CLIENT-GUIDED TREATMENT DEVELOPMENT FOR PROBLEM DRINKERS OF VARIOUS

SEXUAL ORIENTATIONS

By

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ABSTRACT OF THE DISSERTATION

Client-guided Treatment Development for Problem Drinkers of Various Sexual Orientations

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The present study worked from a social learning perspective, addressed several of the methodological limitations of previous research, and provided empirical data on some of the unanswered questions related to drinking habits, barriers to treatment seeking, and treatment preferences in the lesbian/gay/bisexual community. Participants were recruited over the Internet from 5/19/2007 to 5/31/2008 for a web-based survey that provided personalized feedback on drinking habits to respondents. Overall, the sample (n = 218) was ethnically diverse, middle-aged, employed, college educated, 71% female, and 72% heterosexual. Though several sex differences and sexual orientation differences were found in reported rates of substance use, the groups appeared more similar than different in terms of motivation for treatment, barriers to treatment seeking, and treatment preferences. Severity of drinking was correlated with levels of drinking in social networks, and heterosexual respondents reported higher proportions of abstainers in their social networks than lesbian/gay/bisexual respondents. Results suggest individuals do not seek treatment for a wide range of reasons, including stigma, not seeing the need for treatment, and having negative thoughts about treatment. In terms of treatment preferences, 40% preferred professional outpatient treatment, 29% preferred a self-help group, 15% preferred a self-help book,

and 16% preferred computerized treatment either online or with computerized sessions. Clinical

implications and future research directions are discussed.

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Introduction

Alcohol and drug abuse and dependence are major public health concerns that affect individuals, families, and communities. Public safety is decreased by the prevalence of drunk driving, domestic violence, and alcohol-related aggression. In 2006, heavy drinking (five or more drinks on five or more occasions in the past month) was reported by 6.9% of Americans aged 12 or older, or 16.9 million people. Alarmingly, over 24.4% of Americans between the ages of 18 and 25 reported driving under the influence of alcohol in the past year (Substance Abuse and Mental Health Services Administration [SAMHSA], 2007). The prevalence of problem drinking and drunk driving drive fuel prevention and treatment efforts at the national and local levels. Researchers and treatment providers have been trying to improve treatment services with two broad strategies: 1) improving the effectiveness of treatment services by tailoring them for specific needs and populations, and 2) reducing factors (ie. barriers) that prevent individuals from seeking available treatment services. This study examined treatment preferences and barriers to help seeking reported by individuals worried about their drinking habits. Special attention was given to the subpopulation of individuals who identify as lesbian, gay, or bisexual (LGB)[1]. The LGB population is particularly difficult to access, and substance use in the LGB population is a particular concern since the Centers for Disease Control and Prevention (CDC) reported that the majority of reported HIV/AIDS infections (84%) are in men who have sex with men and in intravenous drug users (CDC, 2005). Additionally, there is higher risk for HIV infection for individuals with alcohol use disorders and HIV therapy for alcoholics is more successful if they stop drinking (National Institute on Alcohol Abuse and Alcoholism, 2002).

Despite these social trends, psychosocial research could be viewed as somewhat heterosexist when heterosexism is defined as:

"…conceptualizing human experience in strictly heterosexual terms and consequently

ignoring, invalidating, or derogating homosexual behaviors and sexual orientation, and

lesbian, gay male, and bisexual relationships and lifestyles" (Herek, Kimmel, Amaro, &

Melton, 1991).

Psychosocial research may be heterosexist when it assumes that participants are heterosexual,

ignores LGB issues, or excludes LGB participants. Unfortunately, most researchers do not assess

or report sexual orientation of participants. Additionally, same-sex couples are routinely excluded

from research on couples therapy. More generalizable research would include the LGB population.

Not only is there only limited understanding of LGB substance use, but there also is a lack of

empirical research on treatment issues of LGB substance abusers. The present study addressed

some of the limitations of prior studies. It assessed drinking patterns, alcohol-related problems,

correlates of heavy drinking, perceived barriers to seeking treatment and treatment preferences of

problem drinkers of various sexual orientations.

Substance Use from a Social Learning Perspective

Social learning theory (Bandura, 1977; Baucom & Epstein, 1990; Rotter, 1954) posits that

behavior is controlled by antecedent stimuli and behavior-specific consequences, that behavior is

learned through observation and imitation, and that cognition mediates the learning and

presentation of the behavior. Researchers and clinicians working from a social learning theory

perspective view drinking habits in terms of peer alcohol use, triggers that lead to urges or drinking,

psychosocial and physical consequences of drinking, and thoughts/expectancies about alcohol

use. Research clearly supports the role of peer and partner drinking in shaping individual patterns

of use (e.g. McCrady, 2004; Roberts & Leonard, 1998) and treatment of alcohol use disorders

often includes close examination of social network drinking. The notion of "peer pressure" to drink

or use drugs often is thought of only in the context of adolescent substance use. However, the

influence of peer drinking habits clearly extends into adulthood. Research has shown that shortly after marriage, the drinking habits of each partner become more similar. More specifically, within the first year of marriage partners decrease the frequency of their drinking and drink less often without each other (Demers, Bisson, & Palluy, 1999; Leonard & Eiden, 1999; Leonard & Rothbard, 1999; Roberts & Leonard, 1997; Roberts & Leonard, 1998). Additionally, there is some evidence that heavy drinking and alcohol dependence of one spouse represent risk factors to the other spouse, with the assumption that imitation or social contagion contributes to this elevated risk (McLeod, 1993). The effects of social network substance use are not limited to romantic partners or spouses. There is a strong correlation between drinking habits and perceptions of peer drinking in college samples (e.g. Fromme & Ruela, 1994). Research has shown that support for drinking, often quantified based on the drinking status of important peer and family relations, is associated with poorer treatment outcome (Beattie & Longabaugh, 1997). Treatment for substance use problems often includes changes to social networks to exclude users and include abstainers. Treatment from a social learning perspective attempts to identify antecedents/triggers of drinking episodes (e.g. specific people, emotions, places) and draws attention to negative consequences of problematic drinking (e.g. legal problems, depression, relationship distress). An additional component of treatment is the examination of cognitions/expectancies that guide decisions to use or abstain from alcohol (e.g. Longabaugh et al., 2005; McCrady, 2001).

Working from a social learning perspective leads researchers and clinicians to predict differences between LGB and heterosexual drinking for several reasons. First, the LGB community is unique and often centered on activities that involve drinking and drug use (e.g. bars, circuit parties). This could lead to social networks of LGB individuals that consist of heavier substance users than those of heterosexual individuals. The nature of the LGB community also could lead to it being more difficult for LGB individuals to avoid triggers for drinking (e.g. bars, drinking buddies).

However, the majority evidence about the importance of alcohol-related activities in the LGB community is anecdotal and there are few empirical data addressing social network differences between LGB and heterosexual samples. Second, there seem to be additional triggers to drinking and drug use that may be more prevalent in the LGB population (e.g. to deal with stigma, to enhance sexual experiences). Finally, expectancies about drinking/drug use and perceived normality of use in the LGB community could increase the likelihood of LGB individuals making the decision to drink or use drugs. The present study addressed drinking patterns from a social learning perspective.

Historically, substance use problems were thought to be more prevalent within LGB populations. Earlier research supported this notion, reporting that up to one-third of gay men and two-thirds of lesbians had drinking problems. However, as Bux (1996) drew attention to fatal methodological flaws in earlier research (e.g. recruitment of participants from bars, lack of appropriate control groups), researchers began using more representative samples and more sophisticated methodologies to examine patterns of substance use within the LGB population. After a thorough review and close examination of the research in light of methodological flaws, Bux (1996) concluded from the extant literature that four main trends were evident: 1) lesbians and gay men appeared to be less likely than heterosexuals to abstain from alcohol, 2) gay men did not appear to be at higher risk for alcohol problems than heterosexual men, 3) lesbians appeared to be at higher risk for heavy drinking and alcohol-related problems than heterosexual women, and 4) heavy drinking and alcohol-related problems appeared to be declining among gay men. Additionally, Bux (1996) concluded that there was little empirical support for the popular beliefs that the LGB lifestyle, gender role conflict, or non-acceptance of LGB identity contributed to substance use problems. However, he did find some support for the belief that older age and female gender were not protective factors in LGB populations; older LGB individuals did not appear to "mature

out" of substance use and gender differences in substance use patterns were less evident in the LGB population. Using conclusions drawn by Bux (1996) as a benchmark, this study evaluated the empirical evidence on LGB drinking and drug use that has emerged since 1996 and examined gaps in the extant research and remaining methodological problems within the field. Substance use patterns and factors related to substance use and substance-related problems in the LGB population were discussed in terms of empirical support, unanswered questions, and implications for treatment of LGB individuals with substance use problems.

Differences between LGB and the General Population

As noted, Bux (1996) concluded that lesbians and gay men appeared to be less likely to abstain from alcohol than their heterosexual counterparts, and that lesbians, but not gay men, appeared to be at elevated risk for heavy drinking and alcohol-related problems compared to their heterosexual counterparts. Recent research has used larger and more representative samples than earlier research, but seems to generally support the prior conclusion that heterosexual individuals are more likely to abstain from alcohol and that homosexually-experienced women report higher rates of alcohol problems than exclusively heterosexual women.

Cochran, Keenan, Schober, & Mays (2000) and Cochran, Ackerman, Mays, & Ross (2004) analyzed data from the 1996 National Household Survey on Drug Abuse (Substance Abuse and Mental Health Services Administration [SAMHSA], 1996) to examine differences in substance use between homosexually-experienced (reported a same-sex sexual partner in the past year) and exclusively heterosexual (reported only opposite-sex sexual partners in the past year) adults.[2] Results from these studies must be considered in light of several methodological limitations: recent sexual behavior was used as a proxy for sexual orientation, only past year sexual partners were considered, and adults who did not report sexual activity in the past year were excluded from analyses. Therefore, exclusively heterosexual respondents may have had a history of same-sex

partners and cannot be assumed to be strictly heterosexual. Additionally, sexual behavior is only one aspect of sexual orientation, which also includes sexual identification, sexual attraction, and sexual fantasies. Cochran et al. (2000) reported no difference in alcohol use, alcohol-related problems, or treatment use between men of different sexual experiences. However, homosexually-experienced women reported heavier lifetime, past year, and past month alcohol use than exclusively heterosexual women. Women who reported same-sex partners reported drinking more frequently, consuming larger amounts of alcohol, and getting "drunk" more than women who reported only opposite-sex partners. Additionally, homosexually-experienced women were more likely to suffer from "alcohol dependency syndrome"[3] and to have received treatment for their drinking.

Cochran et al. (2004) reported that men and women who were homosexually-experienced consistently reported higher rates of lifetime use of illicit drugs than exclusively heterosexual individuals. However, these differences were not significant for past month drug use. Homosexually-experienced women were more likely to report one or more symptoms of drug dependence (primarily marijuana) than exclusively heterosexual women, and homosexually-experienced men were more likely to report one or more symptoms of drug dependence (primarily marijuana, cocaine, and hallucinogens) than exclusively heterosexual men. Only homosexually-experienced women were more likely to suffer from drug dependency syndrome than their exclusively heterosexual counterparts (Cochran et al., 2004). Thus, results from Cochran et al. (2000) and Cochran et al. (2004) suggest that women with a history of same-sex sexual behavior are more likely to have alcohol and drug problems than recently exclusively heterosexual women and are more likely to seek treatment for them.

Burgard, Cochran, & Mays (2005) used a large probability sample, the 1998-2000 California Women's Health Survey, to assess substance use patterns of women based on their

sexual experiences. Similar to the studies described above, sexual behavior was used as a proxy for sexual orientation, though this study considered lifetime as well as past year sexual partners. Compared to women who reported only male sexual partners in their lifetime, those who were homosexually-experienced were more likely to smoke cigarettes, drink once or more per week, and binge drink. Results show that homosexually-experienced women reported drinking more times per month and more heavily per occasion. It is noteworthy that these differences were driven mainly by the 26-35 year old cohort, but that the 46 and older cohort also exhibited differences in substance use patterns. Therefore, older age does not appear to be a protective factor against substance use in homosexually-experienced women.

Drabble, Midanik, & Trocki (2005) used a nationally representative sample, the 1999-2001 National Alcohol Survey, to assess patterns of alcohol use and treatment-seeking. This study used measures of both sexual behavior and self-reported sexual orientation to create four categories of sexual orientation: gay/lesbian identity, bisexual identity, heterosexual identity with reports of same-sex partners, and exclusively heterosexual. Of the sample (n = 7,612), 95.5% were classified as exclusively heterosexual, 2.0% as heterosexual with same-sex partners, 1.1% bisexual, and 1.2% gay/lesbian. In terms of alcohol use, exclusively heterosexual men were more likely to be abstainers than gay men, and exclusively heterosexual women were more likely to be abstainers than their lesbian, bisexual, or heterosexual with same-sex partner counterparts. As reported in earlier research, lesbian and bisexual women were more likely than exclusively heterosexual women to report alcohol-related problems (e.g. arguments, angry partner, occupational or legal problems) and seek help for their drinking. These differences were not evident in men. In fact, among drinkers, when compared to exclusively heterosexual women, lesbian women were 7 times more likely (bisexual women 6.5 times more likely) to meet DSM-IV criteria for alcohol dependence, 11 times more likely (bisexual women 8 times more likely) to report two or more

alcohol-related social problems, and 8 times more likely (bisexual women 4 times more likely) to seek help for their drinking (Drabble et al., 2005). These results suggest that lesbian and bisexual women are at elevated risk for alcohol problems and are much more likely to seek treatment for their drinking.

In summary, current research seems to support previous findings and suggests that homosexually-experienced men and women are less likely to abstain from alcohol consumption and more likely to report lifetime use of illicit drugs than exclusively heterosexual men and women. Beyond that, substance use patterns do not appear to differ between exclusively heterosexual and homosexually-experienced men, with one exception; homosexually-experienced men appear to be more likely than exclusively heterosexual men to report one or more symptoms of drug dependence. In contrast, homosexually-experienced women appear to exhibit more substance use problems than their exclusively heterosexual counterparts. Specifically, homosexually-experienced women are more likely to smoke and drink heavily, report more alcohol-related social problems, report more symptoms of alcohol and drug dependence, are more likely to suffer from alcohol and drug dependency syndromes, are more likely to meet DSM-IV criteria for alcohol dependence, and are more likely to seek treatment for their drinking.

Differences within the LGB Population

Older research was limited by the fact that it often did not address differences within groups of LGB individuals beyond the lesbian/gay male distinction (Bux, 1996). Though recent research shows that homosexually-experienced men and women are less likely to abstain from alcohol than their heterosexual counterparts and that homosexually-experienced women are at elevated risk of problematic substance use and substance-related problems than exclusively heterosexual women, significant variation exists within the LGB population. Research has shown that gay men appear to be at higher risk for drug use problems than problem drinking, that

geographic region and contexts of use seem to influence substance use patterns of LGB individuals, and that variations of sexual identity/behavior, especially in women, seem to be related to different patterns of substance use.

Stall et al. (2001) used a probability sample of households in the San Francisco, New York City, Chicago, and Los Angeles areas, the 1996-1998 Urban Men's Health Study, to examine substance use patterns in men who have sex with men (MSM). About 8.5% of households disclosed that one of the inhabitants was a MSM as defined as either a gay/bisexual identity or having had sex with a male partner since the age of 14. Of the MSM who completed the survey (n = 2,172), nearly 90% reported using alcohol in the past six months and 52% reported using illicit drugs in the same time period. Only 8% reported frequent/heavy alcohol use (5 or more drinks at least once per week). In contrast, frequent drug use (at least once per week at any quantity) was reported by 19% and polydrug use (use of three or more drugs) was reported by 18% of the respondents. Younger age was indicative of heavier drug use. It is noteworthy that there were significant regional differences in particular drug used; marijuana use was highest in San Francisco, cocaine use was highest in New York, and amphetamine use was highest in San Francisco and Los Angeles. These results, along with findings from Cochran et al. (2004), suggest that drug use is a more significant problem than alcohol use in young urban men who have sex with men than alcohol use due to higher rates of frequent drug use than heavy drinking.

Thiede et al. (2003) used convenience samples from Baltimore, Dallas, Los Angeles, Miami, New York, San Francisco, and Seattle to assess substance use in MSM between the ages of 15 and 22. Of the men interviewed (n = 3,492), 88% reported alcohol use in the past 6 months, and nearly 60% reported illicit drug use in the same time period. Weekly drug use was reported by 29% of respondents, though marijuana use accounted for 56% of the frequent drug use. Interestingly, MSM who self-identified as heterosexual or bisexual were more likely to report drug

use than those who self-identified as gay, and this was true regardless of level of "outness"[5] to their social networks. Again, regional patterns of drug use were evident with the most common drugs being cocaine in Miami, New York, and Baltimore, amphetamines in Los Angeles, San Francisco, and Seattle, and ecstasy in Dallas. Though these results are similar to Stall et al. (2001) in suggesting that illicit drug use is particularly common among young MSM, the findings from this study must be evaluated in light of its methodological limitations. The convenience sample was recruited through gay-identified public venues, biasing the sample to those who frequented these establishments. Interviews often were conducted in a van located on-site and blood samples were drawn from participants for HIV antibody testing. These methods are not only biased, but intrusive and could have further limited sample generalizability via self-selection for those willing to both accompany an interviewer to a van and provide a blood sample.

