

# Sexual Orientation, Race, and Trauma as Predictors of Sexual Assault Recovery

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Published online: 20 December 2015  
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**Abstract** Sexual minorities and racial minorities experience greater negative impact following sexual assault. We examined recovery from sexual assault among women who identified as heterosexual and bisexual across racial groups. A community sample of women ( $N=905$ ) completed three yearly surveys about sexual victimization, recovery outcomes, race group, and sexual minority status. Bisexual women and Black women reported greater recovery problems. However, Black women improved more quickly on depression symptoms than non-Black women. Finally, repeated adult victimization uniquely undermined survivors' recovery, even when controlling for child sexual abuse. Sexual minority and race status variables and their intersections with revictimization play roles in recovery and should be considered in treatment protocols for sexual assault survivors.

**Keywords** Sexual assault · Revictimization · Sexual minorities · Racial minorities · Psychological outcomes

Sexual assault is a common, yet underrecognized form of family violence, with approximately one-fourth of women experiencing lifetime attempted or completed rape (Kilpatrick et al. 2007). Such high prevalence of sexual victimization is cause for concern, as both childhood and

adulthood victimization is connected to harmful effects on women's mental health (see Campbell et al. 2009 for a review). Even though a history of trauma is connected with negative psychosocial adjustment for women in general, certain subgroups have more serious effects of these types of experiences. In this study, we investigate the psychological adjustment of sexual assault survivors and how that is impacted by survivors' sexual and racial minority status as well as trauma history.

## Sexual Assault Victimization and Recovery of Sexual Minorities

Sexual violence victimization and recovery of non-heterosexuals remains understudied (Balsam et al. 2005). This is particularly problematic as lesbian and bisexual women are at greater risk for sexual victimization than heterosexuals (Drabble et al. 2013; Rothman et al. 2011; Walters et al. 2013). In fact, sexual orientation predicts increased risk of victimization even when other known risk factors are statistically controlled (e.g., gender, age, education; Balsam et al. 2005). The risk of sexual violence is elevated for sexual minorities both in childhood and adulthood (Friedman et al. 2011; Hughes et al. 2010; Morris and Balsam 2003; Roberts et al. 2010; Rothman et al. 2011). A recent study of lesbian and bisexual women has even identified sexual minority status as a risk factor for trauma (Balsam et al. 2015). Risk of sexual victimization may therefore be higher among sexual minorities.

Although research has not precisely identified why sexual minorities experience greater sexual victimization, we present two possibilities. First, sexual minorities may experience homophobic harassment because of their sexual orientation. For example, in 2011, sexual violence accounted for 3 % of the

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3162 reported hate crimes against Lesbian/Gay/Bisexual/Transgender/Questioning/HIV-affected (LGBTQH) people, with sexual harassment accounting for another 3 % (National Coalition of Anti-Violence Programs 2011). Second, sexual minority stress can help explain why this group is at higher risk of victimization. Non-heterosexuals may experience discrimination and systematic oppression from living in a homophobic society (DiPlacido 1998). Sexual minority stress may lead to increased psychological distress and increased risk behaviors that make this population vulnerable to sexual victimization. Not only does this chronic stress put sexual minorities at increased risk for sexual assault, but it can also make recovery from sexual assault more difficult (Balsam et al. 2005). This effect may be even more pronounced among bisexual survivors, who may experience sexual minority stress as well as marginalization from the gay community. Research on recovery supports this idea, with bisexual survivors reporting greater PTSD symptoms (Long et al. 2007; Sigurvinsdottir and Ullman 2015) and problem drinking (Sigurvinsdottir and Ullman 2015) than both lesbian and heterosexual survivors. Because of all these factors, sexual minorities are likely to have different needs than heterosexual survivors.

