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# Rape Prevention and Risk Reduction: Review of the Research Literature for Practitioners

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# Rape Prevention and Risk Reduction: Review of the Research Literature for Practitioners

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# The Perpetration of Intimate Partner Violence among LGBTQ College Youth: The Role of Minority Stress

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**Abstract** Preliminary research suggests that partner violence is a problem among lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) college youth. However, there is no study to date with college youth on the factors associated with perpetration of same-sex partner violence, which is needed to inform prevention efforts specific to this population. Thus, the purpose of the current study was to assess how facets of minority stress (i.e., sexual-orientation-related victimization, sexual minority stigma, internalized homonegativity, sexual identity concealment) relate to physical, sexual, and psychological partner violence perpetration among LGBTQ college youth ( $N = 391$ ; 49 % identified as men; 72 % Caucasian;  $M$  age: 20.77 years). At the bivariate level, physical perpetration was related to identity concealment and internalized homonegativity; sexual perpetration was related to internalized homonegativity; and psychological perpetration was related to sexual-orientation-related victimization. However, at the multivariate level (after controlling for concurrent victimization), psychological perpetration was unrelated to minority stress variables, whereas physical and sexual perpetration were both related to internalized homonegativity; physical perpetration was also related to identity concealment. These results underscore the utility of understanding partner violence among LGBTQ youth through a minority stress framework. Moreover, the current study highlights the need for a better understanding of factors that mediate and moderate the relationship between minority stress and partner violence perpetration among LGBTQ youth in order to inform prevention and intervention efforts.

**Keywords** Dating violence · Sexual minority · Gay/lesbian/bisexual · Minority stress · Internalized homonegativity

## Introduction: Literature Review and Study Rationale

Partner violence, which includes physical, psychological, and sexual violence towards one's partner, is an endemic problem in US society, especially college youth. Although the vast majority of the research literature has focused on partner violence among heterosexual youth, there has been a growing focus on partner violence among lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) youth. In a nationally representative sample of high school students reporting only romantic partners of the same sex, 21 % indicated that they had experienced psychological partner violence victimization within same sex relationships and 24 % reported physical partner violence victimization within same-sex relationships (Halpern et al. 2004). Moreover, in a sample of college students, Porter and Williams (2011) found that being a sexual minority increased one's risk for experiencing physical, sexual, and psychological same-sex partner violence victimization. In the only published study to assess same-sex perpetration of partner violence among youth, Jones and Raghavan (2012) reported that 43.5 % of LGBTQ college students reported dating violence perpetration within the past 12 months. Despite preliminary work documenting the rates of partner violence among LGBTQ youth, there is no research to date that has focused specifically and comprehensively on the rates and correlates of same-sex partner violence perpetration among college students. Having a better understanding of the rates of same-sex partner violence perpetration and the factors that increase LGBTQ youth's

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risk to perpetrate partner violence is important in developing and implementing same-sex partner violence primary prevention efforts. Thus, the purpose of the study was to explore this gap in the literature using a minority stress framework (Lewis et al. 2012).

A number of different theories (e.g., sociocultural theories, social learning theories, personality theories) have been used to explain correlates and predictors of partner violence perpetration among heterosexual youth with modest success (see Dardis et al. 2012 for a review). Although it is likely that a number of the more consistent factors associated with partner violence perpetration among heterosexual youth (e.g., co-occurrence of partner's perpetration, substance use, experiencing physical or sexual abuse as a child, witnessing partner violence between parents; see Dardis et al. 2012 for a review) would also explain partner violence perpetration among LGBTQ youth, it is also likely that LGBTQ youth experience additional factors related to their sexual minority identity. Thus, a theory or framework that recognizes the marginalization and subjugation of LGBTQ individuals may be especially helpful in understanding same-sex partner violence perpetration (Brown 2008). One such theory is disempowerment theory (Archer 1994; McKenry et al. 2006) and the related construct of sexual minority stress, which has been defined as "a multifaceted construct that includes experiences specifically related to one's sexual minority status such as: identity concealment and confusion; experienced and anticipated rejection, victimization and discrimination; and internalized homonegativity/sexual self-stigma" (Lewis et al. 2012, p. 251).

