internalized Homonegativity, DP Difficult Process, IS Identity Superiority, IA Identity Affirmation, IC Identity Centrality, NI Negative Identity

**Table 4** Correlations of LGBIS subscales with continuous demographic, sexuality/romantic relationship, and mental health variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. AC | – | **.32** | **.30** | **.36** | **.50** | **.18** | **–.10** | **.20** | **.74** | –.13 | –.07 | –.04 | –.05 | –.06 | –.05 | **.27** | **.20** | **.25** | **.26** | .14 |
| 2. CM | | – | **.29** | **.35** | **.36** | –.13 | **–.37** | **–.30** | **.74** | .06 | **–.41** | –.13 | –.07 | **–.10** | –.13 | .03 | .04 | .05 | .06 | –.07 |
| 3. IU | | | – | **.43** | **.38** | .02 | **–.31** | **–.19** | **.46** | **–.21** | **–.20** | –.07 | –.03 | –.07 | **–.09** | .16 | .16 | **.11** | **.09** | .05 |
| 4. IH | | | | – | **.39** | .07 | **–.43** | **–.16** | **.63** | –.03 | **–.18** | –.03 | –.08 | –.05 | –.08 | **.21** | .13 | **.10** | .12 | .02 |
| 5. DP | | | | | – | .07 | **–.17** | .08 | **.79** | .01 | –.06 | .05 | –.02 | –.01 | –.02 | .13 | **.11** | .12 | **.11** | .04 |
| 6. IS | | | | | | – | **.16** | **.32** | .05 | .08 | **.27** | .07 | .02 | .02 | .07 | .07 | –.03 | .01 | .01 | .06 |
| 7. IA | | | | | | | – | **.54** | **–.34** | –.05 | **.44** | .05 | .05 | .01 | .08 | **–.11** | –.06 | –.07 | –.04 | .01 |
| 8. IC | | | | | | | | – | –.06 | .08 | **.41** | .14 | .02 | .05 | .07 | –.07 | –.07 | –.02 | –.01 | .01 |
| 9. NI | | | | | | | | | – | –.02 | **–.26** | –.06 | –.07 | –.07 | **–.10** | **.20** | **.15** | **.17** | **.18** | .03 |
| 10. Age | | | | | | | | | | – | .12 | **.11** | –.07 | .05 | **–.10** | –.13 | **–.18** | **–.22** | **–.20** | **–.25** |
| 11. CI | | | | | | | | | | | – | **.18** | .05 | .09 | –.09 | **–.10** | –.09 | **–.09** | –.07 | –.01 |
| 12. #SP | | | | | | | | | | | | – | .06 | .14 | –.01 | .01 | –.02 | –.02 | –.02 | –.01 |
| 13. #RP | | | | | | | | | | | | | – | –.02 | **.16** | –.04 | –.02 | –.03 | –.04 | .01 |
| 14. ALC | | | | | | | | | | | | | | – | .14 | –.13 | **–.15** | .08 | **–.16** | –.13 |
| 15. DRG | | | | | | | | | | | | | | | – | .01 | .01 | –.01 | –.01 | .03 |
| 16. DEP | | | | | | | | | | | | | | | | – | **.58** | **.60** | **.62** | **.52** |
| 17. ANX | | | | | | | | | | | | | | | | | – | **.67** | **.67** | **.37** |
| 18. STR | | | | | | | | | | | | | | | | | | – | **.61** | **.34** |
| 19. PTS | | | | | | | | | | | | | | | | | | | – | **.52** |
| 20. SUI | | | | | | | | | | | | | | | | | | | | – |

AC Acceptance Concerns, CM Concealment Motivation, IU Identity Uncertainty, IH Internalized Homonegativity, DP Difficult Process, IS Identity Superiority, IA Identity Affirmation, IC Identity Centrality, NI Negative Identity, CI LGB community involvement, #SP # of sexual partners in the past year, #RP # of romantic partners in the past year, ALC # of alcoholic drinks per average week, DRG # of illicit drugs used per average week, DEP depressive symptoms, ANX anxiety symptoms, STR stress symptoms, PTS posttraumatic symptoms, SUI suicide risk

Bold font p range from <.001 to ≤.05

tity Uncertainty ($F[6, 468] = 3.80$, $p = .001$) and Difficult Process ($F[6, 468] = 3.96$, $p = .001$). The only notable pattern was that casually dating persons reported higher Difficult Process than several other groups (see Table 3). No significant or meaningful correlations were observed with number of sexual or romantic partners (see Table 4).