### Risk of Sexual Assault for Different Race Groups

The survivor's race can also be a risk factor for sexual assault (see Abbey et al. (2010) for a review). For example, child sexual abuse (CSA) victimization prevalence is high among Black women, with estimates ranging from 34 to 65 % in community samples (adults reporting on their own victimization as children; Amodeo et al. 2006; Bryant-Davis et al. 2010). Black women are also at risk for adult sexual assault (rape lifetime estimates of 19–22 % in population samples of Black women; Black et al. 2011; Tjaden and Thoennes 2006). When sexual coercion is included, that number increases to 41 % according to data from the recent National Intimate Partner and Sexual Violence Survey (NIPSVS; Black et al. 2011). In general, representative sample studies have shown similar rates of sexual victimization for Black and White women. For example, Wyatt (1992) found similar rates of sexual assault in White and African-American representatively sampled women in Los Angeles. Conversely, some nonrepresentative study samples have shown higher rates in Black women (see Abbey et al. 2010 for a review). This may be due to income disparities, as lower income Black women face much higher rates of sexual assault. For example, Temple et al. (2007) found that 67 % of poor Black women experienced sexual assault. In addition, Black women may also be more likely to experience sexual assault in intimate partner relationships, which may be a more hidden, yet more prevalent, form of sexual assault (West 2013).

Subgroups of Black women are at even greater risk for sexual violence, particularly women who are low-income, living with HIV, sexual minorities, and incarcerated Black women. For example, Black bisexual college women reported higher rates of sexual assault (13.2 %) than Black heterosexual women (9.5 %; Krebs et al. 2011). Furthermore, people of color in the Lesbian/Gay/Bisexual community are more likely than Whites to have been victimized (Arreola et al. 2005; Balsam et al. 2010; Dunbar 2006; Meyer 2010; Morris and Balsam 2003). In fact, violence based on race, social class, and sexual orientation has been described as a 'web of trauma' (West 2002). These studies suggest that certain racial and sexual minorities may have different experiences with sexual victimization.

### Psychological Recovery from Sexual Victimization of Sexual and Racial Minority Survivors

Sexual assault survivors may experience problems following their victimization, such as alcohol or drug use, PTSD symptoms, and depression (Campbell et al. 2009). This negative impact is disproportionately high for sexual minorities, with 57.4 % of bisexual women and 33.5 % of lesbian women reporting at least one negative impact (e.g., feeling afraid, missing work, PTSD symptoms), compared to 28.2 % of heterosexual women (Walters et al. 2013). For example, hazardous drinking is more common among non-heterosexual survivors (Drabble et al. 2013; Stevens 2012), and bisexual survivors report greater problem drinking than heterosexual ones (Sigurvinsdottir and Ullman 2015). Also, greater PTSD symptoms are more likely among bisexual survivors (Long et al. 2007; Sigurvinsdottir and Ullman 2015) and lesbians than heterosexual survivors (Sigurvinsdottir and Ullman 2015). Heterosexual survivors also report fewer depressive symptoms than bisexual women (Sigurvinsdottir and Ullman 2015). However, data on the psychosocial impact of sexual assault for sexual minorities are seriously lacking, especially longitudinal data, which are needed to understand the recovery process.

Lesbian and bisexual women of color are also at elevated risk for recovery difficulties following victimization. A cross-sectional study of sexual assault survivors found that Black women reported greater depression, PTSD, problem drinking, and drug use than White women and that Black sexual minority women fared worse on these outcomes than Black heterosexual women (Sigurvinsdottir and Ullman 2015). A recent study of young lesbian and bisexual women recruited through social media found that Asian women reported fewer PTSD symptoms than White women, but there were no race group differences for depression and anxiety (Balsam et al. 2015), confirming other past research (Balsam et al. 2010; Balsam et al. 2013). However, other studies have uncovered

differences in psychological distress and depression (Bostwick et al. 2005; Kim and Fredriksen-Goldsen 2012). Given this limited body of research and discrepant findings, further studies are needed to examine the psychological impact of the intersection between race and sexual orientation on recovery from sexual assault over time.