In the current study, we measured both externalized minority stressors (i.e., general sexual-orientation-related victimization, perception of prejudice or discrimination towards LGBTQ persons) and internalized minority stressors (i.e., internalized homonegativity, identity concealment) as risk factors for perpetration of same-sex partner violence. Sexual-orientation-related victimization includes verbal harassment, threats, and physical abuse/assault victimization on the basis of the victim's sexual orientation and has been reported by 77, 27, and 8 % of LGBTQ college youth, respectively (D'Augelli 1992). Internalized minority stress includes internalized homonegativity (i.e., negative attitudes toward the self based on social stigma) and identity concealment (i.e., hiding one's sexual identity from others) (Lewis et al. 2012). Although research suggests that, on average, youth report low to moderate levels of internalized homonegativity and identity concealment, greater levels of these stressors are related to a number of deleterious psychosocial health outcomes (Cox et al. 2011; Mohr and Daly 2008).

Researchers have hypothesized that minority stress increases an individual's likelihood of perpetrating same-sex partner violence (Brown 2008; Lewis et al. 2012;

McKenry et al. 2006). Given the early stages of this area of research, the mechanisms through which minority stress increases the likelihood of perpetrating same-sex partner abuse is unclear. However, according to disempowerment theory, individuals who feel inadequate and lack self-efficacy are at increased risk of using nontraditional means of power assertion, such as violence (Archer 1994; McKenry et al. 2006). Extending this theory to same-sex partner violence, LGBTQ youth who feel high levels of inadequacy and powerlessness, may be more likely to engage in aggression towards a same-sex partner. Moreover, minority stress experiences are associated with psychological and relational variables such as depression, substance use, and low relationship quality (Frost and Meyer 2009; Hatzenbuehler 2009; McKenry et al. 2006), all of which are also risk factors for perpetrating partner violence (Dardis et al. 2012; Balsam and Szymanski 2005; Murry et al. 2001).

Although there is a theoretical basis to expect a relationship between sexual minority stress and the perpetration of partner violence, there are only a few empirical studies on this topic. In a recent focus-group study with LGBTQ college youth on perceptions of same-sex partner violence, a central theme to emerge was the role of societal and internalized homonegativity as a contributor to perpetration of same-sex partner violence (Gillum and DiFulvio 2012). Although Gillum and DiFulvio (2012) did not directly test the relationship between minority stress and same-sex partner violence perpetration (but rather LGBTQ youth's perceptions of same-sex partner violence), three studies directly have examined these relationships in samples of community adults (Balsam and Szymanski 2005; McKenry et al. 2006; Carvalho et al. 2011). Whereas two studies found significant and positive relationships between facets of minority stress and perpetration of same-sex partner violence (Balsam and Szymanski 2005; Carvalho et al. 2011), another study found no significant associations between minority stress and perpetration of same-sex partner violence (McKenry et al. 2006). In light of these conflicting findings and the dearth of information on same-sex partner violence among younger populations, research with youth is needed to better understand the relationship between sexual minority stress and same-sex partner violence. Moreover, based on research with heterosexual youth (Archer 2000; Dardis et al. 2012; Straus 2008) and LGBTQ adults (Bartholomew et al. 2008; Oringher and Samuelson 2011; Stanley et al. 2006) documenting that partner violence is often mutual and bidirectional (i.e., perpetrated by both partners rather than one partner), research with LGBTQ college youth is needed to understand better the relationships among concurrent partner violence victimization and perpetration experiences.

## Research Questions and Hypotheses

Research suggests that partner violence is a problem among LGBTQ college youth. Although there is no study to date with college youth on the factors directly associated with perpetration of same-sex partner violence, a minority stress framework may be helpful in understanding this phenomenon. Using a sample of US college students currently in same-sex relationships, the current study sought to answer the following questions: What are the rates of perpetration of same-sex partner violence (physical, psychological, sexual) against one's current partner?; What are the relationships among perpetration of same-sex partner violence and externalized minority stressors (sexual-orientation-related victimization; perception of prejudice or discrimination towards LGBTQ persons), internalized minority stressors (internalized homonegativity, identity concealment), and same-sex partner violence victimization (physical, psychological, sexual)? Guided by existing research and theory, we generally hypothesized that the perpetration of same-sex partner violence would be associated positively with same-sex partner violence victimization and externalized and internalized minority stress variables.