In a separate study described in the previous section, Burgard et al. (2005) reported that among homosexually-experienced women, those who reported recent bisexual behavior (reported recent same-sex and opposite-sex partners) were more likely to exhibit problem drinking than women with only recent opposite-sex partners, but that those with only recent same-sex partners were less likely to report binge drinking than those with only recent opposite-sex partners. These results suggest that bisexually active women are at higher risk for alcohol problems than women without a history of same-sex partners and homosexually-experienced women with no recent bisexual activity. Among homosexually-experienced women, those with only recent same-sex partners were less likely than those with only recent opposite-sex partners to report binge drinking (Burgard et al., 2005). These results are interesting in that differences in recent sexual activities appear to be important risk factors for substance use patterns in women.

In summary, recent empirical evidence suggests several variations in substance use patterns within the LGB population: 1) drug use may be a greater problem than alcohol use within

MSM, at least among urban MSM who frequent gay-specific venues; 2) there appear to be regional patterns in the drug use of MSM; specific drugs seem to be either more popular or more available in different areas of the U.S.; 3) MSM who self-identify as gay appear to be less likely to report drug use than MSM who identify as heterosexual or bisexual; 4) recent bisexual behavior in women with a history of female sexual partners seems to be associated with problematic drinking.

Factors Related to LGB Substance Use

Researchers and clinicians have suggested several possible explanations for elevated LGB substance use including internalized homophobia, social pressures, religious or familial turmoil, sub-cultural differences, and societal or cultural implications of being a sexual minority (Beatty et al., 1999; 2003; Bux, 1996; Finnegan & McNally, 2002). The two most commonly cited risk factors for elevated substance use in this population are the importance of the bar scene in LGB communities and minority stress, including discrimination and internalized homophobia (Hughes & Eliason, 2002). In his critical review of the literature, Bux (1996) concluded that there was little empirical support for the contentions that the LGB lifestyle, gender role conflict, or non-acceptance of LGB identity contribute to substance use problems, but findings did provide some support for the beliefs that older age and female gender were not protective factors in LGB populations. Instead, and possibly due to differences in gender roles in the LGB community, women and men are more similar than different. LGB individuals did not appear to "mature out" of substance use and gender differences in substance use patterns were less evident in LGB populations. Recent research generally supports these conclusions, and elaborates on risk factors in that non-Caucasian ethnicity does not appear to be protective against substance abuse for LGB individuals as it is in the general population. Additionally, social networks and contexts of drinking episodes appear to contribute to the likelihood of substance use problems in the LGB population (Hughes & Eliason, 2002).

Internalized homophobia. Internalized homophobia (IH) is an intrapsychic conflict involving negative feelings about one's own sexual orientation that are the result of society's stigmatization of LGB individuals (for review, see Herek, 2004). While the possibility that IH, associated with negative feelings and low self-worth, could be associated with substance use seems clinically appealing, most recent studies have found no association between IH and substance use problems (Gold et al., 2004; Thiede et al., 2003). In fact, most of the recent research has not examined the possible relationship between IH and psychopathology, perhaps due to the difficulty of measuring IH (for review, see Meyer, 2003).

Only one recent study reported a correlation between IH and substance use. Amadio & Chung (2004) conducted an anonymous survey of lesbian/gay, bisexual, and unsure adults (n = 207). Results from the survey suggested that for women only, lower levels of IH were associated with higher levels of alcohol, marijuana, and cigarette use. It was hypothesized that this unexpected inverse relationship could be the result of an association between lower levels of IH and higher levels of involvement in the LGB community (Amadio & Chung, 2004). However, methodological flaws blur the implications of the findings. Specifically, the convenience sample was recruited at a gay pride festival, the measures of substance use were created for and validated in an adolescent population, and different measures of IH were used for men and women. In light of these problems, the inverse relationship between IH and substance use in women should not be weighed heavily against the total lack of supporting evidence that IH is associated with substance use problems.

In the only other recent study to assess IH in relation to substance use, Thiede et al. (2003) concluded that IH was not associated with substance use in MSM between the ages of 15 and 22 (n = 3,492). Despite the large sample size, methodological problems with this study prevent the possibility of drawing firm conclusions. Specifically, a non-validated 4-item measure of IH was

used, the convenience sample was recruited from gay-identified public venues, interviews were conducted on-site, and participants were required to provide blood samples for HIV testing.

These recent studies seem to be consistent with Bux (1996); there is little empirical support for the contention that internalized homophobia, or non-acceptance of sexual minority status, is related to substance use in the LGB population. In fact, there appears to be more evidence that there is no relationship between internalized homophobia and substance use problems, though statistical issues prevent concluding that a null hypothesis is true. Additionally, IH is extremely difficult to measure because it is a constellation of thoughts and emotions. However, researchers have not examined emotional profiles of LGB individuals with substance use problems, and it is possible that specific emotions linked to IH (e.g. shame, anger) could be related to problematic drinking and drug use in the LGB population.

Social and demographic factors. LGB individuals face a unique set of social pressures due to their minority status. They often are ostracized from their families, peer groups, and religious organizations after they disclose their sexual minority status (Beatty et al., 1999). This separation can lead to minimal social support and feelings of isolation, both of which could lead to substance use. Additionally, LGB alcoholics may experience additional social pressures associated with being both a sexual minority and an alcoholic, two groups that are socially stigmatized (Colcher, 1982). This double-stigmatization may prevent LGB problem drinkers from seeking treatment. LGB communities represent a unique sub-culture that must be taken into consideration when studying substance use in this population since research supports the fact that alcohol and drug users mutually influence each other's substance use behaviors (for review see McCrady, 2004). Gay bars are one of the main social outlets in the LGB community (Beatty et al., 1999) and it is reasonable to assume that the majority of individuals who frequent these establishments drink some alcohol. Therefore, alcohol use in the LGB community may increase the sense of belonging

in this bar-oriented sub-culture (Beatty et al., 1999). While Bux (1996) concluded, based on empirical evidence available at that time, that there was little support for the LGB lifestyle contributing to problem drinking, more recent research has suggested that certain aspects of the LGB lifestyle are related to particular substance use patterns.

Greenwood, White, Page-Shafer et al. (2001) used data from the 1992-1993 San Francisco Young Men's Health Study to evaluate sociocultural correlates of heavy substance use. They identified 428 men (40% of the original sample) who identified as gay/bisexual or reported a male sexual partner in the past five years, and assessed the relationship between their substance use patterns and various sociocultural factors (e.g. occupation, education, attendance at gay bars). Results suggested that MSM who reported frequent-heavy alcohol use (five or more drinks at least once a week) were more likely to have a non-professional occupation, frequently attend gay bars, and report higher numbers of sexual partners. Interestingly, occupation was the strongest correlate even after education, bar attendance, and sexual habits were controlled. The strongest risk factor for frequent-heavy alcohol use in this sample was a service/blue-collar occupation. Additionally, MSM who never attended college and those who dropped out of college reported the heaviest use of alcohol and most frequent use of illicit drugs. It is important to note that these cross-sectional analyses prevent causal inferences, and therefore it is unknown whether less education leads to increased substance use or if heavy substance use leads to decreased likelihood of pursuing higher education. The strongest correlate of polydrug use was HIV status; MSM who were HIV+ and those who did not know their HIV status were more likely than those who were HIV- to report polydrug use, even when marijuana was excluded. It is reasonable to infer that HIV+ or unknown status is accompanied by emotional experiences that may be linked to elevated substance use. Taken together, results from Greenwood et al. (2001) suggest that for MSM in the San Francisco area, HIV positive or unknown status and less education are associated with more problematic

illicit drug use, whereas non-professional occupation, frequent gay bar attendance, more sexual partners, and less education are correlated with more problematic alcohol use.

Stall et al. (2001), using the 1996-1998 Urban Men's Health Study (see previous section for study details), evaluated the relationship between alcohol /drug use patterns and connection to gay culture. Results suggested that both low and high affiliation with gay culture is associated with heavy drinking and frequent illicit drug use. MSM who reported moderate levels of gay culture affiliation (measured by gay bar attendance and/or use of gay media sources) also reported the lowest levels of heavy drinking; more frequent attendance at gay bars and less frequent use of gay-oriented media were associated with heavier drinking and more alcohol-related problems. Perhaps LGB individuals who do not frequently view gay-oriented media are not aware of the risks related to substance use (e.g. HIV infection, health problems). Not surprisingly, frequent attendance at sex clubs/bath houses, higher numbers of sexual partners, and unprotected receptive anal sex were associated with frequent drug use or polydrug use. Two other factors that were related to alcohol use patterns were HIV status of family and friends and highest level of education. MSM who reported moderate numbers of HIV+ peers or family were more likely to be frequent-heavy drinkers than those who reported either a high or low number of HIV+ individuals in their social network. Perhaps LGB with low numbers of HIV+ peers are not as affected by negative emotional experiences that could be reasons for drinking, whereas those with high numbers of HIV+ peers have adjusted to the negative emotional experiences and no longer need to drink in order to cope with them or are more health conscious because medical vulnerabilities are more salient to them. Similar to findings from Greenwood et al. (2001), Stall et al. (2001) found that less educated MSM were twice as likely to be frequent-heavy drinkers. Taken together, results from Stall et al. (2001) suggest that for MSM, more problematic illicit drug use is associated with more sexual partners and unprotected sex whereas more problematic drinking is associated with very

high or very low levels of gay culture affiliation, moderate numbers of HIV+ peers and family members, and less education.

Results from Theide et al. (2003, see previous section for methodology) suggest that level of "outness" and ethnic differences are related to substance use patterns in MSM. This study revealed that MSM who were out to more than half of their social network evidenced higher levels of drug use. Since research has shown that alcohol and drug users mutually influence each other's substance use behaviors (for review see McCrady, 2004), it is reasonable to infer that this relationship is due to elevated substance use in the social networks of those MSM who exhibit heavier drug use. However, the relationship between social network substance use and personal substance use has not been studied adequately in the LGB population and a curvilinear relationship is a possibility. While ethnic differences in drugs of choice were less pronounced in this sample, lifetime use of cocaine and heroin was still lower in black than in Caucasian MSM. Thiede et al. (2003) suggested that the social networks are related to patterns of substance use, but that ethnic differences in substance use may not be as important in the LGB populations.

Trocki, Drabble, & Midanik (2005), using data from the 1999-2001 National Alcohol Survey, evaluated the role of drinking contexts in relation to sexual orientation. As was done by Drabble, Midanik, & Trocki (2005) using the same sample, respondents were classified based on sexual behavior and self-reported sexual identity into one of four categories: gay/lesbian identity, bisexual identity, heterosexual identity with reports of same-sex partners, and exclusively heterosexual identity. Assessment of drinking contexts included bars and parties at someone's home. Results suggested that men with a gay identity spent more time in bars than all other men, and there was a trend for bisexual men to spend more time at parties. Level of alcohol consumption did not differ between groups of men with different sexual identities regardless of the context of the drinking. Exclusively heterosexual women reported spending less time in bars than

women who were lesbian, bisexual, or heterosexual with reports of same-sex partners. Heterosexual women with a history of same-sex partners spent more time at house parties than other women. In bar and house party contexts, bisexual women drank more heavily than heterosexual women or lesbians. Heterosexual women with a history of same-sex partners drank more heavily than heterosexual women and lesbians, but not as much as bisexual women. Results from Trocki et al. suggest that gay men and lesbian/bisexual women spend more time at bars than their exclusively heterosexual counterparts. Intensity of drinking differed only between groups of women, and bisexual women appear to drink more than other groups of women.

In summary, several social and demographic factors appear to be related to substance use patterns in the LGB population as evidenced by recent research. There is little empirical support for the contention that internalized homophobia, or non-acceptance of sexual minority status, is related to substance use in the LGB population. There is evidence that gender, age, ethnicity, occupation, education, affiliation with gay culture, and HIV status of individuals and their social networks are related to substance use patterns in the LGB population. While perceived social support may not be limited in same-sex relationships, research has not specifically addressed this issue in relation to substance use.

Summary of Recent Research and Unanswered Questions

Patterns of substance use in the LGB population and factors related to those patterns suggest that there are as many differences within the LGB population as there are between the LGB and general populations. These findings are consistent with current views of substance abusers as a heterogeneous population. The clinical implications of unique LGB substance use patterns and factors associated with substance use in the LGB population must be considered, but current research does not seem to indicate that LGB substance abusers require specialized services since contemporary forms of alcohol/drug treatment suggest individualization based on

individual needs. It does seem, however, that clinicians treating LGB substance abusers need to be educated about LGB-specific patterns of substance use.

Based on research at the time, Bux (1996) stated that treatment programs were not justified in ignoring the unique needs of lesbian and gay male problem drinkers or alcoholics, and that treatment providers needed to be aware of current knowledge about sexuality, sexual orientation and the unique aspects of lesbian and gay male social and developmental experiences in order to provide the most effective treatment. In line with this recommendation, some clinicians and researchers have developed a rationale for separating LGB and heterosexual treatment programs, based on the assumption that LGB individuals need specialized treatment because of their unique subculture and life experiences (e.g. discrimination based on age, heterosexism, sexual behavior) (Beatty & Lewis, 2003; Finnegan & McNally, 2002). Researchers and clinicians often have voiced the view that populations that have experienced prejudice would be better served by clinicians with similar personal characteristics. There is some research suggesting that ethnic minorities who are matched with a therapists based on the same ethnic background have treatment retention than those not matched on ethnicity (Fujino, Okazaki, & Young, 1994), but other research has not found evidence for the importance of race or gender matching (Shin, Chow, Camacho-Gonsalves, Levy Allen & Leff, 2005; Sterling, Gottheil, Weinstein, & Serota, 1998, 2001). Similarly, there is anecdotal evidence that LGB clients would be best served by clinicians who are LGB themselves (Bux, 1996; Finnegan & McNally, 2002), but empirical data supporting this contention are lacking. In terms of a clinician's sexual identity, research reported by Burckell & Goldfried (2005) suggested that LGB individuals only consider a therapist's LGB identity to be beneficial when issues related to the client's sexual orientation are the primary reason for seeking treatment. When sexual orientation is not a primary concern to the LGB client, a therapist's sexual orientation is viewed as less important by LGB individuals. However, in line with clinical

recommendations, knowledge of LGB-specific experiences and a LGB-affirming therapeutic style are considered beneficial or essential by LGB clients regardless of reasons for seeking treatment (Burckell & Goldfried, 2005). There is some evidence, though limited by methodological problems, that LGB clients are more likely to rate a therapy episode as beneficial when they are treated by lesbian or gay therapists (Jones, Botsko, & Gorman, 2003). However, mean ratings of therapeutic benefit between lesbian/gay and heterosexual therapists only differed by one point on the 10-point Likert scale.

Taking into account earlier and more recent research on the LGB population, patterns of substance use, factors related to substance use, and treatment-seeking behaviors and preferences suggest that certain aspects of LGB substance use are different from patterns of use in the general population. However, since substance abusers are generally considered to be an extremely heterogeneous population, unique aspects of LGB substance use patterns do not necessarily demand specialized treatment protocols. There is another model for integration of LGB treatment issues into standard treatment. Treatment protocols, especially those for cognitive-behaviorally oriented therapies, prescribe individualization for client-specific circumstances. From this standpoint, treatments developed for heterosexual individuals and opposite-sex couples could easily be individualized to accommodate LGB clients. For example, societal prejudice and discrimination could be considered environmental stressors; familial turmoil due to sexual minority status and limited social support could be considered social network strain; and LGB sub-cultural differences could be considered similar to individual differences already taken into consideration by existing therapies. Though research is only beginning to address LGB-specific treatment issues, available evidence has not shown that LGB substance abusers require specialized treatment protocols, and there is not data evaluating the efficacy of available treatments in the LGB population. The present study gathered information on perceived barriers to help seeking and

treatment preferences of LGB and heterosexual problem drinkers in order to guide development of treatment and outreach program for LGB substance abusers.

There are several questions that remain unanswered by the available empirical data. Research needs to examine alcohol and drug use patterns in terms of both sexual behavior and other aspects of sexual orientation (including sexual identity, sexual attraction, and sexual fantasies). An additional limitation of current research is that very few researchers include both women and men in the same study sample, and studies that do examine both men and women usually use sexual behavior as a proxy for sexual orientation. This limits the direct comparisons that can be made between lesbian/bisexual women and gay/bisexual men. Since gender differences do not appear to be as evident in the LGB population, research should begin to evaluate sexual minority men and women in the same studies and with the same measures in order to examine differential drinking and drug use patterns. The present study included lesbians, gay men, bisexual men and women, and heterosexual men and women. Additionally, self-reported sexual orientation and past year sexual behavior were assessed to permit comparisons based on both sexual identity and sexual behavior.

One area of the LGB experience not evaluated in substance use research is the level of social support that LGB individuals perceive from their family and friends. Only one study examined differences in perceived social support between heterosexual and lesbian/bisexual women. Mays et al. (1994) reported that among African American women seeking treatment for alcohol use problems, heterosexual women perceived more general social support than lesbian/bisexual women. The dearth of research on differences in social support is interesting since it is commonly assumed that LGB persons' experience of limited social support contributes to psychological distress and problematic drinking and drug use. Research on same-sex couples has addressed perceived social support and revealed mixed results. Though lesbians and gay men report lower

levels of perceived social support from their families and the families of their partners than

heterosexual men and women, lesbians report higher levels of perceived social support from their

friends than heterosexual women (Kurdek, 2004). How these differences relate to substance use is

unknown.

Research needs to examine emotional correlates of LGB substance use and the

relationship between social support and substance use patterns. Additionally, researchers should

attempt to identify factors that are protective against substance use problems in the LGB

population and evaluate the efficacy of empirically-supported treatments for substance abusers in

samples of LGB participants. The present study assessed a variety of demographic and social

factors, social network substance use, and relationship status/satisfaction in addition to substance

use habits.