### Sexual Assault Revictimization Among Sexual and Racial Minorities

Sexual assault survivors may be exposed to multiple victimizations, both in childhood and adulthood. In fact, when women have a CSA history, they are more likely to be assaulted as adults than women without CSA experiences (Walsh et al. 2012). When women have multiple victimization experiences, they report greater recovery problems, such as increased PTSD symptoms (Messman-Moore et al. 2000). However, revictimization among non-heterosexuals is understudied. In a sample of lesbians and bisexual women, 40 % had victimization experiences both as children and adults, and half of the sample met the criteria for hazardous alcohol use (Hequembourg et al. 2013). In Heidt et al.'s (2005) study of male and female members of the Lesbian/Gay/Bisexual/Transgender (LGBT) community, 63 % of the participants reported some kind of lifetime sexual violence. Of those who had been victimized, 38.5 % had unwanted experiences both in childhood and adulthood. When revictimized survivors were compared to the other participants, they reported greater depressive symptoms, PTSD symptoms, and psychological distress than those with childhood or adult assault only. Trauma effects may therefore be cumulative across childhood and adulthood, and this accumulation can be connected to adjustment in adulthood (Heidt et al. 2005).

Risk of revictimization is also higher for sexual assault survivors of color with a CSA history, with 27 % raped during adolescence and 42 % raped as adults (Fargo 2009). Black women who have had more than one unwanted experience are especially vulnerable to mental health problems, such as PTSD, depression, suicidal ideation, and more (Campbell et al. 2008). However, to our knowledge, no study has examined the cumulative effects of multiple adult sexual assault experiences while controlling for CSA using a longitudinal design among sexual minority survivors and multiple race groups.

### Current Study

The purpose of this study was to examine the recovery trajectories of sexually assaulted women and what role sexual orientation, race, and revictimization play in that recovery. We examined PTSD symptoms and depressive symptoms over

3 years in a sample of sexually assaulted women. Examining the impact of sexual minority status on survivors' recoveries is important because little work is available on the topic, particularly using longitudinal designs. Bisexual women appear to be at particularly high risk for recovery problems following sexual assault, so this group needs to be studied further. Also, work examining the intersection of race and sexual orientation in relation to recovery from sexual assault has been scarce. Furthermore, we sought to examine women's trauma histories to understand whether multiple adult victimizations contribute uniquely to women's adjustment, beyond the effect of CSA. Previous studies of revictimization in sexual minority women have focused on the effect of child to adult revictimization risk (for example, Heidt et al. 2005). In our study, we examined repeated adult sexual assault (ASA) while controlling for CSA experiences to understand the different roles that these trauma histories play in women's recovery. Furthermore, there is a clear lack of longitudinal work in this field, making it difficult to examine survivors' recovery processes. Our hypotheses for this study were the following: 1) Bisexual women will report greater PTSD and depression symptoms than heterosexual women, consistent with previous cross-sectional work on this topic (Sigurvinsdottir and Ullman 2015); 2) Black women will report greater PTSD and depression symptoms than non-Black women; and 3) Greater history of trauma (revictimization during study and child sexual abuse) will be connected with more PTSD and depression symptoms. The study also had two exploratory goals: to examine recovery trajectories of the groups studied as well as how race and sexual orientation interact to influence psychological symptoms among sexual assault survivors.

## Method

### Participants

A community sample of bisexual and heterosexual female sexual assault survivors was recruited from a large Midwestern city for three waves of mail surveys ( $N=905$  for all three waves; original sample  $N=1863$ ). The women ranged in age from 18 to 71 and bisexual women ( $M=35.05$ ) were significantly younger than heterosexual women ( $M=40.35$ ),  $t(869)=3.88$ ,  $p<0.001$ . However, there was no difference in mean age at the time of the assault (22.12 years for heterosexual women and 21.54 for bisexual women). The sample was ethnically diverse: 47 % African-American, 35 % White, 2 % Asian, 10 % other, and 6 % multiracial. In this sample, 13 % identified as Hispanic, which was assessed separately from race. There were no differences in the racial composition of the sample by sexual orientation. At the first survey, 43 % of the women were employed, with no differences by sexual orientation. Most of the sample had

low income (71 % with annual household incomes of less than \$30,000), and bisexual women were likely to have lower incomes than heterosexual women,  $\chi^2(5, N=866)=15.62$ ,  $p=.01$ . Overall, the women were well-educated: 33 % had a college degree or higher, 43 % some college education, 15 % graduated high-school, and 9 % had not completed high school. Half of the sample was single, and half had children.