## Method

### Participants

Analyses for the current study included 391 youth from colleges across the US currently involved in a same-sex romantic relationship recruited for an online study through multiple methods (see Procedure section for a description). Roughly half the sample identified as men (48.8 %), 43.5 % as women, 4.6 % as genderqueer, 2.1 % as transman/woman, and 1 % as other. Further, 72.1 % identified as gay or lesbian, 15.3 % as queer, 5.6 % as bisexual, 4.6 % pansexual, and 2.4 % other (e.g., questioning, straight). The average age of participants was 20.77 ( $SD = 1.88$ ), with ages ranging from 18 to 25. The majority of participants identified as Caucasian (72.1 %), followed by Latino or Hispanic (8.7 %), multi-racial (7.9 %), African-American (5.6 %), Asian or Pacific Islander (5.4 %), and American Indian or Alaska Native (0.3 %). Approximately 48, 28, and 24 % stated that their combined family/parents' annual income was less than \$50,000, between \$51,000 and \$100,000, and greater than \$100,000, respectively.

The majority of participants attended public colleges/universities (67.0 %), with 25.8 % attending private, non-religiously affiliated colleges, 6.4 % attending religiously affiliated colleges, and 0.8 % attending professional/trade schools. About one-third of participants (32.7 %) attended

colleges in the Northeast, followed by the Midwest (28.1 %), the West (22.7 %), and the Southeast (16.5 %).

Most participants described their current relationship as a monogamous dating relationship (80.4 %); an additional 17.5 % reported that they were partnered in an open relationship, and 2.1 % were married or in a domestic partnership/civil union. On average, participants had been involved in their current relationship for about a year ( $M = 12.73$  months;  $SD = 13.58$  months; Range: 0–96 months).

### Procedure

Participants were recruited through several mediums: (a) a random sample of 250 colleges and universities in the US were selected and contact information was obtained for LGBTQ centers/organizations, diversity centers/organizations, women's centers/organizations or relevant upper administration (e.g., student affairs administrator, dean of students) if relevant center/organization staff could not be determined; (b) e-mails were sent to members of the Consortium of Higher Education LGBT Resource Professionals (an organization of providing contact information for 200 US colleges/universities that employ a full time staff member committed to LGBTQ issues), (c) facebook advertisements targeting college youth between the ages of 18–25 and currently in a same-sex relationship, (d) postings on websites frequented by LGBTQ youth, and (e) snowball sampling by asking participants to share the web address with other potential participants. With regard to e-mail recruitment (a and b), researchers sent an e-mail to the identified contact person requesting that an attached recruitment message be sent out to any relevant LGBTQ listserv/student organization members. The majority of participants indicated that they had heard about the study through a campus organization listserv/e-mail (52.2 %) or facebook advertisements (40.4 %), whereas 0.5 and 6.9 % of participants indicated that they had been recruited through website postings and snowball sampling, respectively.

To participate in the study, youth were required to be at least 18 years of age and currently involved in a same-sex romantic relationship. If participants were currently involved in more than one relationship, they were instructed to answer the questions regarding the partner/relationship that was most significant to the participant. Informed consent was obtained prior to starting the questionnaire, and participants completed the survey online. Following completion, respondents were debriefed and had the option of entering a raffle to win one of ten \$100 gift cards. All research was conducted in compliance with the university's Institutional Review Board.

To decrease the likelihood of a participant taking the survey more than once, participants were instructed that participating more than once would not increase their

likelihood of receiving one of the gifts cards. Additionally, a single item was included in the survey asking participants if they had already taken the survey. Participants ( $n = 3$ ) responding “yes” to this question were excluded from analyses.

## Measures

### *Current Partner Abuse*

The Revised Conflict Tactics Scale (CTS2; Straus et al. 1996) was utilized to assess for the presence of physical (12 items; e.g., “pushed or shoved me”), sexual (five items; e.g., “made me have sex without a condom”), and psychological (four items; e.g., “called me fat or ugly”) victimization and perpetration in participants’ current relationships. Participants indicated the number of times they have experienced and performed each behavior from 0 (*Never*) to 6 (*More than 20 times*). The CTS2 includes items assessing moderate and severe partner abuse (Straus et al. 1996); these items were combined for rates of physical and sexual abuse. However, for psychological abuse, only severe items were included in estimates, given that moderate items (e.g., shouted or yelled) may reflect more normative conflict resolution within dating relationships, rather than psychological abuse (Edwards et al. 2011; Shorey et al. 2011). Each participant was then coded as either 0 (no victimization/perpetration in current relationship) or 1 (any victimization/perpetration in current relationship) on each of the following six variables: physical victimization, sexual victimization, psychological victimization, physical perpetration, sexual perpetration, and psychological perpetration.

### *Minority Stress*

Several scales and questions were employed to ascertain the degree of minority stress experienced by participants.

