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Exploring shame, guilt, and risky substance use among sexual minority men and women

Amy L. Hequembourg and **Ronda L. Dearing**
Research Institute on Addictions, University at Buffalo, 1021 Main Street, Buffalo, New York 14203-106.

Abstract

This study examined the interrelationships among shame-proneness, guilt-proneness, internalized heterosexism, and problematic substance use among 389 gay, lesbian, and bisexual men and women. Problematic alcohol and drug use were positively related to shame-proneness and negatively related to guilt-proneness. Bisexuals reported riskier substance use behaviors, lower levels of guilt-proneness, and higher levels of internalized heterosexism than gay men and lesbians. Furthermore, study findings indicated that shame and internalized heterosexism are related. Additional investigations of these associations would supplement current understanding of sexual minority stress and would advance the development of substance-related intervention and prevention efforts targeting sexual minorities.

Keywords

Shame; Guilt; Alcohol Abuse; Drug Abuse; Sexual Minorities; gay men; lesbians; bisexuals, Internalized Heterosexism

Despite growing acceptance of sexual minority individuals in the United States, gay men, lesbians, and bisexual men and women (GLBs) continue to experience social stigma related to sexual identity. Sexual minority stigma is the articulation of negative attitudes and feelings about homosexuality that are interwoven into the cultural, legal, and social landscape; this generalized negativity can become internalized into one's own sense of self, resulting in internalized heterosexism[1]. Internalized heterosexism, therefore, is "a set of negative attitudes and affects toward homosexuality in other persons and oneself" (Amadio, 2006, p. 1154) that operate as part of cultural sexual minority stigma. A growing body of research suggests that elevated rates of substance use among GLBs may be a symptom of stress associated with identity-related stigma (for a review, see Hughes, 2005). In other words, from a sexual minority stress perspective (Meyer, 2003), alcohol and drug use may be a maladaptive coping strategy that helps some sexual minority individuals manage the stress associated with internalized stigma (Bobbe, 2002; Hatzenbuehler, 2009; Weber, 2008).

Correspondences concerning this article should be addressed to Amy L. Hequembourg, Research Institute on Addictions, University at Buffalo, Buffalo, New York 14203-1016. ahequemb@ria.buffalo.edu.
Both authors contributed equally to the preparation of this manuscript.

[1]Researchers have traditionally utilized the term "internalized homophobia" in reference to the internalization of stigma associated with being a gay man (Cabaj, 2000). However, because this term is increasingly used to refer to stigma-related stress among not only gay men, but also lesbians and bisexual identified men and women, researchers (e.g., Szymanski & Chung, 2002) are more frequently utilizing the term "internalized heterosexism" in place of "internalized homophobia." See Amadio (2006) for a detailed explanation of this change in nomenclature.

Experiences of stress and associated negative outcomes also may vary by gender and/or sexual identity among sexual minorities. For example, although GLBs share a number of commonalities in their experiences of sexual minority stigma, bisexuals also report feelings of exclusion and negativity even within the GLB community (Burleson, 2005; Hequembourg & Brallier, 2009; Rust, 1992). Consequently, bisexuals may experience heightened levels of stigma compared to gays and lesbians (GLs) because they have fewer social supports and validations for their sexual identities. Experiences of heightened stigma may help explain, at least in part, the emerging body of evidence suggesting higher rates of alcohol-related problems and other negative outcomes among bisexuals compared to GLs, as well as compared to heterosexual men and women (McCabe, Hughes, & Boyd, 2004; McCabe, Hughes, Bostwick, & Boyd, 2005; McCabe, Hughes, Bostwick, West, & Boyd, 2009, Tucker, Ellickson, & Klein, 2008; Wilsnack, et al., 2008). In summary, our understanding of the associated risk factors underlying problematic alcohol and drug use, as well as the gender and sexual identity differences in these negative outcomes among sexual minorities, remains underdeveloped, thereby hindering the advancement of culturally competent substance abuse prevention and intervention programs that may benefit this population.

In the current investigation, we focus on the role of shame and guilt as they relate to internalized heterosexism and substance use. Shame and guilt are categorized as self-conscious emotions (e.g., Tracy & Robins, 2004). As we will discuss, these emotions influence thoughts, behaviors, and ultimately well-being. Self-conscious emotions can arise during the cognitive evaluation of one's role in an event or one's responsibility for a personal attribute (Tracy & Robins, 2006). In the case of shame, the ensuing evaluation brings forth negative, internal, global, stable attributions relating to the *self* (i.e., "I am bad"). The individual believes that the cause (i.e., the self) is something that cannot be changed. As a result, feelings of shame are acutely painful and often result in a desire to withdraw, escape, or hide. In the case of guilt, although cognitive evaluations are also negative and related to internal causality, the interpretation is that aspects of the *situation* contributed to the event or attribute. In other words, the contributing factors were specific and unstable – different circumstances could have resulted in a different outcome. Because the situation or attribute seems mutable, feelings of guilt are usually less intensely painful as compared to shameful feelings, and guilt is associated with attempts to do things differently in the future or to make amends.

Shame and guilt most often arise simultaneously in response to negative self-relevant situations. Namely, when evaluating their role in an event (or personal attribute), most people are likely to acknowledge causal factors related to themselves *and* to factors specific to the situation. However, some people are more likely to respond to negative events with shame (self attributions), whereas others are more likely to respond with guilt (situational attributions). People who have a propensity to respond with shame across situations are said to be shame-prone; people who have a greater tendency to experience guilt are described as guilt-prone (Tangney & Dearing, 2002). The fundamental self/behavior distinction between shame and guilt is attributed to Lewis (1971) and has been supported by abundant subsequent research (as summarized in Tangney & Dearing, 2002).