Eight hundred and ten participants identified as heterosexual and 95 as bisexual. Approximately two-thirds (65.9 %) of the sample had experienced CSA, and almost half (49.3 %) were victimized at some point during the data collection period. A number of participants ( $N=96$ ) identified as one of the following: lesbian, did not provide data on sexual orientation or identified as ‘other than heterosexual, bisexual or lesbian.’ These women were too heterogeneous in terms of sexual orientation to be combined into one and compared to heterosexual and bisexual survivors. Analysis was not done for the lesbian group ( $N=52$ ), because once missing data on key outcomes had been factored in for all waves of data, the group was too small to compare to bisexual and heterosexual women ( $N=48$ ). Additionally, previous work has found that bisexual women are at particularly high risk for recovery problems, warranting studies focusing on this group. Unfortunately, we did not have information about whether participants identified as transgender.

Recruitment was accomplished via weekly advertisements in local newspapers, on Craigslist, and through university mass mail. In addition, fliers were posted in the community, at local colleges and universities, as well as at agencies that cater to community members in general and survivors of violence against women specifically. Interested women called the research office and were screened for eligibility using the following criteria: a) had an unwanted sexual experience at the age of 14 or older; b) were 18 or older at the time of participation; and c) had previously told someone about their unwanted sexual experience.

## Procedure

Participants completed a paid mail survey about their unwanted sexual experiences as part of a study on the impact of sexual assault on adult community-residing women in the Chicago metropolitan area. The mail survey approach was used because it meant women from the local community could participate without potentially revealing themselves as survivors if they had to show up in person at the university. A mail survey was also preferred to a computerized survey, because many of the participants are low-income and may not have had access to a computer. After calling the research office and being screened for eligibility, women were sent packets containing the survey, an informed consent sheet, a list of community resources for dealing with victimization, and a stamped return envelope for the completed survey. At the

end of the survey, participants were asked to indicate whether they wanted to continue participating. Those indicating interest in doing more surveys were contacted a year later and sent another survey. Then, a year later, the same procedure was repeated. Participants were sent money orders of \$25 in the mail for each survey they completed. The university’s Institutional Review Board approved all study procedures and documents.

## Measures

**Sexual Victimization** Sexual victimization in both childhood (prior to age 14) and adulthood (at age 14 or older) was assessed at all three waves using a modified version of the Sexual Experiences Survey (SES; Koss et al. 1987). The revised measure (Testa et al. 2004) assesses various forms of sexual assault including: unwanted sexual contact, verbally coerced intercourse, attempted rape, and rape resulting from force or incapacitation (e.g., from alcohol or drugs). The revised 11-item SES measure had good reliability ( $\alpha=0.73$ ); similar reliability was found in our sample ( $\alpha=0.78$ ). Both CSA and ASA were assessed with the SES measure in the Wave 1 survey. For the remaining two surveys, participants were asked if they had had an unwanted sexual experience since taking the last survey and completed the SES if that was the case. The SES severity score ranges from 0 = *no victimization*, 1 = *contact*, 2 = *sexual coercion*, 3 = *attempted rape*, and 4 = *rape*, but for our longitudinal analyses, we dichotomized the SES at each survey wave (0 = *no revictimization*, 1 = *any type of sexual revictimization*).