*Internalized Homonegativity* The internalized homonegativity subscale was taken from Mohr and Fassinger’s (2000) Lesbian, Gay, and Bisexual Identity Scale. The five-item internalized homonegativity subscale measures the degree to which an individual feels negatively about his/her LGBTQ identity (e.g., “Homosexual lifestyles are not as fulfilling as heterosexual lifestyles,” “I would rather be straight if I could”). Responses range from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*), with higher scores indicating higher levels of internalized homonegativity. Cronbach’s alpha for the current sample was .81.

*Sexual Identity Concealment* Sexual identity concealment was measured using Mohr and Fassinger’s (2000)

*Outness Inventory*. This 11-item scale assesses the degree to which the participants’ family, friends, coworkers, and members of their religious community are aware of their sexual orientation. Participants are presented with different persons (e.g., mother, work supervisors) and respond on a seven-point Likert scale ranging from (*this person definitely does not know about your sexual orientation status*) to (*this person definitely knows about your sexual orientation status, and it is openly talked about*). Participants are also given the option of providing a “not applicable” response to individual items (e.g., individuals that do not belong to a religious community would not respond to items regarding their level of outness to religious community members). Based on scoring recommendations (Mohr and Fassinger 2000), all items that were answered (excluding “not applicable” responses which were excluded from the overall score) were summed and divided by the number of answered items. Because the scale measures the degree to which individuals are open about their sexual identity, all items were reverse scored so that higher scores would indicate greater levels of sexual identity concealment. Cronbach’s alpha for this scale was good (.89).

*Stigma* Participants’ perception of stigma based on sexual identity was assessed by the Stigma Scale (Martin and Dean 1987). The 11-item questionnaire measures the participant’s perception of external prejudice or discrimination towards LGBTQ persons (e.g., “Most people think less of a person who is LGBT”). Participants indicate their level of agreement on a six-point Likert scale with higher scores indicating greater perceptions of stigma. Cronbach’s alpha for this scale was .88.

*Sexual Orientation-Related Victimization* The researchers included an additional two items to assess a history of victimization based on the participant’s sexual orientation (i.e., “Have you ever been [physically attacked/verbally harassed] because of your sexual orientation?”). Participants indicated their agreement by selecting *yes* or *no*. A composite of these two items was created and participants were then coded as either 0 (no sexual orientation-related victimization) or 1 (any sexual orientation-related victimization).

## Results

### Data Preparation

Rates of missing values for questions assessing types of partner violence perpetration and victimization, which were towards the end of the online survey, ranged from 3.8 to 9.5 %. Rates of missing values for sexual orientation-related

victimization and minority stress variables, which were towards the beginning and middle of the online survey, were less than 1 %. A total of 39 cases (10 % of the sample) had at least one minority stress or partner violence variable missing. SPSS Missing Values was used to explore and handle missing data. Missing values were determined to be missing completely at random (Little 1988). We employed multiple imputation techniques to handle missing data on variables assessing partner violence and minority stress factors (Acock 2005; Tabachnick and Fidel 2007). Descriptive statistics presented in the paper were calculated using the original data (prior to imputation), and all inferential data reflects pooled statistics using the imputed data.

Descriptive Statistics

Rates of partner violence and sexuality-related victimization are presented in Table 1. Means and standard deviations for continuous variables used in the current study are presented in Table 2.

Aim 1

What are the rates of partner violence perpetration in current same-sex relationships?

In current same-sex relationships among LGBTQ college youth, physical partner violence was the most commonly reported type of perpetration (19.9 %), followed by psychological (12.5 %) and sexual perpetration of partner violence (10.5 %). Nearly one-third (29.7 %) of the sample reported engaging in any type of partner violence

**Table 1** Rates of victimization and perpetration partner violence = intimate partner violence

	Percent reporting victimization (%)	Percent reporting perpetration
Psychological partner violence	16.1	12.5
Physical partner violence	20.2	19.9
Sexual partner violence	14.1	10.5
Sexual orientation-related	72.9	–

Sexual orientation-related perpetration was not calculated for the current study

**Table 2** Descriptive statistics for study variables

	Mean	SD	Range
Internalized homonegativity	1.74	0.98	1–6
Identity concealment	3.26	1.32	1–7
Stigma	2.97	0.86	1–5.55

perpetration. Moreover, 57.1 % of the sample reported no same-sex partner violence victimization or perpetration, 13.3 % of the sample reported same-sex partner violence victimization only, 7.3 % reported perpetration of same-sex partner violence only, and 22.3 % reported both same-sex partner violence victimization and perpetration.