## Discussion

The present study examined psychometric properties of the LGBIS in a socially stigmatized (Wright, 2010), yet psychologically healthy (Richters et al., 2008), subpopulation of sexual orientation minority-identifying adults. Doing so extends testing of the LGBIS beyond American college student (e.g., Mohr & Kendra, 2011), Portuguese general community adult (de Oliveira et al., 2012), Turkish general adult (Kemer et al., 2017), and U.S. urban adult (e.g., Cramer et al., 2017) samples. Two-factor structures were retained due to adequate model fit, as well as theoretical and conceptual fit with existing identity studies. Grounded in a sociocultural approach to identity-related experiences, the eight-factor model (Kemer et al., 2017; Mohr & Kendra, 2011) was retained. Also, a six-factor model containing a high-order Negative Identity subscale (originally hypothesized by Mohr & Fassinger, 2000) received support. These two models have demonstrated prior factor-analytic support in separate studies: the eight-factor model in U.S. college students (Mohr & Kendra, 2011) and a Turkish sample (Kemer et al., 2017), and the six-factor model with Negative Identity higher-order factor among U.S. urban adult (Cramer et al., 2017). Why did both models display adequate fit among NCSF members?

The major difference between the models is the presence of positive feelings about one's LGB identity. Descriptive patterns of samples between studies further highlight subpopulation variation in the LGBIS. College student (Mohr & Kendra, 2011) and the present sample models included positive aspects of identity. Examination of general trends related to the subscale means between studies is also informative; for instance, the item mean for subscales such as Internalized Homonegativity, Concealment Motivation, Difficult Process (and others) collectively for the urban LGB sample approached three (scale midpoint for all subscales is 3.5) (Cramer et al., 2017). Compared to the present sample (these subscale means range from two points below the midpoint to near the midpoint) and two college student samples (many means 1.5 points below the midpoint and many just below the midpoint; Mohr & Kendra, 2011), the urban adult sample appears to possess slightly worse experiences or express more negativity with respect to identity. Interestingly, the mean of Identity Superiority did not differ much between studies, all falling approximately one and a half points below the midpoint (Cramer et al., 2017; Mohr & Kendra, 2011). Finally, Mohr and Kendra positive identity subscale means

with college students mirror those of the present study, supporting the notion that Identity Centrality and Affirmation (the highest for both groups) may be particularly well developed in both college students and NCSF members.

NCSF, as an education and advocacy group involved in positive and empowering messages (National Coalition for Sexual Freedom, n.d.), and being comprised of BDSM practitioners (a generally healthy population; Gemberling et al., 2015a; Richters et al., 2008), may represent a subpopulation of LGB persons in which Affirmation and Centrality may be equally or even more salient when compared to urban dwelling LGB adults. Moreover, characteristics of the sample, such as the organization's advocacy mission and openness about sexuality in general, raises the possibility that high degree of uniqueness of the sample may help contextualize findings. Despite prejudicial explanations of BDSM behavior and stigmatizing myths about members of the organization (Gemberling et al., 2015a; Wright, 2010), it is plausible that NCSF members may have overcome identity-related struggles, instead fostering stronger affirming identity over time.

Expected demographic patterns were only partially observed. Replicating previous literature (e.g., Cramer et al., 2017; de Oliveira et al., 2012), men, relative to women, reported elevated scores on Acceptance Concerns, Concealment Motivation, Difficulty Process, and Negative Identity. Placed in the context of prejudice, empirical literature suggests that gay and bisexual males may be the target of considerably more common stereotyped beliefs (e.g., Blashill & Powlishta, 2009), contributing to worse self-concept. Gender role expectations may also play a part; men's pressure to conform to traditional role norms and society's lower tolerance of homosexuality among men (Balsam & Mohr, 2007) may contribute to gender patterns. Likewise, Herek et al. (2009) noted that gay and bisexual men experience more internalized stigma due to more negative attitudes toward same-sex behavior in men.