**Posttraumatic Stress Symptoms** PTSD symptoms were assessed at all three waves with the Posttraumatic Stress Diagnostic Scale (PDS; Foa 1995), a standardized 17-item instrument based on *Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV)* criteria (American Psychiatric Association 2000). On a scale ranging from 0 (*not at all*) to 3 (*almost always*), women rated how often each symptom (i.e., reexperiencing/intrusion, avoidance/numbing, hyperarousal) bothered them in relation to the sexual assault during the past 12 months. If women had more than one assault, PTSD symptoms were assessed with respect to the most serious assault. The PDS has acceptable test–retest reliability for a PTSD diagnosis in assault survivors over 2 weeks ( $\kappa=0.74$ ; Foa et al. 1997). The 17 items were summed to assess the extent of posttraumatic symptomatology (for this sample, Wave 1:  $M=21.13$ ,  $SD=12.93$ ,  $\alpha=0.93$ ; Wave 2:  $M=16.76$ ,  $SD=12.03$ ,  $\alpha=0.94$ ; and Wave 3:  $M=15.41$ ,  $SD=12.12$ ,  $\alpha=0.94$ ).

**Depressive Symptoms** Depressive symptoms were measured at all three waves using a 7-item version of the Center of Epidemiologic Studies Depression Scale (CESD-7) modified



by Mirowsky and Ross (1990). Participants were asked to rate their symptoms over the past 12 months using a 5-point Likert scale from 0 (*never*) to 5 (*always*). In this sample, descriptives for depressive symptoms were:  $\alpha=0.86$  ( $M=2.01$ ,  $SD=0.75$ ) for Wave 1;  $\alpha=0.86$  ( $M=1.79$ ,  $SD=0.75$ ) for Wave 2; and  $\alpha=0.88$  ( $M=1.74$ ,  $SD=0.77$ ) for Wave 3.

**Sexual Orientation** Participants were asked at Wave 1 whether they identified as mostly heterosexual, somewhat heterosexual, bisexual, somewhat homosexual, or mostly homosexual. This was recoded so that 0 = *mostly heterosexual* and *somewhat heterosexual* (810 women) and 1 = *bisexual* (95 women). This question was created for this study after consulting with an expert on sexual assault in sexual minority women. Those who identified as somewhat homosexual, mostly homosexual or did not provide data were excluded from analysis. This was done because of few lesbians in the sample, especially at Wave 3, allowing us to just focus our analyses on bisexual women.

**Race** At Wave 1, participants were asked to what race they identified. The largest racial group was Black (47%), so analyses of race were done comparing the Black and non-Black groups.

**Income** At Wave 1, participants were asked to estimate their total household income before taxes. Most were low income, where 71% of participants reported an annual household income of less than \$30,000. Income was only used as a control variable to control for social class.

### Analysis Strategy

As with most longitudinal studies, it was not possible to get three waves of data from all of the participants. For example, survivors were given the option of dropping out of the study if they wished, or their contact information was no longer accurate when the next survey was mailed to them. For these analyses, only data from participants who completed all three waves was used. This was done because those who did not end up completing Waves 2 and 3 of the survey (but stated when they returned the first survey that they wanted to continue participating) were significantly higher on both PTSD and depressive symptoms at Wave 1. These participants were therefore removed from the analyses so that they would not increase these outcomes at Wave 1 without providing any data for the later time points. Participant dropout did not vary according to sexual orientation or race. We used a hierarchical linear modeling approach in SPSS Version 20 to model the changes in variables over the three waves of data collected. This allowed us to observe changes in the dependent variables over the data collection period, as well as how those trends differed between groups. We modeled the effect of sexual

orientation, race, income (control variable), CSA history, and revictimization during the study period. We examined whether wave, race, and revictimization effects varied according to sexual orientation initially by including statistical interaction terms between each of those variables. When the interaction terms were not statistically significant, the effects of combinations of sexual orientation, race, trauma history, and time were not different for subgroups. Thus, we did not retain those nonsignificant interaction terms in the final models for parsimony.

### Results

We investigated psychological symptom recovery trajectories in a sample of sexually assaulted women, as well as the role that sexual orientation and trauma histories played in those trajectories. The summarized results from the hierarchical linear model can be seen in Table 1. In our sample, PTSD and depressive symptoms decreased over the 3 years that data were collected (indicated by the significant negative coefficients for wave).