When thinking about personal attributes (rather than events), shame or guilt may arise if the attribute is considered to be negative, or if the individual believes that others view the attribute as negative. Attributes associated with societal stigma (e.g., minority race, sexual minority identity, substance abuse) are apt to be evaluated as negative, and therefore may be sources of shame and/or guilt. Negative attitudes concerning sexual minority identity are prevalent in our American society, as evidenced by ongoing cultural, legal, political, and religious disputes over the legalization of same-sex marriage, the disputed role of sexual

minorities in the military, disagreements about childhood consequences of gay parenting, and so on. These negative attitudes may be internalized (in the form of internalized heterosexism; Shidlo, 1994) by some individuals who identify themselves as gay, lesbian, or bisexual. If evaluations of one's sexual identity bring forth negative, global, stable attributions, shame is likely to result (e.g., "Because I am gay, I must be a bad person."). If negative thoughts about one's sexual identity are specific and unstable (e.g., "I value my parents' approval and I know that they love and support me, but I worry that I've somehow disappointed them by being gay."), guilt is the likely emotion.

Research evidence indicates that shame-proneness has negative implications at the individual level, whereas guilt-proneness tends to be more adaptive. Although much of the relevant research is correlational, and therefore causality is difficult to infer, in general, shame-proneness tends to be associated with a number of negative characteristics. For example, individuals who are high on shame-proneness are more likely to have interpersonal problems (e.g., Tangney, 1995), to have mental health concerns (Tangney, Wagner, & Gramzow, 1992), and to engage in risky sexual behaviors (Stuewig, Tangney, Mashek, Forkner, & Dearing, 2009) as compared to individuals with lower levels of shame-proneness. As previously noted, the natural action tendencies associated with shame include the desire to hide, escape, or avoid (e.g., Lewis, 1971; Tangney, Miller, Flicker, & Barlow, 1996). Therefore, when people evaluate a situation or attribute as unchangeable, they are likely to resort to use of negative coping strategies (e.g., escape or avoidance responses, such as substance misuse) to manage feelings of shame. In fact, research has demonstrated that shame-proneness is associated with alcohol and substance use problems (Dearing, Stuewig, and Tangney, 2005). Characteristics associated with guilt-proneness are often more positive. When faced with guilt, individuals are likely to evaluate how they might have acted differently in order to have brought about a different outcome (Niedenthal, Tangney, & Gavanski, 1994). As a result, guilt-prone people are likely to apologize, make amends, or resolve to "do better" in the future (Baumeister, Stillwell, & Heatherton, 1994). Correlational research has shown that guilt-prone individuals are more likely to be empathic (Tangney, 1991) and to have positive social relationships (Baumeister et al.). Because guilt is associated with moral and prosocial behavior, it seems to serve a general adaptive function (for review, see Tangney, Stuewig, and Mashek, 2007). Particularly relevant to the current investigation, guilt-proneness seems to have a protective effect against problematic alcohol and substance use (Dearing et al., 2005).

Only a few studies have investigated shame-proneness and/or guilt-proneness among sexual minorities. In one such study, Allen and Oleson (1999) conceptualized shame as an affect or emotional expression associated with an individual's internalization of negative societal attitudes about homosexuality. They differentiated shame from internalized homophobia, conceptualizing the latter as a consequence of the interplay between the individual and the external environment. Allen and Oleson reported a strong relationship between internalized homophobia and shame, with greater shame associated with higher levels of internalized homophobia, whereas less internalized homophobia was associated with higher self-esteem among their study participants. However, their exploratory research was limited in that shame was not measured utilizing psychometrically-sound instruments, and the role of guilt-proneness was unexamined. In a later study, Bybee, Sullivan, Zielonka, and Moes (2009) reported that "chronic shame" and "chronic guilt" were associated with higher levels of depression among gay men compared to heterosexual men. Although their study extended earlier research by including separate measures of shame and guilt, their measurement instruments did not adequately distinguish between the two emotions (see Tangney and Dearing, 2002 for a discussion of measurement issues pertaining to shame and guilt). Consequently, these studies and others that examine relationships among shame, guilt, and other features of sexual minority experience, such as IH and attachment (Sherry, 2007) or

social support and disclosure (Chow & Cheng, 2010), suggest that shame and guilt are associated with IH and other negative outcomes among sexual minorities, but more research is needed to expand on this foundation of knowledge. Little is known, for example, about gender and sexual identity differences in experiences of shame, guilt, and IH among GLBs.

Perhaps most importantly for the purposes of the current study, prior research pertaining to shame, guilt, and internalized heterosexism among sexual minorities has rarely addressed their connection to problematic alcohol or drug use. Despite concern about higher rates of alcohol use and related problems among sexual minorities (Hughes, 2005), and studies to support a link between shame-proneness and alcohol use in other populations (Dearing et al., 2005), our knowledge about these associations is extremely limited. Amadio's work (2006) provides one exception as he found partial support for the connection between internalized heterosexism, alcohol use, and alcohol-related problems, but primarily for lesbians. Further research is needed to investigate these connections.

To date, we therefore have a general idea about the role of shame (and to a lesser extent, guilt) in health-related outcomes among sexual minorities, but the conceptual and theoretical use of these constructs as they relate to sexual minorities have not been empirically pursued with rigor. As a result, researchers and practitioners lack adequate knowledge pertaining to sexual minorities about how shame and guilt function as distinct emotions; how these distinct concepts are associated with negative health-related outcomes; and the connection among internalized heterosexism, shame-proneness, guilt-proneness, and substance abuse.

The purpose of this paper is to examine interrelationships among shame-proneness, guilt-proneness, internalized heterosexism, and problematic substance use (including alcohol and illicit drug use) among a community sample of 389 gay, lesbian, and bisexual men and women. Utilizing a well-validated measure to assess shame- and guilt-proneness (Tangney, Dearing, Wagner, & Gramzow, 2000) as they relate to these variables of interest, we were particularly interested in whether shame-proneness may serve as a risk factor for problematic substance use, and whether guilt-proneness may serve as a protective factor against developing such problems. We anticipated that greater shame-proneness would be associated with higher alcohol severity scores, riskier drug use, and greater IH, while we expected that greater guilt-proneness would be associated with lower alcohol severity scores, less illicit drug use and related problems, and lower IH. Because research on substance use among GLBs has rarely focused on bisexuals as a separate group, most often combining them with gay men and lesbians to make comparisons with heterosexuals (Hughes & Eliason, 2002), we were interested in examining gender and sexual identity differences in substance use and related problems, IH, shame, and guilt among the sexual minority participants in the current study. Given prior research indicating heightened risks among bisexuals compared to their gay and lesbian counterparts, we expected to find elevated alcohol severity scores, greater drug use and related problems, higher IH scores, greater shame, and less guilt among bisexual men and women compared to GLs.