Aim 2

What are the relationships among perpetration of same-sex partner violence variables and minority stress and same-sex partner violence victimization variables?

Table 3 presents correlations among all study variables. Given that the primary variables (i.e., same-sex partner violence) of interest were nonlinear, we computed Spearman’s rho correlations (Tabachnick and Fidell 2007). Results demonstrated that all forms of perpetration of partner violence (sexual, physical, and psychological) were related to one another. Moreover, all forms of same-sex partner violence victimization (sexual, physical, and psychological) were related to all forms of same-sex partner violence perpetration.

Next, three hierarchical logistic regression analyses were conducted in order to determine how sexual minority stress variables related to same-sex partner violence perpetration variables after controlling for same-sex partner violence victimization variables. Thus, the same-sex partner violence victimization variables were entered in block one and the sexual minority stress variables were entered in block two. Only variables that demonstrated significant bivariate associations with the criterion variable of interest were entered into the regression analyses. Although both blocks of the regression analyses are presented in Table 4, herein we only discuss the results of the second and final block of the models.

With regard to minority stress variables, internalized homonegativity was related significantly and positively to physical and sexual same-sex partner violence perpetration, but unrelated to psychological partner violence perpetration. Sexual identity concealment was related significantly and positively to physical perpetration of same-sex partner violence, and unrelated to psychological and sexual perpetration of same-sex partner violence. Sexual-orientation-related victimization was related significantly and positively to psychological perpetration of same-sex partner violence, and unrelated to physical and sexual perpetration of same-sex partner violence. Perceptions of external sexual orientation stigma were unrelated to same-sex partner violence perpetration.

The model for physical perpetration of same-sex partner violence was significant,  $\chi^2 (df = 5) = 156.67, p < .001$ , Nagelkerke  $R^2 = .507$ . In the presence of all model predictors, physical same-sex partner violence victimization, internalized homonegativity, and sexual identity

**Table 3** Correlations among variables of interest

Variable name	1	2	3	4	5	6	7	8	9	10
1. Physical perpetration	–	.45**	.29**	.61**	.33**	.24**	.06	.13*	.22**	.06
2. Psychological perpetration		–	.40**	.41**	.47**	.29**	.11*	–.06	.10	.10
3. Sexual perpetration			–	.28**	.25**	.42**	–.04	–.02	.15*	.02
4. Physical victimization				–	.39**	.26**	.07	–.01	.08	.07
5. Psychological victimization					–	.22**	.10	–.03	.14*	.05
6. Sexual victimization						–	.06	–.03	.08	.04
7. Sexual orientation related victimization							–	–.13*	.06	.19**
8. Identity concealment								–	.30**	.17*
9. Internalized homonegativity									–	.14*
10. Stigma										–

\*  $p < .05$ , \*\*  $p < .001$ **Table 4** Logistic regression analysis of perpetration as a function of minority stress variables

Variables	Physical perpetration			Psychological perpetration			Sexual perpetration		
	<i>B</i>	<i>S.E. B</i>	Odds ratio	<i>B</i>	<i>S.E. B</i>	Odds ratio	<i>B</i>	<i>S.E. B</i>	Odds ratio
Block one									
Physical victimization	2.90**	0.36	18.12	1.53**	0.41	4.64	0.96*	0.46	2.61
Psychological victimization	0.75 <sup>ms</sup>	0.39	2.11	2.00**	0.38	7.42	0.82 <sup>ms</sup>	0.47	2.27
Sexual victimization	0.60	0.42	1.82	1.11*	0.40	3.05	2.18**	0.42	8.80
Block two									
Physical victimization	3.15**	0.40	23.26	1.54**	0.41	4.64	0.89 <sup>ms</sup>	0.47	2.44
Psychological victimization	0.77 <sup>ms</sup>	0.40	2.16	1.98**	0.38	7.18	0.70	0.48	2.00
Sexual victimization	0.59	0.44	1.81	1.11*	0.40	3.01	2.23**	0.43	9.29
Sexual orientation related victimization	–	–	–	0.69	0.49	2.00	–	–	–
Identity concealment	0.32*	0.13	1.37	–	–	–	–	–	–
Internalized homonegativity	0.52*	0.17	1.68	–	–	–	0.36*	0.17	1.43
Stigma	–	–	–	–	–	–	–	–	–

\*  $p < .05$ , \*\*  $p < .001$ , <sup>ms</sup> Marginally significant  $p < .10$ 

concealment were related significantly and positively to physical perpetration of same-sex partner violence, whereas psychological same-sex partner violence victimization was marginally and positively related to physical same-sex partner violence perpetration. Sexual perpetration of same-sex partner violence was nonsignificant in the presence of all other model predictors.