The first hypothesis was that bisexual women will report greater PTSD and depression symptoms than heterosexual women. This hypothesis was confirmed, with both depression and PTSD symptoms being significantly higher for bisexual women than for heterosexual women. PTSD symptoms declined an average of 1.95 during each wave for the heterosexual group (mean overall level at Wave 1 was 21.13 symptoms). Bisexual women reported on average 1.56 more PTSD symptoms than heterosexual women. There were no significant interactions between time and sexual orientation, so the relationship between sexual orientation and psychological symptoms did not change as time went on. Bisexual women therefore consistently reported greater PTSD and depression symptoms than heterosexual women.

The second hypothesis was that black women will report greater PTSD and depression symptoms than non-Black

**Table 1** Predictors of sexual assault recovery

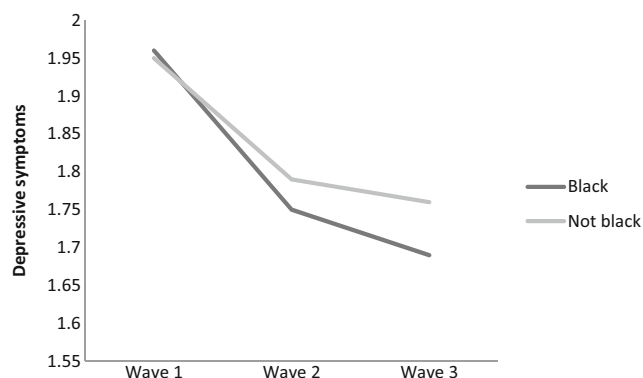
	PTSD	Depression
Wave	-1.95**	-0.09**
Bisexual	1.56	0.17*
Revictimization	6.74**	0.27**
CSA History	1.50**	0.06**
Black	-0.35	-0.08
Income	-0.77**	-0.06**
Wave*Black	-1.40**	-0.05*
Bisexual*Black	7.88**	0.25

Coefficients are unstandardized betas. \* indicates  $p < 0.05$ , \*\* indicates  $p < 0.001$

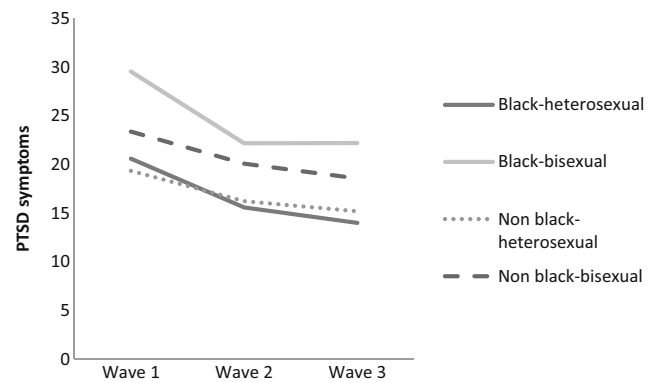
women. This hypothesis was not confirmed for depression or PTSD symptoms. Figure 1 shows that depression symptoms for Black and non-Black women start out very similar, but symptoms decrease faster among Black women, as evidenced by a significant interaction between wave and race in Table 1. Therefore, the relationship between race and psychological outcomes was different throughout the period of the study. For PTSD symptoms, there was also a significant interaction between time and race, seen in Fig. 2 where the non-Black group has a steady decrease in symptoms between each wave, but the Black women have a sharper decline between Waves 1 and 2, with a smaller decrease between Waves 2 and 3. Additionally, for PTSD symptoms only, there was a significant interaction between race and sexual orientation. Figure 2 shows that Black bisexual women consistently have the highest symptoms, followed by non-Black bisexual women. Heterosexual women of both races have very similar PTSD symptoms throughout the data collection period. Therefore, on its own, race does not significantly contribute to these psychological outcomes, but Black bisexual women report the greatest PTSD symptoms. This shows the importance of examining the intersection between race and orientation when understanding women's recovery from sexual assault.