Methods

Participants

The sample included 97 gay men, 87 bisexual men, 98 lesbians, and 107 bisexual women (N = 389) with a mean age of 24.4 (SD = 4.3; range: 18–35) years old. Detailed demographic information is presented in Table 1. Mean years of education among participants was 13.6 (SD = 2.7; range: 6–26). The majority of the sample (59.1%) was White/European-American (non-Hispanic) and nearly one quarter of participants (22.4%) identified as Black/African-American (non-Hispanic). Only 9.0% of participants identified as Hispanic or Latino. The remaining participants identified as Asian (<1%), American Indian or Alaskan

Native (<1%), or multi-ethnic (8.2%). Participants reported low individual annual incomes, with just under half (49.1%) of the sample reporting an income of less than $10,000 per year. Low income was likely related to the high unemployment rate among participants (43.4% unemployed). The sample was split almost equally between single and partnered participants, with 48.8% reporting that they were single/never married and 48.5% reporting that they were partnered or married.

Procedures

Recruitment was conducted in Buffalo, New York as part of a study about risk and protective factors associated with substance use and victimization among sexual minorities. Study participants were recruited using a combination of advertisements in a local entertainment newspaper, flyers, and referrals from other participants. We initially recruited a small number of "seed" participants via flyers hung in local restaurants and cafes. Guided by the principals of Respondent-Driven Sampling (RDS, Heckathorn, 1997), each study participant was provided with three referral "coupons" to distribute to his or her gay, lesbian, or bisexual friends. In this approach, study participants were asked to distribute the coupons to their friends who then made their own decisions about whether or not to contact the study (i.e., friends' contact information was not elicited by project staff). If that friend called to learn more about the study, the participant who referred him/her received a small referral incentive. The theoretical purpose of RDS is to reduce bias by beginning with a small number of "seed" participants, followed by recruitment of the remainder of the participants via the referral system. However, in the current study, the referral system was not as effective as anticipated and additional flyers and advertisements for volunteers via a local entertainment newspaper were required to stimulate recruitment. Consequently, over half (55%) participated in response to a referral from a friend, and the remainder of the sample was recruited after responding to a newspaper advertisement or a flyer. Recruitment efforts did not directly target local gay bars because we were interested in recruiting a sample of participants with a wide range of drinking habits, and we were concerned that recruitment from gay bars would result in a sample biased toward heavier drinkers.

Eligibility criteria included being 18–35 years old, non-transgender, and self-identified as gay, lesbian, or bisexual. The age range (i.e., 18 to 35 years old) for participation in this project was chosen because (1) research indicates that a decision concerning coming-out with a gay or lesbian sexual identity occurs, on average, for men at age 18 and for women at age 28 (Cabaj, 1995); and (2) national data indicate that alcohol use for the general population is at peak prevalence between the late teens and early thirties, with alcohol dependence or abuse highest among 18- to 25-year-olds (Substance Abuse and Mental Health Services Administration, 2003). Therefore, the selected age criteria encompasses the ages when the variables of interest occur at highest rates. Following a brief telephone screening to determine eligibility, participants were scheduled to visit the Research Institute to participate in an assessment that included a larger battery of self-administered and interviewer-administered instruments. Consent procedures—approved by the University at Buffalo's Social and Behavioral Sciences Institutional Review Board—were conducted prior to participation. Participants were compensated $50 for their time and provided with the opportunity to earn an additional $35 if they referred up to 3 gay, lesbian, or bisexual friends to the study (following the guidelines described above for RDS).

Measures

Shame-proneness and guilt-proneness—Shame-proneness and guilt-proneness were measured using the 16-item, scenario-based *Test of Self-Conscious Affect, Version 3* (TOSCA-3; Tangney, et al., 2000). Response options ranged from 1 = "not likely" to 5 = "very likely." A representative scenario is "While playing around, you throw a ball and it

hits your friend in the face." Shame response: "You would feel inadequate that you can't even throw a ball." Guilt response: "You would apologize and make sure your friend feels better." Participants rate each response option for each scenario, resulting in separate scores for shame-proneness and guilt-proneness. In this study, internal consistency reliability was α = .81 for shame and α = .81 for guilt.

Alcohol and drug disorders—The *Alcohol Use Disorders Identification Test* (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) was used as an indicator of hazardous or harmful patterns of drinking. A total score for the 10-item AUDIT was computed to represent severity of alcohol use (see Donovan, Kivlahan, Doyle, Longabaugh, & Greenfield, 2006) and was used for between group analyses. Scores were interpreted using procedures outlined by Babor, Higgins, Biddle, Saunders, & Monteiro (2001) to provide descriptive data concerning rates of hazardous alcohol consumption (AUDIT scores = 8–19) and possible alcohol dependence (AUDIT scores ≥ 20). Total possible scores ranged from 0 to 33. Internal consistency reliability for the AUDIT was excellent for the current study (α = .88).