The model for psychological perpetration of same-sex partner violence was significant,  $\chi^2 (df = 6) = 96.57$ ,  $p < .001$ , Nagelkerke  $R^2 = .400$ . In the presence of all model predictors, psychological, physical, and sexual same-sex partner violence victimization variables were associated positively and significantly with psychological perpetration of same-sex partner violence. However, sexual orientation-related victimization was not significant in the presence of other model predictors.

The model for sexual perpetration of same-sex partner violence was significant,  $\chi^2 (df = 4) = 71.00$ ,  $p < .001$ ,

Nagelkerke  $R^2 = .325$ . In the presence of all model predictors, sexual and physical same-sex partner violence victimization variables were associated positively and significantly with perpetration of sexual same-sex partner violence, whereas psychological partner violence victimization was related marginally to perpetration of sexual same-sex partner violence. Furthermore, internalized homonegativity was associated positively and significantly with sexual perpetration of same-sex partner violence even in the presence of same-sex partner violence victimization variables.

## Discussion

The purpose of the current study was to explore the perpetration rates of same-sex partner violence among college youth and the relationships between the perpetration of



same-sex partner violence and minority stressors. Although few studies have assessed the perpetration of same-sex partner violence, the rates found in the current study are lower than rate of the perpetration of same-sex partner violence found in Jones and Raghavan's (2012) study of college youth and in samples of community adults reporting on prior year perpetration (Bartholomew et al. 2008; Craft and Serovich 2005; McKenry et al. 2006), but higher than those found in a community sample of adults reporting on lifetime same-sex partner violence based on their own definition of "domestic violence" (Carvalho et al. 2011). These discrepancies likely are based on methodological differences; in our study, we used behavioral measures of partner violence perpetration at any point in participants' current relationships. Although participants in our study reported being in their current relationships on average for one year, there was a great deal of variability in relationship length ( $SD = 13.58$  months).

Although not a major aim of the current study, it is important to note that, on average, participants disagreed with items assessing internalized homonegativity, which is reassuring. However, participants, on average, reported moderate agreement on items assessing sexual orientation identity concealment and perceived sexual orientation stigma. Both of these findings are consistent with prior research (Cox et al. 2011; Mohr and Daly 2008). Moreover, it is alarming that 73 % of the sample reported being the victim of physical assault or verbal harassment that was motivated by their sexual orientation. The rates found by the current study closely resemble D'Augelli's (1992) high rate (77 % verbal harassment; 8 % or more physical-assault-based harassment) of sexual orientation related victimization among LGBTQ college students. Overall, these findings demonstrate that, despite the high rates of externalized minority stressors, namely sexual orientation related victimization, faced by college youth, many LGBTQ college youth display resilience and do not internalize these negative experiences, as evidenced by the generally low levels of internalized markers of minority stresses (i.e., internalized homonegativity and sexual identity concealment).

In addition to assessing the rates of same-sex partner violence and minority stress variables among college youth, the current study explored the relationships among these variables. Although both same-sex partner violence victimization and minority stress variables generally were related to same-sex partner violence perpetration variables, differential patterns emerged among these relationships. Indeed, in the multivariate regression analyses, after controlling for concurrent same-sex partner violence victimization, internalized homonegativity demonstrated a positive association with physical and sexual perpetration of same-sex partner violence, and identity concealment

demonstrated a positive association with physical perpetration of same-sex partner violence; none of the minority stress variables were associated significantly with psychological perpetration of same-sex partner violence in the presence of victimization variables. These findings are similar to those obtained by Balsam and Syzmanski (2005) who reported a positive relationship between lifetime perpetration of same-sex partner violence and internalized homonegativity among lesbian community women. However, unlike previous studies (i.e., Balsam and Syzmanski 2005; Carvalho et al. 2011) that found identity concealment unrelated to the perpetration of same-sex partner violence among community adults (which could have been due to restricted range issues), identity concealment was related to the perpetration physical partner violence in our sample of college youth. Finally, although Carvalho et al. (2011) found that stigma was associated positively with perpetration of same-sex partner violence, something that was not replicated in our multivariate analyses, Carvalho et al. (2011) did not include concurrent victimization as a covariate in their multivariate analyses.