As expected, and mirroring general trends reported by Mohr and Kendra (2011), LGB community involvement was associated with a central and affirming identity. Framed as an indicator of social functioning or identity/political interest, LGB community involvement makes sense as an expression of Identity Centrality/Affirmation. We did not observe expected race- or sexual orientation-based patterns. The explanation for race may be very straightforward—the sample was 88% white, resulting in insufficient statistical power to examine group differences by specific categories (e.g., African-American).

While bisexual persons did not vary from others in LGBIS scores as expected, this may be due to our ability to examine sexual orientation minority identity in a much more nuanced manner. Prior LGBIS validation studies (e.g., Cramer et al., 2017; Mohr & Kendra, 2011) were limited in assessment of self-identified participant labels. Empirical literature (e.g., Ridolfo et al., 2012; Russell et al., 2009) suggests that a considerable number of sexual orientation minority persons iden-

tify as other than LGB (e.g., queer, questioning). It is possible that participants identifying as groups such as queer or experimenting/fluid, as were included in the present study, were misclassified in prior work or that the nature of the NCSF sample yielded a greater frequency compared to others. Queer-identifying persons tended to report low Concealment Motivation, and high Identity Affirmation and Identity Centrality, whereas fluid/experimenting persons displayed somewhat of an opposite pattern.

Although these results should not be over interpreted, queer persons may demonstrate less internalization of stigma and less social strain as a consistent reflection of principles of queer theory. One premise of queer perspectives is that sexual orientation reflects more than a binary or continuum of heterosexual to same sex, or one that is beyond normative labeling (Levy, 2009). As such, adoption of nonmainstream identities, such as queer, can inform or be a reflection of political and social advocacy against dominant cultures (Levy, 2009). These qualities among queer-identifying persons are consistent with LGBIS characteristics of strong Identity Affirmation and low Motivation to Conceal (i.e., high motivation to be outward concerning) one's identity. An alternative explanation of the elevated central, affirming qualities among queer persons is the historical context of the word. In response to majority culture labeling of queer as derogatory, Galinsky et al. (2013) posited the idea of minority re-appropriation of prejudicial terms. Queer-identifying members empower themselves to take ownership of pejorative identity labels and adopt them as positive in a successful effort to destigmatize a once prejudicial slur. Enhanced Identity Affirmation of the queer identity label may be evidence of this phenomenon. At a minimum, the idea of group-level re-appropriation of majority group slurs aimed at LGBQ + persons is worthy of future investigation.

The fact that experimenting/fluid participants displayed more Identity Uncertainty and less Centrality makes sense when contextualized in developmental identity models. For instance, sexual orientation identity development theories include ideas such as testing/exploration or comparison (for review, see Levy, 2009). What these stages share is a period of recognition and evaluating one's non-heterosexual identity; our data suggest that this experience may be uniquely characterized by a specific pattern of LGBIS identity scales. We further echo a point articulated by Ridolfo et al. (2012) in that there is clear value assessing other sexual minority identity labels beyond gay, lesbian, and bisexual, in this case, in regard to understanding sociocultural identity patterns.

Hypotheses concerning mental health and romantic/sexual correlates can be addressed largely together in light of a lack of support, with one notable exception. LGBIS subscales displayed few meaningful associations with these indicators. A notable exception to this general trend concerned internalizing mental health symptoms. Mirroring prior studies (e.g., Cramer et al., 2017; Mohr & Kendra, 2011), Acceptance

Concerns, Identity Uncertainty, and Internalized Homonegativity, were positively, yet modestly in size, associated with poorer mental health. These findings, although not surprising, fit with psychosocial models of sexual minority-specific stress (Herek et al., 2009; Meyer, 2013) in which internalizing of stigma and doubting one's identity can contribute to poor health outcomes.