Past year frequency of drug use and lifetime symptoms of dependence were assessed for eight types of illicit drugs (i.e., marijuana, club drugs, opiates, sedatives, cocaine, amphetamines, crystal methamphetamines, and psychedelics). Consistent with scoring procedures used by Farrell et al., (2002), drug dependence was assessed based on five questions from the Diagnostic Interview Schedule (Robins & Regier, 1991) concerning lifetime problematic use of each of the specified illicit drugs (e.g., "Have you ever used [club drugs] for 2 weeks or more?"). Response options were 0 = "no" and 1 = "yes." Participants' scores indicated drug dependence if they answered "yes" to at least one of the 5 questions about problematic use, and their scores indicated severe dependence if they answered "yes" to 4 or 5 of the questions. Marijuana was scored using a slightly more liberal interpretation, with dependence indicated if 2 or more questions were answered affirmatively regarding lifetime marijuana use (as per Farrell, et al., 2002).

Internalized heterosexism—The 31-item *Nungesser Homosexuality Attitudes Inventory* (Nungesser, 1983) was used to assess internalized negativity toward having a gay or bisexual identity. Modifications in wording were made to the original questionnaire in order to include the experiences of bisexuals (e.g., "I would not mind if my boss found out that I am gay *or bisexual*."). One question from the original measure was eliminated due to the outdated use of the term "lifestyles" (i.e., "Gay lifestyles are not as fulfilling as heterosexual lifestyles."), and an additional question (i.e., "Bisexuals are overly promiscuous.") was added to complement an existing question (i.e., "Gays are overly promiscuous."). Given the modifications to include internalized feelings of homophobia as well as biphobia, we hereafter refer to this variable as "internalized heterosexism." After reverse coding of some variables, a summary statistic (possible range: 31–155) was computed, with higher scores reflecting higher levels of internalized heterosexism reported by the participant. Internal consistency reliability for the total score was excellent (α = .90).

Results

Alcohol and Illicit Substance Use

The mean score on the AUDIT was 10.9 (*SD* = 7.1; range: 0–33). Half (50.4%) of the sample scored in the hazardous alcohol use range, and 12.3% of the participants' scores indicated possible alcohol dependence.

Marijuana was the most widely used recreational drug reported by participants, with 58.8% of the sample indicating use in the past year. Frequency of use for the remaining drugs in the

past year was as follows: opiates (19.0%), cocaine (17.0%), club drugs (11.6%), sedatives (9.8%), psychedelics (7.5%), amphetamines (5.7%), and methamphetamines (3.3%). Just under half of participants (43.2%) reported use indicative of marijuana dependence and 15.7% met criteria for severe marijuana dependence during their lifetime. Although less than 20% of the sample reported cocaine use in the past year, 16.5% of the participants' answers regarding their cocaine use suggested a history of cocaine dependence and 8.5% of their answers suggested a history of severe dependence. Indications of a history of severe dependence (lifetime) for other illicit drugs were as follows: opiates (10.5%), sedatives (3.3%), club drugs (2.8%), amphetamines (2.3%), methamphetamines (<1%), and psychedelics (<1%). All subsequent analyses were conducted for only those drugs that were used most frequently by participants (i.e., marijuana, opiates, and cocaine).

Internalized Heterosexism (IH)

The mean internalized heterosexism score for the sample was 63.3 (SD = 19.1), with scores ranging from 33 to 124.

Associations among Key Variables

Consistent with prior findings (e.g., Dearing, et al., 2005; Tangney, 1994), our results indicated a moderate bivariate correlation between shame and guilt of .43, $p < .01$, likely because both involve negative internal cognitive attributions that often arise concurrently in similar situations. To address this overlap in variance between shame and guilt, Tangney and associates (e.g., Stuewig, et al., 2009) suggest the use of semi-partial correlations that factor guilt-proneness out of shame-proneness and vice-versa, allowing one to make more meaningful interpretations by comparing shame-free guilt and guilt-free shame with other constructs. Bivariate correlations between shame or guilt and variables of interest in the study are included for comparison (Table 2).

Based on the semi-partial correlations, we found a significant positive association between shame-proneness and alcohol severity, and a significant negative association between guilt-proneness and alcohol severity scores (i.e., total AUDIT scores). Results also indicated a significant positive association between shame-proneness and IH; while guilt-proneness was significantly associated with IH in a negative direction. Guilt-proneness was negatively correlated with marijuana, opiate, and cocaine dependence and severe dependence, and shame-proneness showed a positive association with cocaine and opiate dependence and marijuana and cocaine severe dependence. Findings also indicated significant positive associations between IH and several of the substance-related variables (i.e., alcohol severity, marijuana dependence and severe dependence, and cocaine severe dependence), suggesting a link between higher levels of IH and drug and alcohol-related problems among participants in the sample.

Between-Group Differences

We conducted a series of between-group comparisons to investigate possible gender and sexual identity differences in shame-proneness, guilt-proneness, alcohol severity, drug dependence, and internalized heterosexism among study participants. Specifically, we were interested in three separate group comparisons: gender (male versus female), sexual identity (gay men vs. lesbians vs. bisexual men vs. bisexual women) and dichotomous sexual identity (GLs vs. bisexuals). ANOVAs and ANCOVAs were conducted to examine group differences in the continuous outcome variables: shame-proneness, guilt-proneness, alcohol severity, and internalized heterosexism (Table 3). Post-hoc results based on Bonferroni adjustments are reported for statistical comparisons among the four sexual identity groups. Chi-square analyses were conducted to examine group differences in drug dependence reports (expressed as categorical outcome variables; Table 4).

Shame-proneness—An ANCOVA was conducted to examine between group differences in shame-proneness, while controlling for guilt-proneness. The results indicated no gender or sexual identity differences in shame-proneness. In other words, men and women did not differ in reports of shame-proneness, GLs did not differ from bisexuals, and no differences in shame-proneness were found among the four sexual identity groups (i.e., gay men, lesbians, bisexual men, and bisexual women).

Guilt-proneness—An ANCOVA also was conducted to examine between group differences in guilt-proneness, while controlling for shame-proneness. Results indicated that women reported significantly higher guilt-proneness than men, and GLs were significantly more guilt-prone than bisexuals. Comparisons among the four sexual identity groups indicated an overall significant difference. A post-hoc Bonferroni test[2] indicated that lesbian women's guilt-proneness was significantly higher than guilt-proneness reported by bisexual men; the other groups did not differ significantly.