It is important to consider concurrent partner violence victimization when examining the relationships among minority stress and partner violence perpetration given that partner violence victimization is the most consistent and robust predictor of partner violence perpetration (see Dardis et al. 2012, for a review), and partner violence is often mutual and bidirectional (Archer 2000; Bartholomew et al. 2008; Oringher and Samuelson 2011; Stanley et al. 2006). Thus, by including partner violence victimization in the regression models, we were able to elucidate the additive effects that minority stress variables have on the perpetration of partner violence. Moreover, previous research has found that minority stress variables are related to partner violence victimization (Balsam and Syzmanski 2005; Carvalho et al. 2011), and consistent with the finding in the current study that internalized homonegativity was correlated positively with psychological partner violence victimization. Thus, a strength of the present study was the inclusion of both partner violence victimization and perpetration, which allows for a more complete understanding of partner violence among LGBTQ college youth.

Taken together, these findings suggest that minority stress and concurrent same-sex partner violence victimization are important in understanding the perpetration of same-sex partner violence among college youth. Moreover, internalized homonegativity seems to be more influential in the perpetration of same-sex partner violence than any other minority stress variable. It is possible that externalized minority stressors, such as discrimination and sexual-orientation-related victimization, are not the driving factors

in the perpetration of same-sex partner violence, but rather it is the extent to which LGBTQ college youth internalize these experiences that are most influential in the perpetration of same-sex partner violence. Although identity concealment (a hypothesized internalized minority stress variable) was not as consistently or strongly related to the perpetration of same-sex partner violence as internalized homonegativity, this may be due to the fact that not all identity concealment is done out of shame. In fact, for some LGBTQ individuals, it may be adaptive to conceal one's identity to avoid discrimination and sexual-orientation-related victimization (Balsam and Szymanski 2005; Corrigan and Matthews 2003). Thus, whereas internalized homonegativity clearly reflects feelings of negativity toward one's sexual orientation, this may not always be the case for identity concealment, and could explain why this variable was related less consistently and strongly to the perpetration of same-sex partner violence in the current study.

Future research is needed to understand better the factors that may mediate or moderate the relationship between internalized minority stressors and the perpetration of same-sex partner violence among LGBTQ college youth. Lewis et al. (2012) suggested that LGBTQ individuals may attempt to cope with minority stress through substance use, which subsequently increases the risk for perpetration of same-sex partner violence. Given that research demonstrates positive associations between sexual minority stress and substance use among LGBTQ youth (Woodford et al. 2012), alcohol is an especially important mediating factor to consider in future research on minority stress and same-sex partner violence. In addition to alcohol use, there are likely other mediating factors (e.g., relationship quality that fully mediated the relationship between internalized homonegativity and partner violence in Balsam and Szymanski 2005 study with lesbian community women), which are important avenues for future work. Moreover, research is needed to understand the factors that may moderate the relationships between sexual minority stress and the perpetration of same-sex partner violence. In other words, what factors could serve as buffers to prevent against sexual minority stress and same-sex partner violence? Research demonstrates that social support serves as a buffer against the impact of minority stress on mental and physical health outcomes among LGBTQ adults (Lewis et al. 2012). Although never examined in samples of LGBTQ college youth, it is presumable that strong social support networks may serve as a protective factor against sexual minority stress and the perpetration of same-sex partner violence.

A better understanding of the mechanisms by which minority stress leads to the perpetration of partner violence as well as protective factors against sexual minority stress

and same-sex partner violence could have important implications for continued theory development and interventions. Disempowerment and minority stress theories suggest that a number of factors (i.e., identity concealment and confusion; experienced and anticipated rejection, victimization and discrimination; and internalized homonegativity/sexual self-stigma) are related to the perpetration of same-sex partner violence. However, the findings of the current study suggest that internalized homonegativity may be the most salient minority stress correlate of the perpetration of same-sex partner violence. Future theoretical work could benefit from integrating an assessment of the etiology and development of internalized homonegativity with factors that may serve as mediators (e.g., alcohol, depression) and moderators (e.g., social support) in the relationship between internalized homonegativity and the perpetration of partner violence. In addition to theoretical implications, the findings from the current study have implications for partner abuse prevention programming. LGBTQ youth are frequently "invisible in mainstream youth programs" (Horn et al. 2009, p. 864), and youth partner abuse prevention programs are no exception to this. Although some components (e.g., assertiveness communication skills training) of existing partner violence prevention programming developed for heterosexual youth is relevant to LGBTQ youth, the findings of the current study suggest that partner violence prevention programming for LGBTQ college youth should integrate techniques (developing positive self-regard, increasing social support networks, exposure to positive LGBTQ messages and role models; Goodenow et al. 2006; Russell et al. 2009; Szalacha 2003; Walls et al. 2010; for a review, see also Hansen 2007) to reduce internalized homonegativity, which could subsequently lead to reductions in partner violence and other negative psychological and behavioral sequelae.