The third hypothesis was that greater history of trauma (revictimization during study and child sexual abuse) will be connected with more PTSD and depression symptoms. This hypothesis was confirmed; Table 1 shows that revictimization during the data collection period was connected with an increase in 6.74 symptoms for PTSD symptoms and 0.27 symptoms for depression symptoms. Child sexual abuse was also connected with 1.50 more PTSD symptoms and 0.06 depression symptoms. These results show that both of these forms of victimization uniquely contributed to psychological adjustment, even among a sample of adult sexual assault survivors.

These results indicated that overall, psychological symptoms among sexual assault survivors decrease over time. Sexual minority status was connected to increased PTSD and depressive symptoms. However, Black women improved more on depressive symptoms than non-Black women. This



**Fig. 1** Depressive symptom recovery trajectories by race



**Fig. 2** PTSD symptom recovery trajectories by race and sexual orientation

was also true for PTSD symptoms, where there was also a significant interaction between race and sexual orientation. Trauma histories also played an important role, because women with a history of CSA or who were revictimized during the study fared worse on these psychological symptom outcomes. These results showed that both CSA and multiple adult victimizations are uniquely connected to increased psychosocial sequelae.

## Discussion

Sexual minority women face unique risks in the aftermath of sexual assault, yet little is known about their recovery process. This study was a longitudinal examination of how sexual orientation, race, and revictimization were related to sexual assault survivors' recovery. The results indicated that in our sample, PTSD and depressive symptoms decreased over a 3-year period among sexual assault survivors. This is a positive finding, but it is possible that the individuals with the greatest risk were lost over time, as they can be more difficult to follow up in a longitudinal study (Scott et al. 2006), so future studies are needed, particularly in representative samples of survivors.

Sexual orientation plays a role in women's recovery from sexual assault. For both depression and PTSD, bisexual women reported greater symptoms than heterosexual women. Greater psychological sequelae among sexual minorities have also been found in previous cross-sectional studies (Long et al. 2007; Sigurvinsdottir and Ullman 2015). We also observed that race played a role in the women's recovery trajectories, in that Black women's symptoms decreased more over time, both for PTSD and depression. Additionally, for PTSD we observed an interaction of bisexual orientation and race, whereby Black bisexual women fared by far the worst of all on these symptoms. These results underscore the importance of examining race and sexual orientation together in studies of sexual assault recovery in women.

Trauma history was also connected with psychological symptoms. We found that women who had been revictimized during the 3-year study reported greater problems than those who had not. This effect remained when CSA history was controlled for, which also contributed to greater symptoms, consistent with previous literature on the topic (Ullman et al. 2005; Ullman and Najdowski 2009). These results suggest that multiple sexual victimizations in adulthood therefore have additive effects in terms of survivor psychological outcomes. We also examined whether recovery trajectories were impacted by adult revictimization experiences and did not find that to be the case. Survivors therefore have greater psychological symptoms when they have had multiple experiences, but the trends in recovery do not differ significantly from those only victimized as adults before the start of the survey. Interventions or strategies that target survivors with multiple traumas therefore may need to be more intensive than the current standard, but it might not be necessary to completely alter those approaches for this population.

These results highlight the importance of examining the recovery of sexual assault survivors longitudinally, because survivors' psychological symptoms may change significantly over time, and how that happens is important for understanding their well-being and developing interventions to help them. Recovery from sexual assault and related psychosocial consequences can be a long and difficult process, which is important to understand in detail. Current studies of trajectories of recovery have not examined sexual orientation, but have shown that distinct subgroups (Rothbaum et al. 1992; Steenkamp et al. 2012) exist, so similar analyses are needed for sexual minority women.