Internalized heterosexism—ANOVA results indicated that men were significantly more likely than women, and bisexuals were more likely than GLs to report higher scores of IH. In comparisons among the four sexual identity groups, we found an overall significant difference in mean IH scores. Post-hoc tests indicated that the mean IH score for bisexual men was significantly greater than the mean IH scores reported by the other sexual identity groups.

Alcohol and illicit substance use—ANOVA comparisons for alcohol severity scores indicated that men had significantly higher scores than women on the AUDIT. Comparisons between GLs and bisexuals indicated a difference approaching significance, with bisexuals reporting higher scores than GLs. Alcohol severity scores also were significantly different among the four sexual minority groups. Post-hoc tests indicated that bisexual men reported significantly higher mean AUDIT scores than lesbians; no other significant differences between groups were found.

We conducted a series of chi-square tests (using Yates Continuity Correction when appropriate) to examine group differences in marijuana and cocaine dependence and severe dependence (Table 4). Results indicated that a significantly greater proportion of men (50.8%) met criteria for marijuana dependence as compared to women (36.6%). Gender differences were not found for severe marijuana dependence. However, we found that a significantly higher proportion of bisexuals (51.5%) than GLs (35.1%) reported patterns of marijuana use indicative of dependence, and a higher proportion of bisexuals (20.6%) than GLs (10.8%) also met the criteria for severe marijuana dependence. Comparisons of marijuana dependence and severe dependence among the four sexual identity groups revealed significant differences. Post-hoc results indicated that a greater portion of bisexual men (57.5%) met criteria for marijuana dependence as compared to bisexual women (46.7%), gay men (44.8%) and lesbians (25.5%). Likewise, differences were significant for severe marijuana dependence; however, in this instance, post-hoc comparisons indicated that the greatest proportion of severe dependence was among bisexual men (20.7%) and bisexual women (20.6%) compared to gay men (13.5%) and lesbians (8.0%).

Chi-square analysis (with Yates Continuity Correction) revealed no significant gender differences in cocaine or opiate dependence or severe dependence. However, as with marijuana outcomes, there were significant differences by sexual identity. A greater proportion of bisexuals (22.8% dependent, 12.4% severely dependent) compared to GLs

[2]All significant post-hoc results are reported at $p < .05$.

(10.3% dependent, 4.6% severely dependent) reported patterns of cocaine use that indicated dependence and severe dependence. A significantly greater proportion of bisexuals (21.9%) than GLs (14.9%) also met criteria for opiate dependence, but this effect was non-significant for severe opiate dependence. Finally, significant differences were found in patterns of use indicating cocaine dependence and severe dependence among the four comparison groups. Post-hoc results indicated that bisexual women (25.5% dependent, 14.2% severely dependent) had the greatest proportion of cocaine use that met criteria for dependence and severe dependence; this proportion was significantly higher when compared to bisexual men (19.5% dependent, 10.3% severely dependent), gay men (12.5% dependent, 6.3% severely dependent), and lesbians (8.2% dependent, 3.1% severely dependent).

Discussion

In general, our findings suggest that internalized heterosexism and shame-proneness are positively linked with problematic alcohol and drug use among sexual minorities. Furthermore, our results indicate that greater guilt-proneness is associated with less substance abuse among this at-risk population. As expected, our findings were consistent with previous work that has demonstrated associations of shame-proneness and guilt-proneness with substance use (Dearing et al., 2005) and with sexual minority studies revealing a relationship between substance misuse and internalized heterosexism (Amadio, 2006; Weber, 2008). The current study also contributes to theoretical speculations about the relationship between IH and substance use, with the added benefit of examining relationships among shame-proneness, guilt-proneness, and IH. Based on patterns of findings in previous research showing the negative implications of IH and/or shame-proneness (Allen & Oleson, 1999; Amadio, 2006; Bybee et al., 2009; Chow & Cheng, 2010; Dearing et al., 2005; Sherry, 2007; Stuewig et al., 2009; Tangney, 1995; Tangney et al., 1992) and the positive implications of guilt-proneness (Dearing et al., 2005, Tangney & Dearing, 2002), we propose that these factors may have an influence on severity of alcohol and drug misuse among sexual minority men and women. Furthermore, our work raises some questions, discussed further below, regarding possible theoretical and conceptual overlaps between shame-proneness and internalized heterosexism that suggest the need for further research on this topic.

The current study also contributes insights into gender and sexual identity differences in substance use and related risk factors among sexual minority participants. While research has recently begun to examine differential risk factors associated with various dimensions of sexual orientation (e.g., Mays & Cochran, 2001; McCabe et al., 2009; Trocki, Drabble, & Midanik, 2005), the need for additional studies that include a range of sexual minority experiences remains. The current study provided a unique opportunity to examine gender and sexual identity differences in alcohol severity scores, illicit drug use and related problems, IH, shame-proneness, and guilt-proneness. Our findings indicate cause for heightened concern for bisexuals compared to gay men and lesbians. As expected, we found that bisexual men and women, as a combined group, reported riskier behaviors than GLs, including higher alcohol severity scores, greater marijuana and cocaine dependence, and higher IH scores. Bisexuals also reported significantly lower guilt-proneness than GLs, suggesting that bisexuals may be less likely than GLs to employ productive and positive coping strategies when faced with stress or adversity. In other words, consistent with other research indicating that guilt-proneness serves an adaptive function, higher guilt-proneness among GLs may serve as a protective factor against substance misuse, while lower guilt-proneness among bisexuals may heighten their vulnerability to substance misuse. This interpretation would help to explain higher rates of substance use misuse among bisexuals compared to GLs in the current study. Given the need for further research about coping strategies utilized by sexual minorities in response to societal stigma, our study contributes

insights about how responses to stress and stigma may result in not only maladaptive (in the case of shame-prone individuals), but also potentially beneficial (in the case of guilt-prone individuals) outcomes.