Treatment Seeking and Barriers

One of the primary goals of this study was to evaluate factors that prevent individuals from

seeking treatment when they are concerned about their drinking habits. In order to evaluate such

barriers, it is helpful to consider how barriers fit into the decision making process associated with

help seeking. Two models of help seeking behaviors guided this research. Figure 1 illustrates the

combined model that guided the present study. Cramer's (1999) model of the psychological

antecedents to help seeking provides a useful framework for understanding decisions to seek

treatment. This model has empirical support in several samples and takes into consideration the

direct and indirect effects of social support, severity of psychological distress, attitudes towards

counseling, and self-concealment (e.g. not wanting to talk about oneself) on the decision to seek

counseling. Cramer (1999) reported that individuals are more likely to seek treatment when

psychological distress is high and they hold fewer negative attitudes towards counseling. High

psychological distress was predicted by impaired social networks and high levels of self

concealment. High levels of self concealment led to impaired social networks and unfavorable

attitudes towards counseling. The present study added one variable to Cramer's model. The health

belief model of treatment seeking (Janz & Becker, 1984) proposes that treatment seeking is

predicted by perceived benefits of treatment, perceived barriers to treatment, perceived

susceptibility to disease/relapse, and perceived severity of disease. Three of these variables are

represented in Cramer's model: perceived benefits of treatment are represented by attitudes

towards counseling and susceptibility to/severity of disease is represented by level of distress.

Perceived barriers to treatment were added to Cramer's model and proposed to have a direct

effect on the decision to seek treatment.

      Barriers to treatment-seeking constitute a significant concern for professionals providing

substance abuse treatment. Previous research indicates that women are less likely to seek

treatment for alcohol use than men and that men and women experience somewhat different

barriers to treatment entry (Schober & Annis, 1996). More specifically, women have reported more

family, social, and financial problems associated with the decision to seek treatment (Beckman &

Amaro, 1986). Women in Beckman & Amaro's sample also reported more opposition from partners

and friends about their decision to seek treatment and the need for child care and educational

training as a part of treatment. Thom (1986), using a small sample of individuals referred to an

alcohol treatment clinic, reported that men were more likely to report difficulty asking for help

whereas women were more likely to report concern over being labeled as alcoholic and that they

did not see alcohol as their primary problem. In summary, previous research suggests gender

differences in which aspects of treatment constitute barriers to treatment seeking.

      Beckman and Kocel (1982) proposed a model of alcohol treatment utilization that includes

two sets of factors that affect the decision to enter treatment: characteristics of the individual and

structural characteristics of treatment services. Characteristics of the individual include factors such

as demographics, attitudes and beliefs, personality, sex-role traditionalism, drinking history, and support networks. Structural characteristics of treatment services include factors such as staff composition and attitudes, types of services offered, child-care availability, and outreach practices. According to Beckman and Kocel (1982), there exists an interactive relationship between these factors that could either promote or inhibit help-seeking behaviors. Though the model was developed as a tool for understanding the treatment-seeking behaviors of alcoholic women, the model also is useful when considering barriers to help-seeking of LGB substance abusers. Working from this model to understand group differences in perceived barriers, it seems likely that LGB problem drinkers will perceive more barriers to treatment-seeking than heterosexual problem drinkers. In terms of individual characteristics, LGB individuals do not appear to "mature out" of problem drinking (e.g. Burgard et al., 2005), are likely to experience stigma associated with their sexual minority status, and could experience lower levels of social support for abstinence due to their sub-culture than heterosexuals (e.g. Beatty et al., 1999; Stall et al., 2001). In terms of treatment service characteristics, there are very few programs that offer LGB-specific services (e.g. Peavy et al., 2004), LGB individuals could encounter negative attitudes about their sexuality from program staff members, and LGB individuals may have anxiety about coming out to their therapist (Bux, 1996; Driscoll, 1982). However, none of these barriers has been evaluated empirically and the present study examined reasons problem drinkers have not or would not seek treatment for their alcohol use.

These barriers are likely to be exacerbated for the LGB population and include both external barriers (e.g. availability of services) and internal barriers (e.g. shame, anxiety). The primary external barrier for LGB substance abusers is the dearth of available services that are overtly LGB-friendly or that offer LGB-specific services. The Substance Abuse and Mental Health Services Agency (SAMHSA) surveys treatment clinics around the United States and reports which

clinics claim to offer mental health programs for LGB clients. However, Peavy et al. (2004) contacted each of those programs and found that only 7% of 885 mental health programs claiming to offer specialized LGB substance abuse services actually offered them. Of those 62 programs nationwide, 50% offered LGB groups, 18% had counselors specially trained in LGB issues, 11% offered group and individuals services, and 21% treated LGB individuals exclusively.

A final problem in the field is that research on the efficacy and effectiveness of psychosocial treatments in the LGB population is virtually non-existent. Though several studies are reportedly underway, same-sex couples are routinely excluded from couples research and most other studies fail to report on the sexual orientation of their samples, leaving the reader to presume a heterosexual sample. Only three treatment outcome studies of LGB substance abusers have been published. The first was conducted as part of the Homophile Alcoholism Treatment Service (HATS) at Boston Homophile Community Health Services. Though limited by small sample size (n = 43) and minimal description of treatment techniques, Driscoll (1982) reported that the program successfully reduced harmful drinking. Paul, Barrett, Crosby, and Stall (1996) reported 12-month changes in drinking and drug use habits for gay/bisexual men in a gay-identified outpatient treatment program. Clients in the program reduced their drinking by half in the first 90 days of treatment, and those changes were typically maintained over the first year. Greenwood, Woods, Guydish, and Bein (2001) evaluated the effects of sexual orientation on treatment outcome of substance abusers randomly assigned to either day treatment or residential treatment. Interestingly, having same-sex sexual partners in the six months prior to treatment was found to be a protective factor for relapse 18-months after admission. The authors suggested that this could have been the result of LGB community resources in the San Francisco area. It should be noted that this sample consisted of mostly of crack cocaine users. The fact that only three published studies address treatment response of LGB substance abusers (only one of which was a random

controlled trial) is problematic in light of the prevalence of substance use in the LGB population. The present study gathers information about barriers to treatment seeking and treatment preferences from heterosexual and LGB problem drinkers in order to guide development of treatment programs and outreach efforts.

The present study worked from a social learning perspective, addressed several of the methodological limitations of previous research, and provided empirical data on some of the unanswered questions related to LGB drinking habits, barriers to treatment seeking, and treatment preferences. In line with social learning theory, the present study not only assessed alcohol use patterns, but also assessed consequences of alcohol use and social network drinking. The present study addressed methodological limitations of extant research in the following ways: 1) it assessed lesbians, gay men, bisexual men and women, and heterosexual men and women on the same measures; 2) it asked respondents both their sexual orientation and the gender of their past year sexual partners; 3) it assessed a variety of demographic and social factors, social network drinking, and relationship status/satisfaction in addition to drinking patterns and drug use history; and 4) it empirically evaluated barriers to treatment seeking and treatment preferences of LGB and heterosexual problem drinkers. An additional strength of this study is that it used the Internet to collect data in a convenient and anonymous way. Recent research has shown computerized treatments are effective in community settings and have favorable client satisfaction (for review see Green & Iverson, in press). Additionally, research suggests that using computerized data collection methods increases the likelihood of participants disclosing sensitive information such as drugs use and sexual behaviors (Gribble, Miller, Cooley et al., 1996; Tourangeau & Smith, 1996; Turner, Rogers, Lindberg, Pleck, & Sonenstein, 1998). Research also suggests that providing drinkers with feedback on their drinking habits increases their motivation for change and utilization of treatment services (e.g. Sobell & Sobell, 2005). Given these findings, one of the aims of this study was to use

Internet technology with two goals in mind: 1) to evaluate stigmatized issues in a way that promotes anonymity and increases the likelihood of accurate responses, and 2) to provide feedback to drinkers in an effort to promote behavior change and increase motivation for treatment seeking.

The Present Study

The present study had five primary goals. Primary aim 1 was to develop a web-based survey that provided personalized feedback to problem drinkers.

Primary aim 2 was to assess drinking patterns, alcohol-related problems, social network substance use, and relationship satisfaction among individuals with various sexual orientations who reported that they are worried that they drank too much (hereafter referred to as "worried drinkers". Based on previous research, it was hypothesized that: 2a) heterosexual men would report more problematic drinking than heterosexual women; 2b) lesbian and bisexual women would report more problematic drinking than heterosexual women; and 2c) gay and bisexual men would report more past and current drug use than heterosexual men. Based on social learning theory, it was hypothesized that (2d) the percentage of respondents' social networks that drink would be correlated with drinking severity reported by respondents. Other variables (e.g. relationship satisfaction, social support for sobriety/treatment seeking) were examined in an exploratory manner since previous research has not been conducted comparing these variables among LGB and heterosexual drinkers.

The third primary aim was to evaluate perceived barriers to seeking treatment reported by problem drinkers of various sexual orientations. Based on the model of treatment barriers set forth by Beckman & Kocel (1982), it was hypothesized that: 3a) women would report more barriers to treatment than men; and 3b) LGB respondents would report more barriers than heterosexual respondents; and 3c) it was hypothesized that gay and bisexual men would report more sexual

barriers to treatment (e.g. fear of abstinence negatively affecting sexual performance) than other respondents. Types of barriers endorsed were examined in an exploratory manner to evaluate sub-group differences in types of barriers that have or would prevent worried drinkers from seeking help for their drinking.

Primary aim 4 was to evaluate treatment preferences of problem drinkers of various sexual orientations. Treatment preferences were evaluated in an exploratory manner since no empirical evidence exists to guide hypotheses, with two exceptions: 4a) it was hypothesized that LGB respondents would prefer LGB therapists to a greater extent than heterosexual participants; and 4b) it was hypothesized that LGB respondents would select a moderate/controlled drinking goal (as opposed to an abstinence goal) more often than heterosexual respondents.

Finally, primary aim 5 was to test a model of help-seeking that posited that social support, self concealment, perceived barriers to treatment, severity of distress, and attitudes towards counseling predict treatment seeking. It was hypothesized that the proposed model of help-seeking would be supported in the following ways: 5a) fewer perceived barriers to treatment, higher severity of distress, and more favorable attitudes towards counseling would predict prior alcohol treatment; 5b) lower perceived social support and higher self-concealment would predict higher severity of distress. Results should allow us to more clearly understand differences in drinking patterns and treatment-seeking behavior between heterosexual, lesbian/gay, and bisexual problem drinkers and make recommendations about the relative treatment needs of these subpopulations. This study is the first to examine differential barriers to treatment and personal treatment preferences for problem drinkers of different sexual orientations.

Method

Participants and Recruitment

Participants were recruited over the Internet in several ways. The survey was linked to search engines, and advertisements (included in Appendix A) were posted on health-related, alcohol-related, and LGB-related websites. The advertisements said, "Are you worried that you drink too much? Take this online survey to get free personalized feedback on your drinking habits." The only requirement for participation was that respondents were age 18 or older; this was not verified objectively, but was based on reported age only. Gay/lesbian/bisexual participants were actively recruited by posting advertisements and sending flyers to 146 LGB-related websites and community organizations across the United States. Heterosexual participants were recruited through similar community organizations that were not LGB-specific (see Appendix B). In addition, efforts were made to recruit ethnic minorities via ethnically-focused websites and organizations (e.g. Gay Men of African Descent, Latino Health Access). Potential participants were assured of anonymity and provided passive consent by entering the site and reporting that they were over 18 before entering the survey portion of the website. Upon completion of the survey and as incentive for participation, respondents received individualized feedback (based on their reported drinking patterns) and treatment referral information. If a respondent did not live in the United States, they were advised that feedback was based on U.S. norms (and therefore possibly less valid for those who live elsewhere), but they were invited to complete the survey anyway. Though attitudes/stigmas encountered by LGB individuals and alcohol consumption vary widely by culture, respondents from other countries were included in analyses because analysis of differences between US and other respondents revealed no significant differences between these groups on drinking quantity and frequency variables. However, respondents from non-US countries scored

significantly higher on the AUDIT, so country of residence was included as a covariate in analyses of group differences on AUDIT scores.

Sample representativeness is a particular concern when conducting Internet research, and several steps were taken to maximize the generalizability of the present study's findings. First, participants were recruited through a variety of resources and efforts were made to access sexual and ethnic minorities. Second, sample demographics were monitored throughout the data collection period to see if they were similar to the demographics of treatment-seeking problem drinking adults in the United States. For example, SAMHSA (2005) reported that 32% of heavy drinkers reported illicit drug use in 2004. Similarly, SAMHSA (2006) reported that 45% of individuals admitted for alcohol treatment in 2004 reported secondary substance use. This report also detailed the following characteristics of those who were admitted for alcohol treatment alone: 75% were male (28% of current sample); 70% were White (76% of current sample); 34% were employed fulltime (44% of current sample); 29% reported some college education (74% of current sample); and 50% reported no prior treatment for their drinking (86% of current sample). It is apparent that the current sample differed from those seeking treatment in several ways; the current sample was composed of a lower proportion of men, higher proportion of college educated individuals, and higher proportion of those with no history of alcohol treatment. Additionally, a large proportion of respondents to the ad, hereafter referred to as *worried drinkers*[6], did not report significant levels of drinking despite their concern about their drinking. Therefore, it became apparent during data collection that this sample was qualitatively different than national treatment-seeking samples and efforts were not made to correct this inequity. The primary reason for this decision was that this study was exploratory in nature; the goal was not to duplicate nationally representative samples, but to gather information about barriers to treatment seeking and treatment preferences from individuals who were concerned about their drinking but not presenting

for treatment via traditional channels. However, recruitment was adjusted to address the finding that very few LGB individuals were completing the survey, since this population was a primary focus for study aims. An IRB amendment was submitted to extend recruitment to include flyers and announcements that were sent to LGB-related ListServs and community organizations. These attempts were successful in increasing the number of LGB respondents to the survey.

Participants were recruited from 5/19/2007 to 5/31/2008. During this time, 792 respondents initiated the survey. Of those, 543 (69%) failed to answer a single question. Two-hundred forty-nine respondents (31%) provided demographic data. Of those 249 respondents, seven respondents (3%) were excluded because they reported their gender as something other than male or female and ten respondents (4%) respondents were excluded because they reported their sexual orientation as "Questioning/Undecided", "Asexual", or "None of the above." Four other entries were excluded because they were judged to be duplicate data from the same person. A validity check was built into the study to assess the level of participant understanding and honesty; a nonsense drug called "IPA/Mountain" was placed on the list as a possible choice for lifetime, past year, and past month drug use. However, none of the participants in this sample reported use of that nonsense drug, so no participants were excluded for failing that validity check.

The sample used for data analysis consisted of 218 respondents. Overall, the sample was ethnically diverse, middle-aged, employed, and college educated. Table 1 summarizes demographic characteristics. With regards to sexual orientation, 48 (72% of men) men identified as heterosexual, 14 (21%) men identified as gay, and 2 (3%) men identified as bisexual; 108 (68%) women identified as heterosexual, 34 (21%) women identified as lesbian, and 12 (8%) women identified as bisexual. Sixteen men (24% of men) and 36 women (23% of women) reported same-sex intimate behavior in the previous year. Seventy percent of respondents reported that they were married or in a committed relationship. Of those in relationships, 49% reported the relationship

length as less than 3 years, 32% as 3 – 10 years, and 19% as 10 years or longer. The mean

relationship satisfaction reported was 4.46 (SD = 1.33) on the 0 – 6 point Marital Happiness Scale.

Twenty-five percent of respondents reported that they had children living in their home.

A power analysis was conducted to estimate the necessary sample size to detect medium

effects in a 2 X 2 design (gender by sexual orientation). Following the Cohen (1988) method for

power analysis, one can estimate necessary sample size to detect various effect sizes based on a

priori determination of confidence intervals (alpha levels), power, and number of groups. For the

present study there were 4 groups (lesbian/bisexual women, heterosexual women, gay/bisexual

men, and heterosexual men). It was not expected that the subgroups (cells) would be equal in size.

However, the composition of the sample was monitored throughout the data collection process and

advertising was adjusted in attempt to balance cell sizes. With the current sample size of at least

16 respondents per cell size, medium to large effects should be easily detectable (alpha level =

.05, beta level = .80). However, small effects will likely be lost to insufficient power.

Measures

An Internet survey was developed to assess sexual orientation, drinking patterns, drug use

history, social network substance use, relationship satisfaction, perceived barriers to treatment-

seeking, and treatment preferences of adult problem drinkers. The validated and standardized

measures listed below were adapted for online administration and modified for use in the LGB

population. A copy of the Internet survey (including measures described below) is included in

Appendix D.

Demographics. Respondents were assessed on the following demographic variables: sex,

age, ethnicity, education, employment status, geographic location, relationship status, length of

relationship, presence of children in the home, self-reported sexual orientation, and gender of past

year sexual partners,

Alcohol Use Disorders Identification Test (AUDIT; Babor, Biddle-Higgins, Saunders, & Monteiro, 2001; Saunders et al., 1993)*.* The AUDIT is a 10-item questionnaire that is commonly used to screen individuals for probable current alcohol use disorders (see Appendix D, page 123). Most items are rated never, less than monthly, monthly, weekly, or daily/almost daily. The maximum score on the AUDIT is 40 and a score of 8 or more indicates a high probability that an individual's drinking is problematic. Scores between 8 and 15 represent moderate alcohol problems and scores 16 and above reflect high levels of alcohol problems. The AUDIT has been used in primary care and psychiatric settings, has shown adequate reliability and validity, and also is an indicator of severity of alcohol problems (Babor et al., 2001). For this study, the AUDIT total score was used as an indicator of problematic drinking and severity of distress.