These results also show the importance of examining the context of women's lives in shaping their experiences. For example, both race and sexual orientation seem to play a role in how women recover from an unwanted sexual experience. In terms of sexual orientation, minority stress has been suggested as a possible explanation for the elevated psychological problems among non-heterosexual sexual assault survivors. In this way, stress associated with living in a homophobic society can contribute to greater problems among this population (DiPlacido 1998). In our study, we compared heterosexual and bisexual women; the latter group may be at even greater risk for stress and recovery problems because of marginalization from the straight community (Weber 2008). Furthermore, bisexual women may experience further stress because the group is more heterogeneous and less visible as a community (Israel and Mohr 2004). Unfortunately, we do not have measures of minority stress in this study, but our data clearly show the unique needs of bisexual women, who may need specialized resources to address unwanted sexual experiences. Clinicians need to be aware that sexual victimization may not only be more prevalent for sexual minority women but also lead to more severe psychological consequences. Given

that CSA is more prevalent for sexual minority women and affects their depression and PTSD symptoms even beyond other adult victimization, prevention efforts are needed to target and treat effects of CSA in sexual minority women.

The race of the survivor was also connected to worse psychological symptoms for bisexual women, suggesting that women who are at the intersection of race and sexual orientation face unique challenges and prejudices that can make their recovery more challenging. This type of multiple marginalization is consistent with previous work showing the compounded effects of sexual and racial prejudice (Bowleg et al. 2003). Part of this discrimination may come from homophobia in communities of color (Balsam et al. 2011; Chae et al. 2010; Mays et al. 1993) or racism in LGB communities (Balsam et al. 2011; Chae et al. 2010; Ward 2008). Professionals should be trained to take a full history of clients' trauma experiences and associated sequelae, talk with women about how their symptoms may relate to assault histories in the context of their sexuality, and provide trauma-specific treatments to address their needs (see Vickerman and Margolin (2009) for a review).

Limitations of this study include the use of a convenience sample and that participants in the sample overwhelmingly identified as heterosexual, decreasing power of the analyses. Also, because we mailed surveys to participants, those who did not have a permanent address may have dropped out of the study. This may have resulted in the loss of the highest risk participants from our sample. Indeed, we only analyzed data from participants with complete data, thus losing those who reported greater depression and PTSD symptoms at wave 1. Also, because the sample is non-representative, it cannot fully illuminate how race and sexual orientation are both connected with psychological adjustment. This possibility speaks to the difficulty of conducting longitudinal studies with community samples, especially with groups that have multiple stressors in their lives. It is important to note, however, that dropout during the study did not affect the results, as we only used data from participants completing all three waves.

In future work, family violence researchers need representative samples of female survivors followed for a longer period of time with larger, ethnically diverse subsamples of sexual minority women to see if these results can be replicated. Also, sexual minority stress needs to be measured longitudinally along with various recovery outcomes that go beyond psychological symptom measures to include broader psychosocial adjustment outcomes. Clinical assessment and treatment should focus attention on Black bisexual survivors who appear to be at particularly greater risk of poorer recovery outcomes. Finally, intersections of sexual forms of victimization with other forms of family violence (e.g., physical and emotional forms of both partner abuse and child abuse) are needed in order to elucidate the roles of race and sexual orientation. Such research will help researchers and practitioners better

understand psychological impact and treatment needs of multiply traumatized, marginalized women who are currently underserved.

**Acknowledgments** The authors would like to acknowledge Mark Relyea, Cynthia Najdowski, Liana Peter-Hagene, Amanda Vasquez, Meghna Bhat, Rene Bayley, Gabriela Lopez, Famaz Mohammad-Ali, Saloni Shah, Susan Zimmerman, Diana Acosta, Shana Dubinsky, Brittany Tolar, Hira Rehman, Joanie Noble, Sabina Skupien, Nava Lalehzari, Justyna Ciechonska, and Edith Zarco for assistance with data collection.

The research was supported by the National Institute on Alcohol Abuse and Alcoholism grant R01 #17429 to Sarah E. Ullman.

#### Compliance with Ethical Standards

**Conflict of Interest** The authors have no conflict of interests and the findings have not been published in other journals.

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