Measurement Implications

A variety of measurement instruments have been used in previous studies to assess global shame- and guilt-proneness, but the underlying conceptual nuances of shame and guilt have often resulted in inaccurate or inadequate measurement (Rizvi, 2010; Tangney & Dearing, 2002). Furthermore, because shame and guilt often occur concurrently, but tend to have differing implications, it is important not only to use well-validated measures, but also to measure and account for both emotional dispositions simultaneously. The current study addresses these concerns by using a psychometrically-sound measure of shame- and guilt-proneness and thus provides foundation for comparison with future studies.

Furthermore, the pattern of correlations of IH with shame-proneness and guilt-proneness in our data suggest the need for further thought about the conceptual distinctions among these three constructs. Additional studies and more nuanced measures of IH will contribute to a better understanding of experiences of shame-proneness, guilt-proneness, and IH among sexual minorities, particularly as these concepts relate to sexual identity. It seems possible that IH contributes to the portion of shame-proneness that specifically relates to being a sexual minority, which may make sexual minority individuals vulnerable to higher levels of overall shame-proneness than heterosexual individuals. This interpretation is consistent with the possibility that the cognitive experience of internalized heterosexism may result in the emotional outcome of domain-specific shame (i.e., shame related to specific triggers). Domain-specific shame has received limited attention by researchers (as discussed in, Tangney, Stuewig, & Mashek, 2007) but holds promise for disentangling the relationship between IH and shame. As pointed out by Rizvi (2010), there is a tremendous amount of variability in the way that individuals respond to potential specific shame cues. Similarly, Brown (2007a) has identified 12 categories of common shame triggers (e.g., body image, parenting, aging) that affect different people to varying degrees. Two of Brown's categories relevant to the present research are sex and being stereotyped or labeled. Although our findings indicated that overall shame-proneness is related to IH, it seems likely that even stronger relations may be evident if using a measure of shame-proneness that includes domain-specific aspects of shame. We are unaware of any such measures that pertain to shame resulting specifically from sexual identity concerns. Thus, additional measurement development efforts pertaining to IH and domain-specific shame could help clarify the relationship of these two constructs.

Intervention Implications

In general, results of the current study are consistent with the idea that guilt-proneness tends to be a healthy emotional style, whereas shame-proneness and IH tend to be associated with problems in a variety of life areas. Based on our speculation that IH may be a cognitive component contributing to overall shame-proneness, the current study findings suggest that intervention efforts to reduce shame (e.g., Brown, 2007b; Gilbert & Procter, 2006; Rizvi & Linehan, 2005) combined with strategies to enhance the protective nature of guilt-proneness, could be developed and tested as substance abuse interventions. Furthermore, we would argue that bisexuals may be a particularly important group to target for these interventions. Comparisons in the current study among the four sexual identity groups suggest that lesbians have lower IH and may be at lowest risk for problematic drug and alcohol use compared to other sexual identity groups. Furthermore, lesbians report the highest guilt-proneness scores (significantly higher than bisexual men), suggesting the need to further investigate whether guilt-proneness among lesbians functions as a buffer against societal stigma and associated

problems. Lesbians may serve as an important source of information in our quest to identify intervention strategies to reduce risky substance use among sexual minorities. Moreover, our findings, combined with prior research indicating IH's negative influence on health outcomes (as reviewed by Williamson, 2000), suggest that interventions aimed at reducing shame and enhancing guilt could be adapted and strengthened for use among sexual minorities by incorporating strategies to reduce IH. Bisexual men, in particular, would benefit from risk reduction interventions, as our findings indicated that they had higher levels of IH, higher alcohol severity scores, and were more likely to report patterns of marijuana use indicative of dependence than gay men, lesbians, or bisexual women.

The literature pertaining to culturally-competent addiction treatment indicates that therapists are already sensitized to linkages between IH and negative psychological outcomes among sexual minorities. Therapists commonly target shame and guilt as roadblocks to recovery, although—as we've suggested earlier in this paper—these concepts are conceptually vague in much of the empirical literature. Cabaj (2000), for example, refers to the negative internal state experienced by some sexual minority addicts as "dual oppressions" resulting from internalized homophobia and substance abuse. Moreover, therapists often conflate shame and guilt, depicting guilt as an entirely negative state that hinders healthy psychological adjustment (e.g., Cabaj, 2000). It was our goal in this paper to provide conceptually-sound distinctions between shame-proneness and guilt-proneness as they relate to alcohol and drug problems among sexual minorities. Findings in this study provide support for the hypothesis that shame acts as a risk factor while guilt may function as a protective factor against alcohol and drug problems among sexual minorities. These results have important implications for therapists working with sexual minority clients because they suggest that therapists must be sensitive to the differences between shame and guilt in general and as related to experiences of sexual minority stigma expressed by their clients. Therapeutic sensitivity to the consequences of heterosexism for their sexual minority patients, and recognition of the potentially differential outcomes associated with shame and guilt, can lend important insights into patients' coping styles and provide useful points of intervention for therapists to help sexual minority individuals effectively manage and minimize harmful behaviors associated with external and internalized heterosexism (e.g., substance misuse). So, for example, these distinctions between shame- and guilt-proneness can be useful knowledge from the perspective of an addictions counselor in helping their sexual minority clients overcome risky alcohol and substance use. Furthermore, shame-proneness, guilt-proneness, and IH also may play a role in individual decisions to seek treatment related to alcohol or substance abuse. Consequently, future studies also are needed to better understand the role of shame-proneness, guilt-proneness, and IH in alcohol-related help-seeking behaviors among sexual minorities.