Daily Drinking Questionnaire-Revised (*DDQ-R;* Kruse, Corbin, & Fromme, 2005; Collins, Parks, & Marlatt, 1985). Compared to the DDQ, the DDQ-R more closely resembles validated retrospective interviews (e.g. Timeline Followback, Form 90). The DDQ-R disaggregates quantity and frequency indices to yield more accurate estimates of drinking frequency and intensity (see Appendix D, page 126). The DDQ-R first assesses frequency of alcohol consumption on each day of the week during the past three months, then assesses typical consumption levels for days of the week when any drinking was reported. Responses to the DDQ-R were used to calculate estimates of percent drinking days (PDD), mean drinks per drinking day (MDPDD), and mean drinks per week (MDPW). These variables were used as the primary measurements of drinking quantity and frequency.

Readiness Ruler (RR; CASAA Research Division, 1995). Respondents were asked two questions about motivation for change (see Appendix D, page 128). The first question asked how ready they were to change their drinking habits using a 10-point Likert scale from 1 (not ready to change) to 10 (trying to change). The second question asked how soon they intended to cut down

or quit drinking; the choices were from 1 (within the next year) to 6 (already trying). This second question was posed only to those who reported an intention to change on the first question. Responses to the RR items were used as indicators of readiness to change drinking behaviors.

History of Drug Use. Three questions were asked to assess history of drug use (see Appendix D, page 129). These questions were based on the 2006 NSDUH interview conducted by SAMHSA and assessed lifetime, past year, and past month use of 17 groups of illicit drugs. Respondents were presented with a list of drugs and asked to select which ones they had used ever, within the past year, and within the past month. Respondents were coded dichotomously on whether they had used any of the illicit substances in the stated time period. Further distinction was made by coding those who reported drug use as either having used marijuana only, or other drugs either alone or in conjunction with marijuana.

Marital Happiness Scale (MHS) (Azrin, Naster & Jones, 1987). The MHS is a simple Likert scale rating of marital happiness, which is typically part of the Dyadic Adjustment Scale (Sharpley & Rogers, 1984; Spanier, 1976). This single item asks respondents to rate their degree of happiness with their relationship from "extremely unhappy" (score of 1) to "perfect" (score of 7). McCrady, Epstein, & Hirsh (1999) reported good internal consistency of monthly MHS ratings and Goodwin (1992) reported significant correlations between a single item measure of relationship satisfaction and a more comprehensive measure of relationship satisfaction.

*Important People and Activities (*Longabaugh & Zywiak, 1999; Zywiak, Longabaugh, & Wirtz, 2002). The IPA is an interview designed to gather information about an individual's social network. This interview was adapted to a self-report format and additional questions/answers relevant to LGB individuals were added for the present study (see Appendix D, page 132). Respondents were asked to name up to 5 people who had been important/influential to them in the past six months. Each person listed was then rated on type of relationship, gender, sexual

orientation, amount of contact, drinking/drug use status, support for alcohol/drug use, and support for sobriety/treatment-seeking. Responses were used to calculate the size of respondents' social networks, percentage of the network who were rated as abstainers from alcohol or moderate/heavy drinkers, percentage of the network that was rated as generally supportive of the respondents, and percentage of the network that respondents reported would be supportive of treatment-seeking for alcohol or drug use.

Barriers Questionnaire (BQ; Miller & Tonigan, 1995). The BQ is a 50-item measure that assesses reasons an individual has not sought help for their alcohol use (see Appendix D, page 138). Each item is rated from 0 (not at all important) to 3 (very important). Items are interpreted on an individual basis, and norms (percent of participants who endorsed as "important" or "very important") are available based on a large randomized trial of drug users (Meyers, Miller, Smith, & Tonigan, 2002). Several items were added to this instrument because they were deemed appropriate based on empirical and clinical evidence of LGB-related treatment issues. These items focused on safety issues and sexual performance issues. The results section describes how the BQ items were divided into subscales, and both the subscales and the total sum of the BQ items were used as indicators of barriers to treatment seeking.

Treatment History, Treatment Seeking, and Treatment Preferences. Respondents were asked four questions about prior treatment. These questions were based on the 2006 National Survey on Drug Use and Health conducted by SAMHSA and assessed lifetime and past year treatment for alcohol/drug use problems. Six questions assessed intentions to enter treatment and treatment preferences, two questions assessed current treatment, and one question assessed personal drinking goals of respondents. These questions were examined to evaluate differences and similarites between heterosexual and LGB respondents on reported treatment preferences and treatment histories. See appendix D, pages 136 and 141 for questions about treatment issues.

Procedures

  Website Design and Advertisement. Specific aim 1 of the present study was to develop a web-based survey that offered personalized feedback to problem drinkers. The Internet survey was designed according to recommendations from Riggle, Rostosky, & Reedy (2005) regarding web-based research in LGB populations and Nosek, Banaji, & Greenwald (2002) regarding the ethics of Internet research. Procedures for the present study adhered to the following recommendations stated by Riggle et al. regarding online research with the LGB population: 1) Likert scales were used for survey questions whenever possible; 2) the website was pilot tested prior to data collection; 3) there was full disclosure of research goals, procedures, and risks to privacy when recruiting participants; 4) demographic questions were placed at the beginning of the survey; 5) data were downloaded from the website at multiple points throughout the survey; and 6) IP addresses were collected to identify duplicate data. Procedures also followed these recommendations from Nosek et al.: 1) a clear and concise consent form was used; 2) the researcher's e-mail address was automatically presented for respondents to contact should they have questions; 4) participants were recruited from adult-dominated websites; 5) data were encrypted via implementation of a secure server line (SSL); 6) data were labeled in ways meaningful only to the researcher; 7) advertising was done on sites likely to be of interest to the target population; and 8) IP addresses were collected to aid in the identification of duplicate data.

  Once the measures were selected, the Principal Investigator (Green) translated the measures into HTML code using MySQL language when necessary. A graduate student in computer science was hired to transfer the HTML code to the domain (http://www.worrieddrinker.com) that was rented for 2 years from http://www.netfirms.com. The survey was pilot tested in a convenience sample of peers and colleagues (n = 16) to identify technical problems and evaluate ease of use and time needed for completion. Results of the pilot

testing revealed that several questions needed to be reworded and several questions needed additional answer choices. It took pilot participants 10 – 40 minutes to complete the survey. Following pilot testing, necessary adjustments were made to measures and syntax based on feedback from the pilot subjects and consultation with experts in the field of addictions. Once necessary revisions were made, the survey was launched on the Internet and advertisements were placed on websites related to alcohol, health, or LGB issues.

Personalized Feedback. Once respondents completed the survey, they were thanked for their participation and received personalized feedback (based on their responses to the survey). Feedback included estimations of typical consumption, money spent on alcohol, and risks associated with reported level of drinking. Additionally, feedback included information on perceived social support for drinking/abstinence and treatment-related resources. A template of the personalized feedback is included in Appendix D.

Data Management

Responses to the Internet survey were entered automatically into a database. Each respondent was assigned a participant identification number, and the only personal identifying information that was collected was an IP address. Each database was password protected to ensure access only by key personnel. Prior to data analyses, two steps were taken to ensure that duplicate data had not been collected. First, respondents were instructed to complete the survey only once. Second, once data collection was complete, IP addresses (unique to a computer and automatically collected as part of the survey) were examined for duplicates. Sixteen entries from eight IP addresses were identified as having the same IP address as another entry. Since more than one individual could have completed the survey on the same computer, these entries were compared to determine whether the same individual had completed the survey twice. Eight of those entries had different demographic information from each other and were deemed different

respondents. The other eight entries (from 4 IP addresses) had extremely similar or identical demographic information and were deemed duplicate entries from the same respondent. In these cases, the more complete submission was included in analyses. If both entries were complete, then the entry with the highest total score on the Barriers Questionnaire was selected. This decision was made in order to maximize the amount of variability in the sample and capture the highest number of reported barriers to treatment seeking. Four entries were deleted from the data file for being duplicate entries.

Several steps were taken to minimize missing data. First, respondents were informed that complete data were necessary for valid feedback. Additionally, if a respondent did not complete a question, a pop-up reminder appeared reminding them that complete data were necessary for accurate feedback. Respondents were permitted to continue the survey with items skipped, and they were able to terminate the survey by simply closing the website. There was a significant proportion of incomplete surveys.

Results

Preliminary Analyses

Missing data and incomplete entries are particularly challenging for Internet studies. Though multiple efforts were made to minimize skipped questions and premature survey termination, a large proportion of entries were incomplete in one way or another (25% incomplete entries). In order to maximize power, individuals were not excluded from the sample due to missing data; individuals who provided demographic data were retained in the sample. Incomplete data were excluded from analyses using casewise deletion; respondents with missing values were not included in analyses using those values.

After data collection was complete, several sets of analyses were performed. Specific hypotheses and planned analyses for each specific aim are discussed separately. Prior to evaluating the specific aims of the study, the included measures were tested for reliability in the LGB sub-sample. This was necessary since standardized measures have been validated on presumably heterosexual samples, and it was unknown whether their structure was applicable to LGB samples. Therefore, measures with subscales were evaluated in the LGB sub-sample with Cronbach's alpha for internal consistency. Overall, the internal consistency of the AUDIT and the BQ was equally high in both sub-samples. For the 10-item AUDIT, Cronbach's alpha was .892 in the heterosexual sub-sample and .899 in the sample of LGB respondents. For the 56-item BQ, Cronbach's alpha was .953 in the heterosexual sub-sample and .957 for LGB respondents. Each of these levels is well over the acceptable cutoff of .70, and therefore both the AUDIT and the BQ seem to be reliable in the LGB sub-sample.

The normality of dependent variable distributions was examined and data transformations were conducted to normalize skewed outcome variables. A conservative cutoff of Kurtosis greater than .70 was used to identify variables that needed to be transformed. The following variables

exceeded that cutoff and were subjected to Log transformations prior to group comparison analyses: percent drinking days, AUDIT sum score, mean drinks per week, and BQ sum score. Correlation analyses were conducted to identify demographic variables that needed to be used as covariates. Of particular interest in this step was the association between self-reported sexual orientation and sexual behavior. A very high correlation between these two variables would have suggested that including only one of them as a grouping variable was sufficient. However, a moderate correlation would have suggested that both variables needed to be used in comparison analyses and interactions between them needed to be assessed. Spearman's correlation coefficient for these variables was $rho = .584$, $p < .001$; sexual orientation and past year sexual behavior were moderately correlated with each other. When examined more closely, 134 respondents identified as heterosexual identities and reported only opposite-sex partners in the previous year, 16 identified as heterosexual and reported no partners in the previous year, and 6 identified as heterosexual but reported same-sex partners (2 men and 4 women). An additional grouping category was created that rated individuals as exclusively heterosexual or homosexually-experienced (either identified as LGB or reported same-sex partners in the past year). Primary analyses were conducted separately using that variable for grouping and using LGB identification for grouping. Overall, the results were the same. Therefore, self-reported sexual orientation (LGB status) was used as the primary grouping variable for the analyses in order to prioritize sexual identification over past year behavior. Other demographic factors were correlated with primary alcohol use variables using Spearman's rho for interval/ordinal variable. Variables with moderate to high correlations (e.g. gender, age) were included as covariates in subsequent analyses. Table 2 summarizes results of the correlation analyses. Based on these analyses, several covariates were included in analyses of variance of group differences. Age was included as a covariate in analysis of variance of drinking frequency (PDD). For analyses of variance in drinking intensity (MDPDD),

age, ethnicity, education, and relationship length were included as covariates. There were no covariates needed for mean drinks per week analysis. Ethnicity, education, and country of residence were included as covariates of AUDIT sum scores. For overall intensity of barriers to treatment seeking (BQ sum score), no demographic covariates were needed.

During the data collection process, it was noticed that a large number of respondents to "are you worried that you drink too much?" ad scored below with cutoff of 8 on the AUDIT. Therefore, differences between worried drinkers who screened positive for a possible alcohol use disorders and those who scored below the threshold on the screening measure were evaluated. Looking at the entire sample (n = 218), the mean score on the AUDIT was 10.43 (SD = 7.70), and 130 (60%) scored an 8 or above, indicating a likely alcohol use disorder. Interestingly, 88 individuals responded to the ad for people worried about their drinking, but scored below the AUDIT threshold. Analysis of this group of respondents revealed that they were less educated and more satisfied with their relationships than respondents who score 8 or above on the AUDIT (see table 3 for results of comparisons). Additionally, those who scored below threshold on the AUDIT had lower percent drinking days, fewer mean drinks per drinking day, and fewer mean drinks per week. There was a trend for those who scored below the threshold to report fewer barriers to treatment seeking. There were no differences between the groups on age, employment, or income; table 3 provides details of these analyses.

Alcohol and Drug Use (specific aim 2)

For the whole sample, percent drinking days ranged from 0% to 100% (M = 36.16; SD = 31.86), the mean drinks per drinking day ranged from 1 to 10+ (M = 4.00; SD = 2.35), and the mean drinks per week (MDPW) ranged from 0.00 to 70+ (M = 11.28; SD = 13.69). About 50% of respondents had MDPW greater than the safe drinking levels recommended by the National Institute of Health (7 drinks per week for women, 14 for men). It is important to note that there was

a false ceiling on these estimates because the highest option for respondents to report was "10 or more" drinks for a given day. Overall, AUDIT scores indicated that this sample was at moderate risk for alcohol use disorders (M = 10.43; SD = 7.70). Respondents were asked to classify their drinking pattern with the prompt "do you consider yourself". Sixteen (7%) of respondents reported that they considered themselves abstainers, 134 (62%) considered themselves non-problem/normal/social drinkers, 38 (17%) considered themselves problem drinkers, and 18 (8%) described themselves as alcoholics. Therefore, only 56 respondents (26% of entire sample) considered themselves problem drinkers or alcoholics. This finding leads to questions about why the remaining respondents chose to complete a survey that advertised for people who were worried about their drinking habits. Unfortunately, reason for response was not evaluated so one is left to speculation. In terms of group differences with regards to perceptions of drinking patterns, men were more likely to consider themselves problem drinkers or alcoholics than women (38% vs. 23%; z = 2.133, CI = 96.7) and heterosexual respondents were more likely to be abstainers than LGB respondents (16% vs. 0%; z = 2.318, CI = 98%).

Specific aim 2 was to assess the drinking patterns, alcohol-related problems, social network substance use, and relationship satisfaction of LGB and heterosexual problem drinkers. This aim was evaluated with Analysis of Covariance (ANCOVA) and independent t-tests; results are summarized in table 4 and the substance use reported by each group is described in table 5. Hypothesis 2a was that heterosexual men would report more problematic drinking than heterosexual women. Independent t-tests partially supported this hypothesis; men reported more frequent drinking (45% versus 32% drinking days), there was a trend for men to report more mean drinks per week (16 versus 11 drinks), and men scored significantly higher on the AUDIT than women (12.23 versus 9.68). Additionally, a higher proportion of men exceeded the safe drinking guidelines than women (63% versus 43%). Table 3 includes details of the analyses. Hypothesis 2b

was that lesbian and bisexual women would report more problematic drinking than heterosexual women. Independent t-tests failed to offer support for this hypothesis; see table 4 for details of between group comparisons on drinking variables. ANCOVAs were used to evaluate differences between groups based on sex and sexual orientation, using covariates selected in univariate correlational analyses described above. The drinking frequency (PDD) ANCOVA revealed sex differences but no sexual orientation differences. Men reported more frequent drinking than women, but there was no interaction with sexual orientation. More frequent drinking also was reported by those without children in the home. See table 6 for details of PDD analyses. The drinking intensity (MDPDD) ANCOVA did not reveal differences between sexes or sexual orientations. The interaction between sex and sexual orientation was not significant, see table 7. For mean drinks per week (MDPW), ANCOVA showed differences between sexes, but not between sexual orientations or their interaction. See table 8 for details of MDPW analyses. The ANCOVA for AUDIT scores evidenced differences between sexes, but not between sexual orientations. The sex by sexual orientation interaction was not significant. Higher AUDIT scores were found for men, those with less education, and those living outside the U.S. Table 9 details this analysis.

Illicit drug use was reported at fairly high rates in the current sample; see table 5 for details by group. In order to discriminate use of marijuana alone from use of marijuana and/or other drugs, proportions were examined in terms of any reported drug use, and use of marijuana only. Lifetime drug use was reported by 157 respondents (72%), and 43 of those (20% of whole sample) reported only using marijuana. Past year drug use was reported by 106 respondents (56%), and 41 of those (19% of whole sample) used marijuana only. Past month drug use was reported by 66 respondents (30%) and 36 of those (17% of whole sample) used marijuana only. Hypothesis 2c was that gay and bisexual men would report more past and current drug use than heterosexual men. This

hypothesis was supported by the finding that significantly more gay/bisexual men reported past year drug use significantly than heterosexual men (86% versus 49%), and there was a trend for gay/bisexual men to report more past month drug use (58% versus 33%). These trends were not seen for differences between heterosexual and lesbian/bisexual women for past month or past year drug use, but there was a trend for lesbian/bisexual women to report lifetime drug use more often than their heterosexual counterparts (90% versus 78%). Interestingly, when the entire sample was evaluated together, there was a trend for women to report lifetime drug use more often than men (82% versus 70%), and LGB reported lifetime drug use (89% versus 74%) and past year drug use (67% versus 50%) more often than heterosexual respondents.