**Implications for Identity Theory, Research, and Practice**

The first big picture implication worth noting is the general pattern of sexual orientation minority identity among NCSF group members. The present sample represented a sexual orientation minority subgroup within a broader national organization of adults with alternative sexual interests. Wright (2006, 2010) highlighted various historical and current stigmas surrounding persons with alternative sexual interests, such as a poor public perception of BDSM persons as possessing negative mental health and, therefore, having difficulty accessing health and safety services. As measured by the LGBIS, we found overall patterns of a central, affirming self-concept that defines sexual orientation identity. Evidence of a positive sense of identity, coupled with existing work (Richters et al., 2008; Wismeijer & van Assen, 2013) demonstrating healthy sexual and psychological functioning, points to the need for more education and advocacy programing aimed at reducing misconception and prejudice directed at these persons. Echoing this point, Gemberling et al. (2015a) posed a positive identity perspective, arguing for alternative sexual interest to be reframed as its own or part of sexual orientation.

Another general trend was observed in LGBIS construct validity patterns. That is, the LGBIS was largely linked to sexual orientation-specific constructs (e.g., inter-correlations among subscales, LGB community involvement, gender). Despite prior studies (e.g., Balsam & Mohr, 2007; Cramer et al., 2017; Gemberling, et al., 2015b) supporting a strong likelihood of connection to mental health variables, the LGBIS demonstrated little meaningful association with indicators of mental health and sexual functioning (e.g., stress, suicidality, substance use, sexual and romantic partners), with the exception of depression and anxiety symptoms. The present study may feature a sub-sample of sexual orientation minority persons whose sexual/romantic patterns and mental health may be more strongly defined by BDSM-related identity, involvement, and behavior than their LGB identity. Alternatively, restricted ranges in LGBIS scales may explain the lack of association with some mental health variables and other demographic correlates. For instance, fewer links between internalized homonegativity and mental health were observed in the present study compared to previous research. Limited variance in internalized homonegativity could account for these patterns.

In general, the LGBIS subscales displayed largely consistent patterns with one another. In particular, Identity Superiority was unrelated to Negative Identity and poor mental health and was modestly and positively associated with Identity Centrality and LGB community involvement. These findings were mainly concordant with prior studies (e.g., Mohr & Kendra, 2011), suggesting Identity Superiority may be associated with community involvement/identification and Identity Centrality, and unrelated to mental health. As such, sexual orientation minority persons embracing uniqueness from heterosexual persons may view LGB identity as central to their self-concept, yielding time and effort into the LGB community. One notable exception can be seen in Cramer et al. (2017), who reported findings in which Superiority was positively yet modestly associated with negative well-being (e.g., negative affect, depression, stress). They surmised that Identity Superiority may be conceptualized as a context-dependent aspect of identity. Although their findings indicated that Identity Superiority was associated with a higher-order Negative Identity factor and poor mental health, among college students and in the present sample, Identity Superiority may have less to do with mental health and other LGBIS subscales.

Limitations of the present study can be seen in both design and sampling characteristics. Data were collected in cross-sectional manner via self-report. Therefore, causality cannot be inferred; moreover, we must acknowledge classic, yet valid, caveats associated with self-report data, not the least of which concerns the potential for socially desirable responding. Moving forward, LGBIS studies should incorporate prospective data collection approaches and construct validity tests with objective indicators of well-being (e.g., clinician-rated mental health, biological metrics of physical health). The sample was also limited with respect to generalizability, mostly by participant attrition, lack of inclusion of positive mental health indicators, the high rates of white participants, and subclinical levels of mental health. The latter point is one spanning across LGBIS studies. Future examination of measurement of sexual orientation minority identity for youth or adults in at-risk settings may go far in efforts to develop a widely employable measure like the LGBIS. Although acceptable based on established CFA practices (DiStefano & Hess, 2005), alternative approaches to examining factor structures in CFA exist. For instance, allowing all factors to correlate in a new sample while freely estimating all factor loadings may be advisable if the primary goal were to refine theory or factor structures for the present sample. Future LGBIS evaluations examining a range of factor structures may adopt such an approach. Finally, although we extended the LGBIS literature beyond gay, lesbian, and bisexual identity labels (e.g., no label, no preference), small cell sizes in experimenting and fluid categories required collapsing. Future research may seek to oversample those with such identities in order to achieve large enough samples for confident between-groups comparisons with other subgroups.

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