Limitations & Strengths of the Current Study

Results and findings from this study help us understand various factors related to alcohol severity scores and drug use and dependence among the current community sample of 389 sexual minority men and women, but a larger, random sample would be needed in order to make claims about generalizability. Similarly, the generalizability of findings is limited by eligibility constraints dictated by the current study. The exclusion of adolescents and adults over the age of 35 limits interpretation of how age may play a role in the intersections among shame, guilt, IH, and substance related problems. One could speculate that these relationships may be more prevalent among older sexual minorities, who may have come out during a time when being a sexual minority was stigmatized to a greater extent. Our focus on self reports of sexual identity also prevents us from knowing how these factors operate among other groups of sexual minorities who may not self-identify as gay, lesbian, or bisexual but whose sexual behaviors or desires that are not exclusively heterosexual.

Our results indicate high levels of alcohol use and above average illicit drug use (Substance Abuse and Mental Health Services Administration, 2008) among our participants. Specifically, the rates of alcohol dependence in the current community-based study were higher than those found in national prevalence studies of sexual minority alcohol use (e.g., McCabe, et al., 2009). It is possible that participants in the current study, who identify as gay, lesbian, or bisexual and reside in a predominantly blue-collar urban area, have been exposed to higher levels of sexual minority stigma than participants in other studies. The high rate of unemployment among our participants may be another factor influencing their hazardous patterns of alcohol and substance use. However, because it is beyond the scope of the current study to examine these possibilities, the reasons for high rates of substance use compared to those found in national studies remains a question for consideration in future studies.

The cross-sectional design of the study prohibits us from determining causal links among our variables; longitudinal research studies would be particularly helpful for examining how these factors vary across time within individuals. The current study modified the NHAI (Nungesser, 1983) measurement instrument for use with men and women who identified as gay, lesbian, or bisexual. The NHAI was originally designed to assess internalized experiences of stigma among gay men; therefore, despite excellent internal consistency for the IH measure in the current study, it is advisable that researchers also develop and utilize more comprehensive measures that better capture biphobia and women's experiences of IH (e.g., Szymanski & Chung, 2002). Lastly, our understanding of the relationships among shame-proneness, guilt-proneness, alcohol severity, drug use and related problems, and IH garnered in the current study would be strengthened in future studies that capture changes across time in a wider array of psychological and social variables (e.g., stressful life circumstances, social support, mental health) potentially associated with elevated rates of alcohol and drug-related problems among sexual minority men and women.

Despite these limitations, the current study features a number of unique strengths. This is one of the first known studies to use a well-validated measure (TOSCA-3) to systematically examine shame-proneness and guilt-proneness as distinct constructs among sexual minorities. Participants' reports on this measure allowed us to examine previously hypothesized relationships among shame-proneness, guilt-proneness, and IH in our sample. We found evidence to suggest that all three variables may play an important role in substance use problems among this vulnerable population. Lastly, group comparisons based on sexual identity and gender in the current study further support a growing body of research that suggests bisexual men and women may be at higher risk than gay men and lesbians for experiencing a range of risks and negative outcomes. The reasons for this additional vulnerability constitute an interesting area for further investigation.

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Table 1

Selected Demographic Characteristics of Study Participants by Sexual Identity and Gender

	Gay Men (*n* =97)	**Lesbians (*n* = 98)**	**Bisexual Men (*n* =87)**	**Bisexual Women (*n* = 107)**	**GLs (n = 195)**	**Bisexuals (n = 194)**
Mean Age in Years (*SD*)	24.7 (4.3)	25.1 (4.4)	23.9 (4.1)	23.9 (4.3)	**24.9 (4.4)** *	**23.9 (4.2)** *
Mean Years of Education (*SD*)	14.2 (2.7)	14.4 (2.7)	12.5 (2.1)	13.2 (2.8)	**14.3 (2.7)** **	**12.9 (2.5)** **
Ethnicity (%)						
White/Not Hispanic	57.7	66.3	44.8	65.4	**62.1**	**56.2**
African-American/Not Hispanic	28.9	20.4	18.4	21.5	**24.6**	**20.1**
Hispanic/Latino	7.2	3.1	20.7	6.5	**5.1**	**12.9**
Multi-Ethnic	5.2	9.2	14.9	4.7	**7.2**	**9.3**
Other	1.0	1.0	1.2	1.9	**1.0**	**1.5**
Currently Employed (%)	53.6	68.4	44.8	56.1	**61.0**	**51.0**
Annual household income (%)						
<$10,000	39.2	42.9	62.1	53.3	**41.0**	**57.2**
$10,001–25,000	33.0	37.8	28.7	34.6	**35.4**	**32.0**
$25,001–50,000	24.7	16.3	8.0	6.5	**20.5**	**7.2**
$50,001–75,000	3.1	3.1	0	0.9	**3.1**	**0.5**
Marital Status (%)						
Single/never married	57.8	31.6	50.7	53.3	**45.6**	**51.5**
Partnered/married	40.0	68.4	44.0	43.5	**53.3**	**44.3**

Note: $N = 389$. Table 1 presents demographic data broken down by gender/sexual identity (gay men, lesbians, bisexual men, and bisexual women) on the left side of the table, and in bold text by sexual identity collapsed across gender (gay men/lesbians, bisexual men/women) on the right side of the table (as related to the group distinctions made throughout the paper).

* Bisexuals were significantly younger than GLs, $F(1, 388) = 4.9$, $p < .05$.