Social Networks

Respondents were asked to name up to 5 people who had been important/influential to them in the past six months and then rate each important person on several different items assessing social support and alcohol use. Ninety-three percent of respondents reported the maximum of 5 important people. For each respondent, the percentage was calculated of the 5 important people rated as supportive, supportive of a decision to seek addiction treatment, abstainers from alcohol, and moderate/heavy drinkers. Table 10 summarizes comparisons of social support variables. Overall, respondents reported high levels of social support from their assessed social network[7]; over 80% were rated as generally supportive. There were lower levels of support for the decision to seek treatment; about 50% of the assessed social network was rated as supportive of addiction treatment. A little over a third of the assessed social network members were rated as moderate or heavy drinkers, whereas only 23% were rated as abstainers from alcohol. There were no sex difference in reported levels of general social support, moderate/heavy drinkers, or abstainers . Interestingly, there was a trend for women to report more social support for treatment seeking than men. There were no sexual orientation differences in the percentages of

the network rated as generally supportive, supportive of treatment seeking, or moderate/heavy drinkers. However, heterosexual respondents reported higher percentages of abstainers in their assessed social networks than LGB respondents reported (25% vs. 15%). In fact, 21 (34%) LGB respondents reported that none of their social network members were abstainers. Interestingly, 38 respondents (24%) reported that none of their assessed social network would support treatment seeking for alcohol problems. When this subgroup was examined more closely, there was a range of problem severity but many consumed modest amounts of alcohol. For this group, PDD ranged from 0 – 90 (M = 24.32; SD = 22.40), MDPDD ranged from 1 – 10+ (M = 3.36; SD = 2.13), MDPW ranged from 0 – 39 (M = 6.89; SD = 8.84), and AUDIT scores ranged from 0 – 16 (M = 6.26; SD = 4.05). Eighty-eight respondents (40%) scored below the threshold of 8 on the AUDIT.

Exploratory analyses examined the correlations between demographic variables and characteristics of social support networks. The percentage of the assessed social network reported to be supportive of alcohol treatment was correlated significantly only with the percentage of the network generally supportive [rho(160) = .244, p = .002] and history of past or current treatment [rho(149) = .170, p = .039]. The percentage of the assessed network rated as moderate or heavy drinkers was correlated significantly with age [rho(161) = -.178, p = .024], relationship length [rho(117) = -.262, p = .004], and having children in the home [rho(154) = -.172, p = .033]. It is important to note that children could have been listed as part of the assessed social network, so the relationship between children in the home and social network drinking should be interpreted with caution.

Hypothesis 2d was that the percentage of respondents' social networks that drink would be correlated with drinking severity reported by respondents. This hypothesis was supported by the evidence that the percentage of the assessed social network rated as moderate or heavy drinkers

was correlated significantly with AUDIT scores [rho(162) = .280, p <.001], PDD [rho(158) = .294, p < .001], and MDPDD [rho(145) = .198, p = .017].

Barriers toTreatment Seeking (specific aim 3)

Part of specific aim 3 was to evaluate potential clients' perceptions of barriers to treatment seeking among LGB and heterosexual problem drinkers. The first step in assessing differences between groups on reported barriers was to examine the measure used to assess barriers to treatment seeking. This measure has not been broken down into subscales, so the first step in the analyses was to create subscales based on the face validity of the items, and then evaluate the internal consistency of those subscales. Guided by previous research, the following categories were used for the subscales: ease of use and availability difficulties, safety concerns, lifestyle and financial burden, fear of treatment, negative attitudes towards counseling, self-concealment, stigma, fear of social consequences, problem minimization, and lack of motivation for change. Only one item was moved from one subscale to another based on evaluation of internal consistency. After further consideration, the ease of use and availability difficulties subscale was combined with the lifestyle and financial burden subscale to create a subscale for difficulties accessing services; combining these items improved the internal consistency of the subscale. The internal consistency was evaluated separately for LGB and heterosexual subscales, but there were no differences, so results from the entire sample are presented. Details of these analyses are presented in Table 11; all 9 of the subscales had Cronbach's alphas above the acceptable .70 cutoff (lowest alpha = .791).

Based on the model of treatment barriers set forth by Beckman & Kocel (1982), It was hypothesized that: 3a) women would report more barriers to treatment than men; 3b) LGB respondents would report more barriers than heterosexual respondents; and 3c) gay and bisexual men would report more sexual barriers to treatment (e.g. fear of abstinence negatively affecting sexual performance). Barriers were examined in several ways. First the overall sum scores for the

BQ and BQ subscales were evaluated,then the mean scores were evaluated by dividing the sum scores by the number of items in that scale. Finally, subscales were coded as "yes" or "no" depending on whether any of the items in the subscale was endorsed as a barrier. This was done to provide a more easily understandable description of highly endorsed barriers and to provide a more sensitive measure of barriers in order to facilitate recommendations for treatment development and outreach efforts. Table 12 summarizes results of BQ subscale analyses.

The BQ sum scores ranged from 0 to 144 and the mean was 40.97 (SD = 27.69). Analysis of variance with revealed no differences in overall level of perceived barriers by sex or by sexual orientation. Table 13 summarizes this analysis. The subscales with the highest rates of endorsement of any item on the subscale were Problem Minimization (92%), Lack of Motivation for Change (91%), Negative Attitudes Towards Counseling (67%), Fear of Treatment (67%), and Stigma (60%). Hypothesis 4a was that women would report more barriers to treatment than men, but there was no evidence in support of this hypothesis. There were no sex differences in the proportions endorsing these scales, but there was one sexual orientation difference. Interestingly, heterosexual respondents endorsed Stigma in greater proportions than LGB respondents (66% versus 45%). The BQ subscales with the highest mean scores were Problem Minimization (*M* = 1.40, *SD* = .73), Lack of Motivation for Change (*M* = .87, *SD* = .56), Stigma (*M* = .73, *SD* = .88), and Self Concealment (*M* = .67, *SD* = .84). Independent t-tests did not reveal any sex differences in BQ subscale means, but there was a trend for heterosexual respondents to have higher mean scores for Safety Concerns than LGB respondents. Hypothesis 3b was that LGB respondents would report more barriers than heterosexual respondents. However, the two subscale differences found were in the opposite direction; more heterosexual respondents than LGB respondents endorsed Stigma (66% vs 45%). and heterosexual respondents had higher mean scores for Safety Concerns (mean score .35 vs .16) than LGB respondents. Hypothesis 3c was that gay and

bisexual men would report more sexual barriers to treatment (e.g. fear of abstinence negatively affecting sexual performance) than other respondents. BQ items 54 and 55 evaluated sexual barriers to treatment and were part of the lack of motivation to change subscale. At least one of these items was endorsed by 48 respondents (29%) and there were no significant differences [z = .054, ns] between rates of endorsement by heterosexual men (27%) and gay/bisexual men (33%).

The final item of the BQ allowed respondents to give an open-ended answer to what had prevented or would prevent them from seeking treatment for their alcohol use. Though most people did not use this option, several respondents did provide their own reasons and below are a few examples of particularly interesting responses.

A 36-year-old female from Canada wrote,

> "I cannot sleep and have tried every type of treatment, or drug, relaxation, everything and the only thing that reliably puts me to sleep is alcohol. I have built up tolerance and need quite a bit of it to sleep. The alternative is awful and I will go 3 days without sleep trying to avoid drinking. I actually hate drinking and being hung over all the time. I am in the middle of a terrible divorce and custody battle and my prior unsuccessful treatment is being used against me even though my husband drinks for a longer period and volume throughout the day. There is no proof like a treatment stay. I would be afraid that it would cause me to lose custody of the children."

A 27-year-old female from New York wrote:

> "Although I have been worried about my drinking in the past, and am somewhat worried about it now, I never have sought help because I didn't want to confirm my thoughts that I might have a problem. Also, it is

emotionally painful to think of myself as a person who has a problem with alcohol, and getting help would put that front and center."

A 27-year-old female from New York wrote:

"I'm not really sure that this is a problem. I just wonder about the secrecy I surround about drinking alone. I do not usually get drunk alone, just slightly relaxed -- but I don't think the amount of nights I drink alone is "normal" outside of dramatic artists and writers -- and I am friends with some of those, but not exclusively. I also have a couple of alcoholic family members -- one recovered for 30 yrs, one still actively drinking -- and I know that can be worrisome."

An 18-year-old female from Arizona wrote:

"Because I am a young college student just having a few drinks with my friends or at parties two to three time per week."

Treatment History and Readiness for Change

Within the entire sample, lifetime utilization of professional alcohol and/or drug treatment services was reported by 24 respondents (11%), 26 (12%) reported that they had attended self-help or community support groups for alcohol or drug addiction, 15 (7%) reported current treatment, and 13 (6%) reported that they were considering treatment. Of the 152 with partners, 17 (11% of those with partners) reported that their partner had suggested treatment. Nineteen respondents (9% of the whole sample) reported that a friend of relative other than their partner had suggested that they seek treatment for their drinking. On the Drinking Goals measure, 61 (28%) reported that they had no desire to change their drinking habits, 57 (26%) reported a moderated/controlled drinking goal, 12 (5.5%) reported an abstinence goal, and 35 (16%) reported that none of the goal choices applied to them. With respondents who reported no desire to change

their drinking excluded (n = 61), 19 (18%) of the remaining 104 respondents reported past treatment for alcohol or drug addiction, 20 (19%) reported that they had attended self-help or community support groups for alcohol or drug addiction, 14 (13%) reported current treatment, and 12 (11%) reported that they were considering treatment. Of these respondents reporting the desire to change their drinking, 14 (13%) of those with a partner reported that their partner had suggested treatment and 14 (13%) reported that a friend of relative other than their partner had suggested that they seek treatment for their drinking. The mean score on the 10-point Readiness Ruler was 3.94 (SD = 2.9). On this measure, nearly half of respondents (n = 97, 45%) reported that they were not ready to change their drinking, 27 (12%) reported that they were "ready to change", and an additional 27 (12%) reported that they were "trying to change". Of the 54 reporting that they were ready to change or trying to change their drinking, 38 respondents (68%) reported that they were already trying to make changes and an additional 11 (20%) reported that they intended to make changes to their drinking habits within the next 3 months. There were no sex differences in ratings on the Readiness Ruler. Heterosexual respondents reported higher readiness to change than LGB respondents [t(198) = 2.22; p = .028], and of the respondents who reported that they were ready to change heterosexual respondents reported the intent to change sooner than LGB respondents [t(54) = -2.21, p = .043].

Treatment Preferences (specific aim 4)

Treatment preferences were evaluated as part of specific aim 4. It was hypothesized that: 4a) LGB respondents would prefer LGB therapists more than heterosexual participants would prefer heterosexual therapists; and 4b) LGB respondents would be more likely to select a moderate/controlled drinking goal (as opposed to an abstinence goal) than heterosexual respondents. Forty percent of respondents reported that they would prefer professional treatment rather than self-help support if they were going to seek treatment for their alcohol or drug use (36%

preferred outpatient, 4% preferred inpatient). Twenty-nine percent reported that they would prefer a self-help group, 15% a self-help book, and 16% preferred computerized treatment either online or with computerized sessions. Independent z-tests for proportions revealed no significant differences in treatment modality preference by sex or sexual orientation. Twenty-seven percent of men preferred male therapists, and 35% of women preferred female therapists; these proportions were not statistically different. Thirty-eight percent of heterosexual respondents reported that they would prefer a heterosexual therapist, whereas a significantly larger 54% of LGB respondents reported a preference for a LGB therapist [z = 1.7, CI = 95.6]. This supports hypothesis 4a and lends some support to the notion that LGB clients prefer LGB therapists. However, it should be noted that this 54% is not an overwhelming proportion and mitigating factors (e.g. prior treatment experience) may play a role in this relationship. Of the 104 respondents who reported the desire to change their drinking habits, 16.3% reported a goal of abstinence and 50% reported a goal of moderated or controlled drinking. Of those who scored above the AUDIT cutoff and completed the drinking goal section (n = 93), 25 (27%) reported no desire to change, 49 (53%) reported a controlled drinking goal, 8 (8.6%) reported an abstinence goal, and 11 (11.4%) reported that none of the stated goals applied to them. Hypothesis 4b was not supported since there were no significant differences found in the proportions of heterosexual and LGB respondents endorsing moderate/controlled drinking goals.

Model of Help-Seeking (specific aim 5)

Specific aim 5 was to test the model of help-seeking that posits that treatment seeking is predicted by social support, self concealment, perceived barriers to treatment, severity of distress, and attitudes towards counseling (see figure 1). It was hypothesized that the proposed model of help-seeking would be supported in the following ways: 5a) fewer perceived barriers to treatment, higher severity of distress, and more favorable attitudes towards counseling would predict prior

alcohol treatment; 5b) lower perceived social support and higher self-concealment tendencies would predict higher severity of distress. Since the data were cross-sectional we could not conduct a true path analysis, but linear and logistic regression were used to evaluate the proposed model. The dependent variable was treatment history (dichotomized for 0 = no prior or current alcohol/drug treatment, 1 = prior or current alcohol/drug treatment). Step one used logistic regression to regress treatment history on perceived barriers to treatment (BQ sum score without the NATC subscale), severity of distress (AUDIT score, PDD, MDPDD, or MDPW), and negative attitudes toward counseling (NATC subscale without item about past treatment experiences). For model testing, the BQ item about previous negative experiences with treatment was removed from the NATC subscale because it overlapped with the dependent variable. Results offered support only for the relationship between severity of distress/problem and treatment seeking [Nagelkerke R^2 = .24], with AUDIT scores predicting treatment history. There was no support for the relationship between overall perceived barriers (BQ sum scores) or negative attitudes towards counseling and treatment history. Step 1 analyses were repeated with alternate measures of problem severity (PDD, MDPDD, and MDPW) with similar results. It should be noted that measures of problem severity were used as proxies for severity of distress. The results of these logistic regressions are presented in tables 14 – 17. Model analyses were run subsequently for the sub-sample of respondents who scored above the threshold on the AUDIT in order to examine the model in a sample of more problematic drinkers. Results of these analyses did not offer additional support for the model, and therefore are not presented.

Step two used linear regression to regress severity of distress (AUDIT score) on social support (derived from IPA items) and self-concealment (SC, a BQ subscale). Social support was derived from item 8 on the IPA. Each participant was given a 0 – 100 score that represented the percentage of the assessed network that the respondent reported as being supportive, very

supportive, or extremely supportive. Step 2 analyses were conducted for each of the measures of

severity of distress (PDD, MDPDD, MDPW, and AUDIT) and none of the models supported the

hypothesized relationships of social support and self-concealment predicting severity of distress.

Tables 18a – 21a summarize results of these linear regressions. Again, model analyses were run

subsequently for the sub-sample of respondents who scored above the threshold on the AUDIT.

These analyses similarly offered more support for the model than those that included less

problematic drinkers; when AUDIT scores were used, problem severity was predicted by scores on

the self-concealment scale, but not by social support. Tables 18b – 21b present results for these

analyses. To further explore the relationship between severity of distress and social support, social

support for treatment seeking was added to the regression analyses. When this variable was

added, the model was supported for AUDIT scores; severity of distress was predicted by self-

concealment [Beta = .23, t = 2.20, p = .030], general levels of social support [Beta = -.23, t = -2.20,

p = .030], and social support for treatment-seeking [Beta = .31, t = 2.98, p = .004]. However, these

relationships were not maintained when other drinking variables were used as the measure of

severity of distress. Tables 18c – 21c present results for step 2 analyses in the sub-sample using

both measures of social support. Figure 1 illustrates with proposed model with beta-weights

included to show the magnitude of each predicted relationship.

Discussion

Results offered mixed support for study hypotheses and exploratory analyses revealed some interesting findings that can guide future research and treatment efforts. Overall, results suggest that many people are concerned about their drinking, but not willing to seek treatment for a wide range of reasons. The heterogeneity of the respondents to the worried drinker ad illustrates that concerns about drinking are not driven solely by the severity of the drinking. Though several sex differences and sexual orientation differences were found in reported rates of substance use, the groups appeared more similar than different in terms of motivation for treatment, barriers to treatment seeking, and treatment preferences.

Specific aim 1 was to develop a web-based survey that provided personalized feedback to problem drinkers. This aim was completed and the survey will continue to be available to the public until October 2008, which is the end of the domain rental period. Making this survey available to the public was more than simply the method for completing this study; it was hoped that the provision of feedback would stimulate individuals to consider changing heavy drinking patterns. Research has shown that providing simple feedback on drinking habits may result in decreased drinking and increased utilization of treatment services (Sobell, Sobell, Leo, et al., 2002). This study provided feedback on several domains of drinking and provided individuals with resources to locate treatment services. The high rate of interest (almost 800 interested respondents) and low rate of previous treatment experience suggest that many people beyond the small percentages who seek treatment are concerned about their drinking habits. Additionally, the large number of respondents to the online survey and the heterogeneity of the sample suggest that the Internet is a viable route to reach a wide range of individuals with various levels of drinking and motivation for change. In fact, over half of those who completed this survey reported that they were not ready to change their drinking habits and a significant proportion reported that they would prefer self-help or

online therapy if they made the decision to change their drinking habits. These findings suggest the utility of the Internet in accessing individuals not typically accessible in treatment settings.