Whereas the current study aids in our understanding of same-sex partner violence perpetration and its associations with minority stress and concurrent same-sex partner violence victimization, there are several limitations to the current study. First, as previously discussed, we did not include measures to explain the relationship between minority stress and same-sex partner violence. Second, the vast majority of our sample was obtained through methods that required individuals to openly identify as LGBTQ, and although we attempted to recruit participants through other means (e.g., posting on self-help websites for questioning youth), those methods resulted in very few participants ( $n = 2$ ). Third, our sample was limited to young adults attending college and cannot be generalized to young adults who do not attend college. Fourth, although it is promising that we found generally low to moderate levels of minority stress variables (e.g., identity concealment and

internalized homonegativity), the restricted range on some of these variables could have limited our ability to detect significant relationships among minority stress variables and partner violence variables. Fifth, participants were required to be currently in relationships to participate in our study, and it is possible that individuals in very abusive relationships did not participate, which could have resulted in a selection bias. Sixth, although the CTS2 (Straus et al. 1996) is the most widely used measure of partner violence, it is widely criticized for providing a decontextualized understanding of partner violence that does not take into account the motives for the violence (e.g., power and control, self-defense), who initiates the violence, or the physical and psychological outcomes associated with the violence (Kimmel 2002). Seventh, we utilized a cross-sectional design that does not allow for an understanding of the temporal relationships among the perpetration of same-sex partner violence, same-sex partner violence victimization, and minority stress. Finally, despite recommendations to conduct gender-specific analyses when exploring the correlates of partner violence perpetration (Dardis et al. 2012), we did not do this given the gender fluidity in our study (i.e., men, women, genderqueer, transman, transwoman, and “other”) and our concerns regarding cell sizes for some of the partner violence variables [e.g., 10.5 % ( $n = 41$ ) of the entire, mixed-gender sample reported perpetrating sexual partner violence, which would become even smaller if we divided this by gender]. Moreover, power dynamics within a relationship extend beyond gender and include power related to other social identities such as racial and ethnic identity and socioeconomic status (Brown 2008). Although the consideration of these other social identities was beyond the scope of the current study, future research with LGBTQ youth could benefit from understanding how other marginalized identities intersect with sexual orientation to influence the perpetration of partner violence using a minority status framework. Moreover, future research should endeavor to utilize longitudinal designs, employ larger and more diverse samples of LGBTQ youth, explore alternative methods of data collection, and include measures to better capture the context of same-sex partner violence and the factors that are hypothesized to mediate and moderate the relationship between minority stress and the perpetration of same-sex partner violence.

In conclusion, although previous research with LGBTQ youth has documented the deleterious psychological sequelae of sexual minority stress (Almeida et al. 2009; Cox et al. 2011; Kelleher 2009; Mohr and Daly 2008; Vanden Berghe et al. 2010), the current study extends this previous work by examining the minority stress correlates of the perpetration of partner violence among a sample of LGBTQ college youth. The findings from the current study

add to the growing body of literature demonstrating that partner violence is a concern in LGBTQ youth relationships. Moreover, the results of this study underscore the utility of understanding partner violence among LGBTQ youth through a minority stress framework, and the particularly salient role of internalized homonegativity on the perpetration of partner violence even in the presence of concurrent partner violence victimization. A better understanding of sexual minority stress and its relationship to same-sex partner violence, as well as the explanatory mechanisms of these relationships, will be useful in tailoring prevention and intervention efforts for LGBTQ youth. However, programming efforts alone will not lead to widespread reductions in same-sex partner violence because these experiences are situated within larger heterosexist and violence-tolerant social and institutional contexts and these too must be addressed.

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**Author contribution** KE conceived of the study, participated in its design, coordination, and interpretation, conducted analyses, and drafted the manuscript; KS participated in the design, coordination, and interpretation of the study, conducted analyses, and helped to draft the manuscript. Both authors read and approved the final manuscript.

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