** Bisexuals reported significantly lower educational attainment than GLs, $F(1, 383) = 27.6$, $p < .001$.

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Table 2

Pearson Correlations among Key Variables

	Bivariate Shame	Bivariate Guilt	Semi-Partial Shame	Semi-Partial Guilt	Internalized Hetero.	Alcohol Severity	Marij. Dep.	Severe Marij. Dep.	Opiate Dep.	Severe Opiate Dep.	Cocaine Dep.	Severe Cocaine Dep.
Bivariate Shame	—	.429**	N/A	N/A	.090	.048	−.021	.014	.066	−.004	.091	.112*
Bivariate Guilt		—	N/A	N/A	−.211**	−.109*	−.206**	−.178**	−.119*	−.111*	−.099	−.105*
Semi-Partial Shame			—	N/A	.196**	.105*	.075	.101*	.130*	.049	.148**	.174**
Semi-Partial Guilt				—	−.273**	−.144**	−.218**	−.205**	−.163**	−.121*	−.153**	−.170**
Internalized Hetero.					—	.144**	.132*	.170**	.028	−.020	.073	.129*
Alcohol Severity						—	.232**	.275**	.182**	.111*	.231**	.178**
Marijuana Dependence							—	.494**	.230**	.172**	.257**	.238**
Severe Marijuana Dep.								—	.087	.081	.097	.150**
Opiate Dependence									—	.726**	.453**	.381**
Severe Opiate Dep.										—	.343**	.255**
Cocaine Dependence											—	.686**
Severe Cocaine Dep.												—

Note: $N = 371$. Correlation results are presented for bivariate shame and guilt; however, the semi-partial shame and guilt variables were used to interpret analyses, as described in the text. For all drug dependence variables: 0=No, 1=Yes; Internalized Heterosexism: higher scores = more internalized heterosexism; Alcohol Severity: higher scores = greater alcohol severity. Because semi-partial correlations involve using residual values (e.g., shame with the variance for guilt partialled out), correlations of semi-partial values with non-residualized values are not statistically meaningful (i.e., N/A).

* $p < .05$;

** $p < .01$.

Table 3

Mean (SD) and Group Differences for Key Variables

	Men ***n*** **= 184** ***M*** **(*SD*)**	**Women** ***n*** **= 205** ***M*** **(*SD*)**	**Gays/ Lesbians** ***n*** **= 195** ***M*** **(*SD*)**	**Bisexuals** ***n*** **= 194** ***M*** **(*SD*)**	**Gay Men** ***n*** **= 97** ***M*** **(*SD*)**	**Bisexual Men** ***n*** **= 87** ***M*** **(*SD*)**	**Lesbians** ***n*** **= 98** ***M*** **(*SD*)**	**Bisexual Women** ***n*** **= 107** ***M*** **(*SD*)**	**Total** ***N*** **= 389** ***M*** **(*SD*)**
SHAME	2.62 (.68)	2.79 (.71)	2.74 (.70)	2.67 (.70)	2.67 (.68)	2.56 (.68)	2.81 (.71)	2.76 (.71)	2.71 (.70)
ANCOVA	ns		ns		ns				
GUILT	3.71 (.61)	3.95 (.61)	3.62 (.60)	3.76 (.64)	3.79 (.57)	3.62 (.64)	4.04 (.61)	3.87 (.61)	3.84 (.62)
ANCOVA	$F(1, 387) = 10.32^{***}$		$F(1, 387) = 5.15^{*}$		$F(3, 384) = 5.55^{***}$ Posthoc: L > BM				
INTER-NALIZED HETERO.[1]	67.84 (20.43)	59.11 (16.85)	57.95 (15.80)	68.70 (20.67)	62.27 (17.46)	74.16 (21.77)	53.64 (12.63)	64.21 (18.65)	63.27 (19.12)
ANOVA	$F(1, 371) = 20.36^{***}$		$F(1, 371) = 31.81^{***}$		$F(3, 371) = 19.68^{***}$ Posthoc: BM > GM, L, BW				
ALCOHOL SEVERITY[2]	11.63 (7.37)	10.20 (6.84)	10.21 (7.10)	11.55 (7.10)	10.65 (7.08)	12.74 (7.58)	9.77 (7.13)	10.59 (6.58)	10.87 (7.13)
ANOVA	$F(1, 387) = 3.97^{*}$		$F(1, 386) = 3.47^{\dagger}$		$F(3, 387) = 2.90^{*}$ Posthoc: BM > L				

[1] Possible range: 31–155.

[2] Possible range: 1–40. *$p < .05$, **$p < .01$. Note: “GM” refers to gay men, “BM” refers to bisexual men, “L” refers to lesbians, and “BW” refers to bisexual women.

* p < .05,

*** p < .001,

† p = .06.

Table 4

Chi-Square Results for Gender and Sexual Identity Differences in Drug Dependence

Drug Type	Gender (Men vs. Women, *df* = 1)	Dichotomous Sex ID (GLs vs. Bisexuals, *df* = 1)	Sex ID/Gender (GM vs. BM vs. L vs. BW, *df* = 3)
Marijuana Dependence	$\chi^2 = 7.98^{*}$ φ = −.14 (small effect)	$\chi^2 = 10.75^{***}$ φ = .17 (small effect)	$\chi^2 = 20.35^{***}$ *V* = .23 (large effect)
Severe Marijuana Dependence	$\chi^2 = .39^{ns}$	$\chi^2 = 7.02^{*}$ φ = .14 (small effect)	$\chi^2 = 8.08^{*}$ *V* = .14 (medium effect)
Opiate Dependence	$\chi^2 = 1.39^{ns}$	$\chi^2 = 3.08^{*}$ φ = .09 (small effect)	$\chi^2 = 4.45^{ns}$
Severe Opiate Dependence	$\chi^2 = 1.22^{ns}$	$\chi^2 = 2.32^{ns}$	$\chi^2 = 6.48^{ns}$
Cocaine Dependence	$\chi^2 = .12^{ns}$	$\chi^2 = 10.93^{***}$ φ = .17 (small effect)	$\chi^2 = 12.81^{**}$ *V* = .18 (medium effect)
Severe Cocaine Dependence	$\chi^2 = .05^{ns}$	$\chi^2 = 7.54^{*}$ φ = .14 (small effect)	$\chi^2 = 9.06^{*}$ *V* = .15 (medium effect)

Note: *n* ranged from 387–388 in analyses. “GM” refers to gay men, “BM” refers to bisexual men, “L” refers to lesbians, and “BW” refers to bisexual women. The phi coefficient was reported for 2 by 2 tables and Cramer’s *V* was reported for tables larger than 2 by 2; effect size was interpreted using Cohen’s criteria (1988).

ns not significant,

* p < .05,

** p < .01,

*** p < .001.