Specific aim 2 was to assess drinking patterns, alcohol-related problems, social network substance use, and relationship satisfaction among male and female worried drinkers with various sexual orientations, hypothesizing that heterosexual men would report more problematic drinking than heterosexual women, lesbian and bisexual women would report more problematic drinking than heterosexual women, and gay and bisexual men would report more past and current drug use than heterosexual men. The specific hypotheses for this aim largely were not supported for sexual orientation differences and were moderately supported for sex differences. Men reported more problematic drinking than women for drinking frequency and one measure of drinking intensity. Results indicated that men had higher AUDIT scores, drank more frequently than women, and reported more drinks per week than women and these results were maintained when covariates were included in the analyses. These results are consistent with a large body of research showing that men typically drink more heavily than women. Results did not support the prediction that lesbian and bisexual women would report more problematic drinking than heterosexual women. These results are not in line with previous research that demonstrated heavier drinking and more alcohol-related consequences in homosexually-experienced women than exclusively heterosexual women (Burgard et al., 2005; Bux, 1996; Cochran et al., 2000; Drabble et al, 2005). This inconsistency could be a result of the small sample size or the method for assessing alcohol use, which imposed a false ceiling on levels of drinking intensity (i.e. the highest number of drinks per day that respondents could report was "10 or more"). This inconsistency also could be a result of the differences between the current sample and those used in previous studies. The current study specifically recruited individuals who were concerned about their drinking and collected data over the Internet; both of these methodological issues could have resulted in a sample qualitatively

different than those included in previous studies. Perhaps sexual orientation differences are not present in subsamples of women worried about their drinking. Supporting this possibility, there were no differences between proportions of heterosexual and LGB women who described themselves as problem drinkers or alcholics (23% vs 21%).

In order to improve upon methodologies from previous studies, differences in drinking were examined with several different grouping variables. Previous research suggests that bisexual individuals drink more heavily than gay or heterosexual individuals, but the number of bisexual respondents in this sample was quite small. Therefore, analyses were conducted with bisexual respondents included, and then separately with them excluded. Results for sexual orientation were similar for all drinking variables regardless of the inclusion or exclusion of bisexual respondents. Similarly, research suggests that sexual behavior contributes to problematic substance use in addition to sexual identification. Therefore, respondents were coded as "homosexually experienced" if they either identified as LGB or reported same-sex partners in the previous year. Grouping respondents in this way did not alter results of drinking analyses; none of the drinking variables were different between heterosexual and homosexually-experienced individuals. There are two important possible explanations for the discrepancy between the current study and previous research that suggests sexual orientation differences in substance use. First, the current sample was not randomly selected and is not representative of the LGB population; online data collection and the recruitment of "worried" drinkers resulted in a sample that is not appropriate to assess the epidemiology of substance use. Again, the goal of this study was not to replicate findings from national samples, but to gather exploratory data about barriers to treatment from individuals not likely to seek face-to-face treatment services. Second, individuals could have used very different metrics to measure their drinking since there was not an interviewer present to educate respondents about the size of a "standard drink." Though there was a guide provided in

the online survey that described a standard drink for beer, wine, and liquor, individuals could have misinterpreted that guide or ignored it altogether. Therefore, we cannot assume equivalence between reported drink sizes. However, if these results represent a true similarity between groups, results would suggest that identity as a sexual minority, lesbian/gay or bisexual, is more related to drinking habits than sexual behavior.

A large proportion of the sample used illicit drugs - nearly 80% had used drugs at some point in their lives; more than 50% in the past year, and more than 33% in the past month. It was hypothesized that gay and bisexual men would report more past and current drug use than heterosexual men; this hypothesis was supported for past year drug use, and there was a trend for gay/bisexual men also to report more drug use in the past month. Among women, there was a trend for more lifetime drug use among lesbian/bisexuals than their heterosexual counterparts. These findings are consistent with previous research showing that LGB individuals report more lifetime drug use than heterosexual individuals (e.g. Cochran et al., 2004). Interestingly, when the entire sample was evaluated together, there was a trend for more women to report lifetime drug use than men, and LGB individuals were more likely to report lifetime and past year drug use than heterosexual respondents. With regards to the finding that women reported more drug use than men when sexual orientation was not included as a grouping variable, this difference could be driven by unequal cell sizes and a larger proportion of LGB female respondents than LGB male respondents. In other words, the apparent sex difference actually could be a sexual orientation difference disguised by the prevalence of female LGB respondents. However, the finding that women reported more drug use than men on an Internet survey is provocative, suggesting the possibility that women minimize their drug use when evaluated by a person rather than a computer. It is possible that the anonymity provided by online administration enabled these women to report

their drug use more accurately, as has been found in previous research (e.g. Tourangeau & Smith, 1996).

Based on social learning theory and previous research, it was hypothesized that drinking severity would be related to drinking in the social network. This hypothesis was supported for PDD, MDPDD, and AUDIT scores. These findings are consistent with previous findings that peer and partner drinking shape an individual's drinking patterns (e.g. McCrady, 2004; Roberts & Leonard, 1998). There were no sex differences or sexual orientation differences in reported levels of the assessed network rated as moderate or heavy drinkers. There were, however, sexual orientation differences in the proportions of the assessed networks rated as abstainers; LGB respondents reported significantly fewer abstainers than heterosexual participants (15% vs. 25%), and 34% of LGB respondents reported that none of their assessed network members were abstainers. These findings are consistent with the finding that LGB respondents were less likely to abstain from drinking than heterosexual resondents (0% vs 16%). It is commonly posited that LGB substance use is higher due to the impact of social network substance use. However, this study suggests that there may be no differences in rates of moderate/heavy drinking, but that LGB individuals have fewer abstainers in their networks. However, the lack of empirical support for the differences between moderate/heavy drinking social network members in LGB and heterosexual respondents may be due to insufficient power or the result of the sample being composed of worried drinkers. It is possible that heterosexual respondents in the current sample were part of more heavily drinking social networks than the general population of heterosexual drinkers. Further studies should examine social network differences in general population samples.

Other aspects of social network support were evaluated in an exploratory manner. Overall, the sample reported high rates of general social support and somewhat lower rates of support for treatment seeking; 24% (38 respondents) reported that none of their assessed network would

support treatment seeking for alcohol problems. This finding is particularly troublesome. Why is it that the decision to seek treatment for a drinking problem is not perceived as being supported as much as other aspects of life? One possibility is that stigma associated with treatment could lead individuals to think that those close to them would not be supportive of treatment seeking. An alternate explanation for this finding is that many of the people who reported no support for treatment were not drinking at very high levels. However, there was a wide range in drinking frequency (0 – 90% drinking days) and intensity (1/2 – 30 or more drinks per week) with some of the individuals reporting quite severe problematic drinking. Drinking at unsafe levels (more than 7 drinks per week for women or 14 drinks per week for men) was reported by 29% of the respondents who reported that none of their assessed network would be supportive of their decision to seek addiction treatment. It makes sense that individuals with low or moderate rates of drinking would not perceive much social support for treatment seeking because most of the people who know them likely would know that they did not drink that much. However, for those individuals whose drinking patterns are more severe, the perceived lack of social support could pose an additional barrier to treatment seeking. Interestingly, there was a trend for women to report more social support for addiction treatment than men. This conflicts with previous findings that women report social barriers to treatment seeking and opposition to the decision to seek treatment more often than do men (Beckman & Amaro, 1986). However, research on barriers has not been conducted in samples with large proportions of LGB participants, and it is possible that this sex difference is driven by a sexual orientation difference. In other words, it is possible that LGB communities are more supportive of addiction treatment than heterosexual communities. This notion is supported by previous findings that lesbian women are more likely to seek addiction treatment than heterosexual women (Drabble et al., 2005). Future research should examine further

examine perceived social support for psychotherapy and addiction treatment in the LGB community.

Exploratory analyses examined the correlations between demographic variables and characteristics of social support networks. The percentage of the assessed social network supportive of alcohol treatment correlated significantly with history of past or current treatment and with the percentage of the network that was generally supportive. The percentage of the assessed network rated as moderate or heavy drinkers correlated significantly with younger age, shorter relationship length, and not having children or stepchildren. The negative relationship between age and social network drinking is understandable from a "maturing out" perspective suggested by previous research; older individuals are less likely to be heavy drinkers (e.g. Labouvie, 1996). In fact, for the current sample there was a significant negative correlation between age and mean drinks per drinking day. The negative relationship between relationship length and social network drinking makes sense in light of research suggesting drinking patterns of partners tend to become more similar over time and relationships have a protective function against problematic drinking (Demers, Bisson, & Palluy, 1999; Leonard & Eiden, 1999; Leonard & Rothbard, 1999; McLeod, 1993; Roberts & Leonard, 1997; Roberts & Leonard, 1998). This finding also could be related to age in that individuals with longer relationships are likely to be older, and therefore further along in the maturing out process. With regards to the finding that social network drinking was negatively correlated with having children, it is important to note that underage children could have been included in the assessed social network, therefore lowering the percentage of drinking-aged people in the assessed social network. However, if this finding is not an artifact of the methodology, it suggests that individuals with children have social networks composed of fewer moderate/hevy drinkers. This finding would make sense in terms of both a maturing out perspective (parents are likely to be older) and in terms of selecting social network members who limit their heavy drinking,

which would increase the safety and family-friendly nature of social interactions. Future research should evaluate further the relationship between social support for treatment seeking and treatment history without limiting the size of the network assessed in order to provide more comprehensive data about social network influences on drinking behaviors.

A surprising finding was that a large number of respondents (40%) to the "Are you worried that you drink too much?" ad scored below the standard cutoff on the AUDIT. This finding is inconsistent with previous findings that people tend to minimize their drinking and underreport alcohol-related problems (e.g. Maisto, Sobell, & Sobell, 1979) and raises questions about what factors contribute to individuals' concerns about their drinking. Researchers have noticed a tendency for many problem drinkers not to seek professional treatment, but participate in opportunities to change their drinking on their own, and a burgeoning literature addresses the efficacy of facilitated natural recovery, or guided self change, for individuals who do not want to seek professional treatment (for review see Sobell & Sobell, 2005). This trend highlights the heterogeneity in problem severity and motivation for treatment. Since the large proportion of respondents to the worried drinker ad was unexpected, differences between those who scored above the AUDIT cutoff and those who scored below the cutoff were examined in an exploratory manner. Results suggested that respondents who scored above the AUDIT threshold were less educated and less happy with their romantic relationships. These findings are in line with previous research showing that higher education is associated with lower rates of problematic drinking (e.g. Greenwood et al., 2001) and with research suggesting that relationship distress is a common antecedent to drinking (e.g. Lammers, Schippers, & van der Staak, 1995). The finding that many of the respondents who were concerned about their drinking were drinking at low or moderate level suggests that factors besides drinking severity contribute to concern about drinking. Family history of alcoholism was not assessed in the survey and it is a possible reason that family history positive

individuals responded to the advertisement because of heightened awareness of the potential for their drinking to become problematic.

Specific aim 3 of the present study was to evaluate perceived barriers to seeking treatment and treatment preferences of problem drinkers with various sexual orientations. These analyses primarily were exploratory, but a few specific hypotheses were posited a priori. It was hypothesized that women would report more barriers than men, and that LGB respondents would report more barriers than heterosexual respondents. Neither of these hypotheses was supported by the results, suggesting that within this sample, barriers were experienced similarly regardless of gender or sexual orientation. There were two exceptions to this finding and both were in the opposite direction to the hypotheses; heterosexual respondents endorsed Stigma Concerns in greater proportions than LGB respondents and there was a trend for heterosexual respondents to have higher mean scores on Safety Concerns than LGB respondents. These results are counterintuitive and inconsistent with previous findings that women and minorities experience more barriers to treatment (e.g. Beckman & Amaro, 1986). One possible explanation for these findings is that LGB communities may have a more accepting view of psychotherapy than heterosexual communities. This possibility is consistent with previous findings that lesbian/bisexual women are more likely to seek treatment than heterosexual women (e.g. Cochran et al, 2000). However, these finding should be evaluated with caution due to elevated likelihood of Type II error since these analyses were exploratory and therefore conducted with lenient alpha levels. It was hypothesized that gay and bisexual men would report more sexual barriers to treatment (e.g. fear of abstinence negatively affecting sexual performance) than other respondents; this hypothesis was not supported. This finding could be a result of the small sample size, or the fact that only 2 items evaluated thoughts about the effects of drinking on sexual functioning or enjoyment. However, if this is not a spurious finding, it suggests that fear of changes in sexual performance or enjoyment

are areas that could be addressed in treatment and outreach efforts to reduce the negative impact of such fears on treatment seeking.

There was a wide range of treatment preferences reported in the sample. Less than half of the sample reported that they would prefer professional treatment, highlighting the need for alternative treatment modalities. Of those who preferred professional treatment, the vast majority preferred outpatient over inpatient treatment. However, this finding should be interpreted in light of finding that many of the respondents were not drinking at levels that would suggest the need for inpatient treatment. Only a third of respondents reported a preference for self-help or community support services, and this finding suggests the possibility that though group treatment is more widely available, it is not the treatment modality preferred by most treatment seekers. Quite a large proportion of respondents reported a preference for assistance in changing their drinking habits via self-help books (15%) or computerized treatment programs (16%). This finding is intriguing in terms of service access and the dissemination of empirically supported treatments through books and the Internet. Recent research suggests that computerized treatments are efficacious and cost-effective (for review see Green & Iverson, in press), and the number of responses to the current study and reported preference for computerized treatment reported by respondents provide evidence that the translation of treatments to computerized format would permit a good number of problem drinkers to receive help who might not normally access treatment services.

There exists anecdotal evidence and therapeutic lore that clients are better served by clinicians of the same gender or sexual orientation. However, these notions have not been adequately evaluated. Of the current sample, about a third of respondents preferred a therapist of their same sex. This is not a majority and refutes the notion that gender concordance is an important factor to clients or potential clients. With regards to sexual orientation, LGB respondents in the current study were more likely to prefer a LGB therapist (54%) than heterosexual

respondents were to prefer a heterosexual therapist. This is consistent with anecdotal evidence that LGB clients prefer LGB clinicians (Finnegan & McNally, 2002). However, it should be noted that this 54% is not an overwhelming proportion and mitigating factors (e.g. prior treatment experience) may play a role in this relationship. Another possible explanation for this finding is that individuals were not asked whether they viewed issues related to their sexual orientation as one possible focus in treatment. Previous research suggests that LGB individuals only consider a therapist's sexual orientation important when issues related to sexual orientation are a primary reason for seeking treatment (Burckell & Goldfried, 2005). Additionally, LGB respondents were not asked if they would seek out a therapist who was LGB themselves or LGB-friendly. Another unknown is the strength of the preference. Future research should examine reasons for therapist preferences and well as the strength of those preferences.

In terms of drinking goals, half of respondents reported a moderated or controlled drinking goal and there was no support for the hypothesis that LGB respondents would prefer moderate drinking more than heterosexual respondents. Interestingly, over a third of respondents reported that none of the provided drinking goal choices applied to them; most of the people who reported that none of the goals applied to them (24 of 35, 69%) scored below the AUDIT cutoff. This suggests that respondents could have selected the "none apply to me" category because they did not want to change their drinking because they did not think their drinking habits were problematic. However, there was considerable variation in the drinking goals reported by those who scored above the AUDIT threshold, suggesting the need for patient-centric treatment goals and treatment protocols that offer flexibility instead of urging abstinence.

The BQ subscales with the highest rates of endorsement were related to two general domains: not seeing the need for treatment and negative thoughts about treatment. The BQ subscales with the highest mean scores were Problem Minimization, Lack of Motivation for

Change, Stigma, and Self Concealment. These findings are understandable when considering the decision process to seek treatment. Individuals who do not view their drinking as problematic or unusual (problem minimization) or who perceive greater incentives to keep drinking than to quit drinking (lack of motivation for change) are least likely to seek treatment for their drinking. Both problem minimization and lack for motivation for change were reported by 9 of 10 respondents, suggesting that these barriers are quite prevalent. In order to investigate the relationship between these constructs and problem severity, correlations that were examined provided a mixed picture of the relationship between these scales and problem severity. There was a trend for problem minimization to be correlated negatively with mean drinks per drinking day [$r(154) = -.146$, $p = .071$] suggesting that the problem minimization scale may have been an accurate perception of non-problematic drinking rather than denial for many of the respondents. On the other hand, there was a negative correlation between motivation for change and percent drinking days [$r(167) = -.261$, $p = .001$], mean drinks per week [$r(171) = -.274$, $p < .001$], and AUDIT scores [$r(171) = -.331$, $p < .001$]. The finding that increased problem severity accompanies lack of motivation for change suggests that drinking gives respondents something very valuable that is difficult to give up. Contemporary approaches to addiction treatment often include components of motivation enhancement and correcting skewed perspectives on safe levels of alcohol use (for review see Finney & Moos, 2002). The results of the current study offer support for the importance of addressing these topics, and suggest that outreach efforts might be able to increase treatment seeking behaviors by targeting these barriers.

This sample was relatively treatment naïve and not ready to change their drinking habits. Only a small portion of respondents reported use of either professional treatment for alcohol/drug problems or self-help/community support groups (14% of whole sample). Despite the fact that all respondents responded to the ad for worried drinkers, nearly half reported that they were not ready

to change their drinking. Readiness to change was positively correlated with measures of drinking severity [for AUDIT, $r(200) = .445$, $p < .001$], suggesting that more problematic drinking is associated with higher motivation for changing drinking habits. It should be noted that this relationship seems to be discrepant with the previous results that motivation for change is negatively correlated with drinking severity. However, readiness to change was referring specifically to current levels of drinking, whereas the lack of motivation for change subscale was part of the BQ, which assessed reasons respondents had not or would not seek treatment for their drinking. The finding that readiness to change current drinking habits correlated with drinking severity is consistent with the finding in the current study that problem severity predicts the likelihood of seeking treatment. Of those considering changing their drinking habit, 27%% reported that their partner, a friend, or relative had suggested that they seek treatment for their drinking. These findings are consistent with anecdotal evidence that seeking treatment for addiction often occurs in response to concern expressed by important people. Further examination of this relationship revealed a significant correlation between problem severity and partner or other relation having suggested treatment [for AUDIT scores: partner suggestion $r(176) = .167$, $p = .027$; other suggestion $r(175) = .388$, $p < .001$]. Future research should examine the impact of social network suggestion/encouragement on the decision to seek treatment for addiction and perhaps devote resources to educating the public on how to effectively encourage treatment seeking to their loved ones.

The final aim of this study was to test a model of help-seeking that posited that social support, self concealment, perceived barriers to treatment, severity of distress, and attitudes towards counseling predict treatment seeking. It was hypothesized that fewer perceived barriers to treatment, higher severity of distress, and more favorable attitudes towards counseling would predict treatment history. Results of analyses evidenced support for the relationship between

higher problem severity and greater likelihood of having sought treatment, but did not support any of the other proposed pathways. The lack of support for this model must be considered in light of two critical methodological issues - that these analyses were cross-sectional and that perceptions about previous treatment were not assessed. Of particular concern, post-hoc analyses revealed that respondents who reported any past or current treatment scored higher on the negative attitudes toward counseling [t(157) = -2.57, p = .011] and fear of treatment [t(162) = -2.54, p = .012] scales of the BQ. It is possible that previous treatment could have been the impetus for the negative attitudes toward counseling and future studies should more closely examine the temporal order of attitudes about treatment experiences.

It also was hypothesized that lower perceived social support and higher levels of self-concealment would predict higher severity of distress. This part of the model was not supported; there were no relationships between severity of distress and these variable. In contrast to the assumption that drinking quantity and frequency drive levels of distress, it is possible that drinking behavior per se is not a good proxy for severity of distress since it does not include evaluation of social or emotional consequences of use. Future studies should utilize a more accurate measure of distress about drinking instead of simple drinking quantity and frequency variables.

The final item on the BQ allowed respondents to give an open-ended answer to what had prevented or would prevent them from seeking treatment for their alcohol use. Many of the responses were similar to the problem minimization scale of the BQ (e.g. "Because I am a young college student just having a few drinks with my friends or at parties two to three times per week"). However, some of the responses pointed to aspects of alcohol use that were not addressed by the BQ. For example, one woman wrote that alcohol was the only thing that reliably put her to sleep, and she saw her only alternative as not sleeping for extended periods of time. That woman also reported concern about her drinking being used against her, "I would be afraid that it would cause

me to lose custody of the children." Another woman wrote, "it is emotionally painful to think of myself as a person who has a problem with alcohol, and getting help would put that front and center." Another woman illustrated the importance of social network norms by stating, "I do not usually get drunk alone, just slightly relaxed -- but I don't think the amount of nights I drink alone is 'normal' outside of dramatic artists and writers." These responses suggest that some of the barriers to changing drinking habits are idiosyncratic, and should be addressed on an individual basis by treatment providers and outreach workers.

Study Strengths and Limitations

The present study has several strengths that make it unique in the field. Internet administration provided a level of anonymity that could have made respondents more comfortable reporting accurate estimates of their drinking and drug use. Additionally, Internet administration made the survey available to people all over the world at various stages of concern about their drinking. Traditional samples often are limited to those who seek treatment through traditional channels, but the present study accessed respondents who largely had no previous contact with the treatment community. The present sample also was composed of high proportions of women, who often are underrepresented in treatment samples. The inclusion of men, women, heterosexual, and LGB participants in the same study and the use of validated measures permitted direct comparisons between groups on the constructs under investigation. Finally, the current study evaluated both sexual identification and sexual behavior instead of using sexual behavior as a proxy for sexual orientation.

Despite these strengths, the present study has several limitations. First, the use of an Internet survey poses several threats to data validity and sample generalizability. Respondents could terminate the survey before completion, complete the survey more than once, or provide bogus answers in order to finish more quickly. Efforts were made to minimize these possibilities by

providing participants with an estimate of completion time, providing pop-up alerts when an item was skipped, and collecting IP addresses to search for duplicates. The sample was not a random sample and could therefore be biased towards LGB individuals who were more comfortable with their sexual orientation, more comfortable with the Internet, and those who have Internet access. Little can be done to minimize these biases, but efforts were made to recruit individuals from diverse backgrounds (see participants and recruitment section). There was no way to evaluate respondents' understanding of the survey, and those not fluent in English may have misunderstood questions or answers, therefore limiting the validity of their answers. Finally, the use of the Internet for data collection presents an additional threat to sample generalizability. The current sample was quite different from nationally representative samples; women and those with a college education were overrepresented in the current sample. However this disparity is not a critical flaw since the goal of the current study was not to assess the epidemiology of alcohol and drug use, but to gather information about barriers to treatment seeking and treatment preferences from individuals who were concerned about their drinking but not presenting for treatment via traditional channels.

Clinical Implications of Findings

A specific purpose of this study was to gather empirical data that could guide treatment and outreach program development for problem drinkers with various sexual orientations. Though many of the hypotheses were not supported, several important findings have specific clinical implications. Two-thirds of respondents endorsed items reflecting fear of treatment and negative attitudes towards counseling as reasons for not seeking alcohol treatment, and over half of the respondents endorsed concerns about stigma. These findings highlight specific challenges faced by treatment providers and outreach workers. How can healthcare providers attempt to change negative perceptions of addiction treatment? How can society minimize the stigma attached to psychotherapy and addiction? Since personal experience and testimonials from others can lead to

negative attitudes and fears of treatment, how can the field provide contradictory evidence that outweighs negative attitudes and fears and motivates individuals to give treatment a chance? Unfortunately, there may be no easy solution to this dilemma. Perhaps over time, as treatment becomes more widely available and the use of empirically-supported treatments expands, these attitudes will change. In terms of outreach efforts, these negative attitudes and fears of treatment are a prime target for corrective campaigning and publicity. The issue of stigma similarly is complicated and difficult to change. However, efforts to decrease stigma related to treatment seeking can be seen in the Veterans Affairs Medical Centers; new posters and publications state, "It takes the courage and strength of a warrior to ask for help." Similar efforts could be initiated in the public sector in attempts to minimize the stigma associated with mental illness, addiction, and psychotherapy. In terms of treatment issues, therapists should spend time exploring previous treatment experiences and perceptions of stigma that could prevent an individual from engaging fully in treatment. Additionally, since self-concealment was reported as a significant barrier for many respondents, alternatives to group treatment should be offered whenever possible. One possibility is the use of computerized treatment programs and the Internet in order to access individuals who have not sought treatment due to self concealment. This possibility should be explored, especially since 16% of the present sample stated a preference for computerized treatment. Alternatively, individual sessions could explore issues related to self concealment prior to an individual's entrance into group therapy. Additional issues that warrant attention by clinical professionals are problem minimization and lack of motivation for change. Though contemporary forms of psychotherapy utilize motivation enhancement techniques and attempt to correct skewed perceptions of drinking norms, these areas have yet to be targets of outreach efforts. Public campaigns that address motivation issues and drinking norms could stimulate treatment seeking

from individuals who minimize their drinking or experience specific motivational barriers to changing their drinking habits.

In terms of treatment preferences, LGB and heterosexual respondents appear more similar than different. Both groups reported a preference for outpatient treatment, about a third reported a preference for a therapist of their same gender, and half reported a goal of moderated or controlled drinking rather than abstinence. The only difference was that a larger proportion of LGB respondents reported a preference for a LGB therapist than the proportion of heterosexual respondents who reported a preference for a heterosexual therapist. However, these findings should be interpreted with caution because it was not an overwhelming majority (54%) of LGB respondents and confounding variables (e.g. previous negative treatment experiences involving heterosexual therapists, distress about sexual orientation) were not assessed or controlled for in these analyses. Based on these data, it does not seem that LGB problem drinkers vary greatly from heterosexual problem drinkers in terms of their preferred treatment modalities or drinking goals. Therefore, programs developed for heterosexual problem drinkers should be equally useful for LGB problem drinkers, with the possible exception of preferred sexual orientation of therapists. However, the preference for LGB therapists could be explored with an intake clinician prior to treatment onset in order to clarify reasons for the preference and determine whether it is clinically relevant to attempt to place LGB clients with LGB therapists.

Future Directions

Findings of this study can guide future research in several domains. Research should continue to examine the relationship between social network substance use and problem severity in problem drinkers. Though no differences between groups were found in the current study, larger and more representative samples may uncover sex or sexual orientation differences in social network substance abuse. Additionally, the current study limited the size of the assessed social

network to 5 individuals and future studies should examine social network influences in a more comprehensive manner. The importance of a match between clinician and client on sexual orientation still is unclear. Though the current study seemed to support such a preference from LGB clients, mitigating factors (e.g. the anticipated role of sexual orientation issues in the treatment process) were not examined. Future researchers should examine this possible preference, as well as the impact of sexual orientation match/mismatch on treatment outcomes. Results of the current study also suggest the possible value of testing the effectiveness of translating empirically-supported treatments into computerized formats in order to provide access to individuals who may not seek services via traditional channels. Researchers have begun to address these issues and various computerized treatment protocols are now available (for review see Green & Iverson, in press), but more research is needed on effective models of computerized treatment and results on access to care and outcomes. From a community perspective, results of the current study have particular implications for public health campaigns. Specifically, results suggest that common barriers to treatment include lack of motivation, problem minimization, and stigma associated with treatment and that these barriers are perceived by individuals regardless of sex or sexual orientation. Research on outreach efforts and public health campaigns that target motivation, skewed norms, and stigma should be tested for impact on service utilization among problem drinkers.

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Footnotes

[1]Despite the growing population of transgender individuals in the population, research on the substance use patterns of transgender individuals is extremely limited (for review see Hughes & Eliason, 2002). Therefore, this review will focus exclusively on substance use research conducted with lesbians, gay men, and bisexual men and women.

[2]The terms "homosexually-experienced" and "exclusively heterosexual" are the terms used by the cited authors, but each category is somewhat ambiguous. For example, they do not take into account the current relationship status of the individuals, and the "exclusively heterosexual" category likely contains bisexual individuals who simply reported no recent same-sex partners.

[3]It is important to note that an official DSM-IV diagnosis could not be derived from NHSDA data due to lack of assessing withdrawal symptoms. Therefore, the term "alcohol/drug dependency syndrome" is used to denote probable alcohol/drug use disorder based on three or more DSM-IV symptoms of alcohol/drug dependence.

[4]The term "outness" refers to disclosure of sexual orientation to members of an LGB individual's social network.

[5]The term "worried drinker" is used throughout this paper to refer to respondents to the study recruitment ad, "Are you worried that you drink too much?"

[6]The term "assessed social network" is used throughout this paper to refer to social support reported by participants for up to five important people. Therefore, this is not an evaluation of the comprehensive social network.

Table 1: Demographic Characteristics of Respondents Included in Analyses (n = 218)

Characteristic	Sample Mean or Distribution
Age (n = 218)	Mean age 30.61, *SD* = 11.91
Gender (n = 218) Male Female	 64 (29%) 154 (71%)

Sexual Orientation (n = 218)
Heterosexual
  Male
  Female
Lesbian/Gay/Bisexual
  Male
  Female
	
	156 (72%)
	48 (22%)
	108 (50%)
	62 (28%)
	16 (7%)
	46 (21%)

Ethnicity (n =218) Caucasian only African-American/Black Hispanic/Latino Asian/Pacific Islander Native American Other Missing	 166 (76%) 7 (3%) 13 (6%) 21 (10%) 1 (1%) 6 (3%) 2 (1%)
Education (n = 218) Less than High School High School Only Trade School Some College 2-year College Degree 4-year College Degree Advanced Degree	 1 (0.5%) 31 (14%) 2 (1%) 68 (31%) 16 (7%) 42 (19%) 58 (27%)
Employment Status (n = 218) Full-time employment Part-time employment Full-time student Homemaker Retired Unemployed (on disability) Unemployed	 96 (44%) 31 (14%) 72 (33%) 7 (3%) 2 (1%) 2 (1%) 8 (4%)
Occupation (n = 214)	

Higher executives, major professionals	19 (9%)
Executives, less professionals	26 (12%)
Administrative, minor professionals	29 (14%)
Clerical, sales, technicians, servicemen	27 (12%)
Skilled manual employees	5 (2%)
Semiskilled employees	4 (2%)
Unskilled employees	4 (2%)
Student	78 (36%)
Homemaker	6 (3%)
Retired	2 (1%)
Unemployed	9 (4%)
Others, not classifiable	5 (2%)
Household Income (n = 218)	
No answer	8 (4%)
$0 – 15,000	47 (22%)
$15,001 – 30,000	26 (12%)
$30,001 – 45,000	26 (12%)
$45,001 – 60,000	27 (12%)
$60,001 – 75,000	19 (9%)
$75,001 – 100,000	25 (12%)
$100,001 – 125,000	15 (7%)
$125,001 – 150,000	11 (5%)
$150,001 and above	14 (6%)
Region of Residence (n =216)	
Outside United States	26 (12%)
United States	190 (87%)
New England	11 (6%)
Middle Atlantic	30 (16%)
East North Central	12 (6%)
West North Central	9 (5%)
South Atlantic	27 (14%)
West South Central	15 (8%)
Mountain	16 (8%)
Pacific	17 (9%)
Missing	53 (28%)
Urbanicity (n = 218)	
Metropolitan/Urban Area	94 (43%)
Suburban Area	90 (41%)
Country/Rural Area	33 (15%)
Missing	1 (0.5%)

Relationship Characteristics	
In a Committed Relationship (n = 218)	152 (70%)
Married, Civil Union, or Commitment Ceremony (n = 150)	49 (23% of whole sample)
With children or stepchildren (n =203)	55 (25% of whole sample)

Table 2: Results of Correlation Analyses

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. LGB status	1															
2. Age	.234**	1														
3. Ethnicity	-.072	-.333**	1													
4. Education	.282**	.539**	-.174*	1												
5. Employment	-.270**	-.382**	.213**	-.319**	1											
6. Country	.045	-.124	.103	.013	.012	1										
7. Income	.053	.316**	-.269**	.253**	-.245**	.042	1									
8. Urbanicity	-.176**	-.087	.044	-.267**	.154*	.030	.040	1								
9. Relationship Status	-.071	.154*	-.113	.106	-.026	.130	.191**	.023	1							
10. Relationship Length	.110	.669**	-.079	.375**	-.259**	-.220**	-.480**	.057	NA	1						
11. Kids	.041	.452**	-.202**	.115	-.057	-.061	.146*	.100	.174	.306**	1					
12. AUDIT sum score	-.005	-.056	-.198**	-.135*	-.058	-.150*	-.111	-.072	-.080	-.141	.147*	1				
13. PDD	.027	.137	-.222**	.111	-.106	.000	.130	-.060	.138	-.006	.157*	.685**	1			
14. MDPDD	-.047	-.293**	-.054	-.337**	.082	-.118	-.143	.085	-.220**	-.188*	-.006	.717**	.369**	1		
15. MDPW	-.062	-.005	-..114	-.070	-.009	.041	.063	.056	.016	-.025	.125	.790**	.925**	.612**	1	
16. BQ sum score	-.052	.036	-.053	-.032	-.038	-.141	-.078	.033	.070	-.041	.018	.239**	.153*	.115	.120	1
Mean		30.61										10.43	36.16	4.00	19.50	
SD		11.91										7.70	31.86	2.35	15.66	

NOTE: The coefficients of correlation reported are Pearson's correlation coefficients for pairs of interval variables and Spearman's rho for pairs including ordinal variables; for LGB status 0 = heterosexual and 1 = LGB; for ethnicity 0 = Caucasian only and 1 = other than Caucasian only; for Country of residence, 0 = other than United States and 1 = United States; for relationship status 0 = not in a relationship and 1 = in a relationship

*p < .05   **p < .01

Table 3: Differences between Respondents Above and Below the AUDIT Threshold

Variable	Below AUDIT Threshold n = 88	Above AUDIT Threshold n = 130	Statistics
Age	*M* = 32.30 *SD* = 13.34 n = 87	*M* = 29.53 *SD* = 10.76 n = 129	*t* (214) = 1.55 *p* = .123
Education	*M* = 4.25 *SD* = 1.76 Mode = advanced degree n = 88	*M* = 3.75 *SD* = 1.67 Mode = some college n = 130	*t* (216) = 2.14 *p* = .034
Employment	*M* = 1.64 *SD* = 1.72 Mode = Full-time n = 88	*M* = 1.36 *SD* = 1.46 Mode = Full-time n = 130	*t* (216) = 1.23 *p* = .222
Income Range	*M* = 4.15 *SD* = 2.75 Mode = $0 – 15,000 n = 88	*M* = 3.72 *SD* = 2.48 Mode = $0 – 15,000 n = 130	*t* (216) = 1.19 *p* =.236
Relationship Satisfaction (MHS)	*M* = 4.78 *SD* = 1.26 n = 65	*M* = 4.22 *SD* = 1.34 n = 87	*t* (150) = 2.65 *p* = .009
PDD	*M* = 16.82 *SD* = 22.57 n = 84	*M* = 50.79 *SD* = 30.08 n = 111	*t* (193) = -9.01 *p* < .001
MDPDD	*M* = 2.34 *SD* = 1.38 n = 70	*M* = 5.05 *SD* = 2.34 n = 110	*t* (178) = -10.03 *p* < .001
MDPW	*M* = 2.63 *SD* = 3.55 n = 85	*M* = 17.41 *SD* = 14.87 n = 120	*t* (203) = -10.48 *p* < .001
BQ Sum	*M* = 36.45 *SD* = 30.74 n = 76	*M* = 44.51 *SD* = 24.63 n = 97	*t* (171) = -1.91 *p* = .057

NOTE: PDD = Percent Drinking Days; MDPDD = Mean Drinks Per Drinking Day; MDPW = Mean Drinks Per Week; BQ = Barriers Questionnaire; Education: 0 = Middle School, 1 = High School, 2 = Trade School, 4 = Some College, 4 = 2-year degree, 5 = 4-year degree, 6 = advanced/professional degree; Employment: 0 = Full-time, 1 = Part-time, 2 = Homemaker, 3 = Student, 4 = Unemployed on disability, 5 = Unemployed not on disability, 6 = retired; Income: 1 = 0 – 15k, 2 = 15 – 30k, 3 = 30 – 45k, 4 = 45 – 60k, 5 = 60 – 75k, 6 = 75 – 100k, 7 = 100 – 125k, 8 = 125 – 150k, 9 = above 150k; MHS: 1 = extremely unhappy up to 7 = perfect

Table 4: Differences in Alcohol and Drug Use by Sex and Sexual Orientation

Variable	Group	Mean (SD)	Statistics
PDD	Male (n = 58) Female (n = 137) Heterosexual (n = 140) LGB (n = 55)	M = 45.02; SD = 33.63 M = 32.41; SD = 30.44 M = 35.71; SD = 31.61 M = 37.28; SD = 32.77	t(193) = 2.65, p = .011 t(193) = -.31, p = .758
MDPDD	Male (n = 53) Female (n = 127) Heterosexual (n = 126) LGB (n = 54)	M = 4.43; SD = 2.34 M = 3.82; SD = 2.34 M = 4.04; SD = 2.32 M = 3.91; SD = 2.44	t(178) = 1.60, p = .111 t(178) = .33, p = .740
MDPW	Male (n = 60) Female (n = 145) Heterosexual (n = 147) LGB (n = 58)	M = 15.69; SD = 15.64 M = 9.46; SD = 12.41 M = 11.23; SD = 13.11 M = 11.42; SD = 15.18	t(203) = 2.75, p = .007 t(203) = -.09, p = .929
AUDIT	Male (n = 64) Female (n = 154) Heterosexual (n = 156) LGB (n = 62)	M = 12.23; SD = 7.50 M = 9.68; SD = 7.68 M = 10.49; SD = 7.90 M = 10.29; SD = 7.24	t(216) = 2.25, p = .025 t(216) = .17, p = .865
Lifetime Drug Use	Male (n = 59) Female (n = 147) Heterosexual (n = 148) LGB (n = 56)	41 (70%) 121 (82%) 109 (74%) 50 (89%)	Z = 1.84, CI = 93.4 Z = 2.22, CI = 98.7
Past Year Drug Use	Male (n = 58) Female (n = 138) Heterosexual (n = 143) LGB (n = 52)	33 (57%) 76 (55%) 72 (50%) 35 (67%)	Ns Z = 1.94, CI = 97.4
Past Month Drug Use	Male (n = 55) Female (n = 134) Heterosexual(n = 138) LGB (n = 50)	21 (38%) 47 (35%) 45 (33%) 21 (42%)	Ns Ns

NOTE: PDD = Percent Drinking Days; MDPDD = Mean Drinks Per Drinking Day; MDPW = Mean Drinks Per Week; AUDIT = Alcohol Use Disorder Identification Test

Table 5: Reports of Alcohol and Drug Use by Group

	Male Heterosexual n = 48	Male LGB n = 16	Female Heterosexual n = 108	Female LGB n = 46
PDD	*M* = 43.26 *SD* = 32.38 n = 43	*M* = 50.04 *SD* = 37.73 n = 15	*M* = 32.37 *SD* = 30.84 n = 97	*M* = 32.50 *SD* = 29.82 n = 40
MDPDD	*M* = 4.70 *SD* = 2.52 n = 39	*M* = 3.69 *SD* = 1.61 n = 14	*M* = 3.74 *SD* = 2.18 n = 87	*M* = 3.98 *SD* = 2.68 n = 40
MDPW	*M* = 16.10 *SD* = 16.43 n = 45	*M* = 14.45 *SD* = 13.39 n = 15	*M* = 9.08 *SD* = 10.75 n = 102	*M* = 10.36 *SD* = 15.76 n = 43
AUDIT	*M* = 12.58 *SD* = 7.90 n = 48	*M* = 11.19 *SD* = 6.25 n = 16	*M* = 9.56 *SD* = 7.75 n = 108	*M* = 9.98 *SD* = 7.59 n = 46
Lifetime Drug Use*	60% (n = 29 of 44)	75% (n = 12 of 14)	73% (n = 79 of 101)	80% (n = 37 of 41)
Past Year Drug Use*	44% (n = 21 of 43)	75% (n = 12 of 14)	47% (n = 51 of 97)	48% (n = 22 of 37)
Past Month Drug Use*	29% (n = 14 of 42)	44% (n = 7 of 12)	29% (n = 31 of 93)	30% (n = 14 of 37)

NOTE: PDD = Percent Drinking Days; MDPDD = Mean Drinks Per Drinking Day; MDPW = Mean Drinks Per Week; BQ = Barriers Questionnaire

*The percentages reported for drug use are the percentage of the group including missing data. The numbers reported are the numbers of respondents that reported drug use out of the number with data for that variable.

Table 6: Results for ANCOVA for Differences in Percent Drinking Days (n = 167)

Variable	Type III Sum of Squares	df	F-ratio
Sex	2.425	1	10.26**
LGB Status	.002	1	.01
Sex x LGB Interaction	.115	1	.49
Ethnicity	.134	1	.57
Children in the Home	.679	1	2.87†

NOTE: Reference groups were male, heterosexual, Caucasian, and without children

† $p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$

Table 7: Results for ANCOVA for Differences in Mean Drinks Per Drinking Day (n = 179)

Variable	Type III Sum of Squares	df	F-ratio
Sex	6.996	1	1.48
LGB Status	.147	1	.03
Sex x LGB Interaction	9.024	1	1.91
Age	20.047	1	4.24*
Ethnicity	23.471	1	4.97*
Education	33.585	1	7.11**
Relationship Status	21.594	1	4.57 *

NOTE: Reference groups were male, heterosexual, Caucasian, and not in a relationship

† $p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$

Table 8: Results for ANOVA for Differences in Mean Drinks Per Week (n = 189)

Variable	Type III Sum of Squares	df	F-ratio
Sex	3.619	1	8.90**
LGB Status	.027	1	.07
Sex x LGB Interaction	.001	1	.01

NOTE: Reference groups were male and heterosexual

† $p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$

Table 9: Results for ANCOVA for Differences in AUDIT Scores (n = 204)

Variable	Type III Sum of Squares	df	F-ratio
Sex	.686	1	5.46*
LGB Status	.014	1	.74
Sex x LGB Interaction	<.001	1	.01
Ethnicity	.270	1	2.15
Education	.883	1	7.03**
Country of Residence	.870	1	.6.93**

NOTE: Reference groups were male, heterosexual, Caucasian, and non-US living
† $p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$

Table 10: Group Differences in Social Support Variables

Variable	Group	Mean and Standard Deviation	Statistics
Percentage Generally Supportive	Male (n = 41) Female (n = 120) Heterosexual (n = 118) LGB (n = 43)	M = 80.00; SD = 25.30 M = 86.00; SD = 20.18 M = 85.08; SD = 21.43 M = 82.79; SD = 22.50	$t(159)$ = -1.54, p = .126 $t(159)$ = .59, p = .554
Percentage Supportive of Treatment Seeking	Male (n = 41) Female (n = 120) Heterosexual (n = 118) LGB (n = 43)	M = 44.39; SD = 37.29 M = 57.33; SD = 39.49 M = 54.91; SD = 38.98 M = 51.63; SD = 40.29	$t(159)$ = -1.84, p = .068 $t(159)$ = .47, p = .640
Percentage Rated as Moderate/Heavy Drinkers	Male (n = 41) Female (n = 121) Heterosexual (n = 118) LGB (n = 44)	M = 39.51; SD = 31.78 M = 36.53; SD = 26.29 M = 36.27; SD = 27.79 M = 40.00; SD = 27.62	$t(160)$ = .60, p = .553 $t(160)$ = -.76, p = .448
Percentage Rated as Abstainers from Alcohol	Male (n = 41) Female (n = 121) Heterosexual (n = 118) LGB (n = 44)	M = 23.41; SD = 26.42 M = 36.53; SD = 26.29 M = 25.25; SD = 26.33 M = 15.00; SD = 17.32	$t(160)$ = .284, p = .777 $t(160)$ = 2.878, p = .005

Table 11: Internal Consistency of Barriers Questionnaire Subscales

Subscale	Number of Items	Cronbach's Alpha	Items
Service Access Difficulties	7	α = .833	*I didn't know where to go for help.* *I had no transportation, no way to get there.* *I couldn't afford to pay for help.* *I needed someone to take care of my children while I was getting help.* *I didn't have the time.* *I couldn't get time off from work.* *I had no insurance to pay for it.*
Safety Concerns	2	α = .832	*I didn't feel safe going where I'd have to go for help.* *I was afraid that I would not be safe or would be harassed/attacked in a treatment environment.*
Fear of Treatment	5	α = .814	*I didn't want to be told to stop drinking.* *I was afraid I would be put into a hospital.* *I was afraid of what might happen in treatment.* *I was worried about the bad feelings of going through withdrawal from alcohol.* *I didn't know what would happen to me.*
Negative Attitudes Towards Counseling	8	α = .800	*I didn't think it would do any good.* *Someone important to me disapproved on my getting help.* *I was afraid that I would fail, or that it wouldn't help me.* *I didn't want somebody telling me what to do with my life.* *I've had a bad experience with treatment before.*** *Somebody I know had a bad experience with treatment.* *Other people discouraged me from seeking help.* *I didn't want to go to Alcoholics Anonymous or other 12-step group.*
Self-Concealment	3	α = .803	*I hate being asked personal questions.* *I don't like to talk in groups.* *I was afraid of the people I might see.*
Stigma	4	α = .896	*I was concerned about what other people would think of me if I went for help.*

			I was too embarrassed or ashamed.
			I thought that my family would be embarrassed.
			I thought people would make fun of me.
Fear of Social Consequences	5	α = .791	*I thought my job might be in danger if I went for help.*
			I thought I'd lose my friends if I went for help.
			I thought that going for help might get me into legal trouble.
			I was afraid of the people I might see.
			I was afraid that I would lose friends if I quit drinking.
Problem Minimization	8	α = .829	*My drinking seemed fairly normal to me.*
			I didn't think I had a serious problem with alcohol.
			I thought I could handle it on my own.
			I didn't think of myself as an alcoholic.
			I didn't think I needed any help.
			Drinking was not my main problem.
			I thought that "help" was for people who had worse problems than mine.
			I thought my troubles would just go away without any help.
Lack of Motivation for Change	14	α = .848	*No one told me I had a problem with alcohol or encouraged me to seek help.*
			I thought I was too young to be getting help.
			My drinking wasn't causing any problems as far as I could see.
			I like drinking and didn't want to give it up.
			I didn't know how I could live without drinking.
			It just seemed like too much trouble to go for help.
			I liked getting drunk.
			Drinking was a way of life for me.
			Drinking really had not caused much trouble or problems for me.
			There seemed to be more good than bad about drinking for me.
			I was afraid that I would not be able to enjoy myself without drinking.
			I was afraid that I would not be able to perform sexually without drinking.
			I was afraid that I would not enjoy sex as much without drinking.
			I was afraid that I would not be able to

			approach women/men I was romantically interested in without drinking.

** This item was omitted from the Negative Attitudes Towards Counseling subscale for model analyses. For the 7-item scale, α = .782.

Table 12: Evaluation of Barriers to Treatment Seeking

	Mean Score and SD (Range 0 – 3)	Percent Endorsement as a Barrier	Sex Differences	Sexual Orientation Differences
Service Access Difficulties	.50 (SD = .63)	102 of 162 (47%)	Ns	Ns
Safety Concerns	.29 (SD = .64)	42 of 174 (24%)	Ns	Trend for mean scores to be higher for H than LGB t(117) = 1.94, p = .055
Fear of Treatment	.57 (SD = .65)	121 of 181 (67%)	Ns	Ns
Negative Attitudes Towards Counseling	.50 (SD = .54)	122 of 181 (67%)	Ns	Ns
Self-Concealment	.66 (SD = .83)	92 of 176 (52%)	Ns	Ns
Stigma	.72 (SD = .87)	108 of 180 (60%)	Ns	Endorsed more by H (66%) than LGB (45%) [z = 2.32, CI = 98%]
Fear of Social Consequences	.44 (SD = .59)	99 of 180 (55%)	Ns	Ns
Problem Minimization	1.38 (SD = .74)	168 of 182 (92%)	Ns	Ns
Lack of Motivation for Change	.86 (SD = .57)	164 of 181 (91%)	Ns	Ns

Table 13: Results for ANOVA for Differences in BQ Sum Scores (n = 163)

Variable	Type III Sum of Squares	df	F-ratio
Sex	.023	1	.20
LGB Status	.017	1	.14
Sex x LGB Interaction	.031	1	.26

NOTE: Reference groups were male and heterosexual

† $p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$

Table 14: Results of Logistic Regression Predicting Treatment History with AUDIT (n = 153)

_____

| | Treatment History | | | |
Variable	Beta	SE	Odds Ratio	*p*-value
BQ Sum Score	.00	.01	1.00	.982
AUDIT Sum Score	3.66	1.01	38.93	<.001
NATC Sum Score	.09	.09	1.01	.306

_____

Note: BQ = Barriers Questionnaire, NATC = Negative Attitudes Towards Counseling

Table 15: Results of Logistic Regression Predicting Treatment History with PDD (n = 144)

_____

	Treatment History			
Variable	Beta	SE	Odds Ratio	p-value
BQ Sum Score	.00	.02	.99	.920
PDD	1.34	.62	3.81	.030
NATC Sum Score	.12	.10	1.12	.225

_____

Note: BQ = Barriers Questionnaire, PDD = Percent Drinking Days, NATC = Negative Attitudes Towards Counseling

Table 16: Results of Logistic Regression Predicting Treatment History with MDPDD (n = 144)

Variable	Treatment History			
	Beta	SE	Odds Ratio	*p*-value
BQ Sum Score	.00	.02	1.00	.941
MDPDD	.23	.10	1.25	.019
NATC Sum Score	.11	.10	1.12	.250

Note: BQ = Barriers Questionnaire, MDPDD = Mean Drinks per Drinking Day, NATC = Negative Attitudes Towards Counseling

Table 17: Results of Logistic Regression Predicting Treatment History with MDPW (n = 147)

Variable	Treatment History			
	Beta	SE	Odds Ratio	*p*-value
BQ Sum Score	.00	.02	1.00	.971
MDPW	1.33	.51	3.77	.009
NATC Sum Score	.10	.10	1.10	.308

Note: BQ = Barriers Questionnaire, MDPW = Mean Drinks per Week, NATC = Negative Attitudes Towards Counseling

Table 18a: Results of Linear Regression of Social Support and Self-Concealment onto AUDIT Score

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.08	-.89	$p = .374$
Self Concealment Sum	.01	.06	.72	$p = .471$

$R^2 = .001$ $F(2,141) = .88, p = .446$

Table 18b: Results of Linear Regression of Social Support and Self-Concealment onto AUDIT Score
(excluding respondents who scored below the AUDIT cutoff)

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.16	-1.48	$p = .143$
Self Concealment Sum	.02	.26	2.38	$p = .020$

$R^2 = .101$ $F(2,80) = 4.51, p = .014$

Table 18c: Results of Linear Regression of Social Support and Self-Concealment onto AUDIT Score
(excluding respondents who scored below the AUDIT cutoff and including support for treatment)

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.23	-2.20	$p = .030$
Percentage of Network Supportive Of Treatment Seeking	.00	.31	2.98	$p = .004$
Self Concealment Sum	.02	.23	2.20	$p = .030$

$R^2 = .192$ $F(3,79) = 6.26, p = .001$

Table 19a: Results of Linear Regression of Social Support and Self-Concealment onto PDD

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.13	-1.50	$p = .137$
Self Concealment Sum	-.01	-.05	-.54	$p = .587$

$R^2 = .017$ $F(2,132) = 1.14, p = .323$

Table 19b: Results of Linear Regression of Social Support and Self-Concealment onto PDD (excluding respondents who scored below the AUDIT cutoff)

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.13	-1.13	$p = .263$
Self Concealment Sum	.02	.12	1.04	$p = .303$

$R^2 = .036$ $F(2,76) = 1.43, p = .246$

Table 19c: Results of Linear Regression of Social Support and Self-Concealment onto PDD (excluding respondents who scored below the AUDIT cutoff and including support for treatment)

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.14	-1.12	$p = .234$
Percentage of Network Supportive Of Treatment Seeking	.00	.06	.48	$p = .004$
Self Concealment Sum	.02	.11	.99	$p = .326$

$R^2 = .192$ $F(3,75) = 1.02, p = .390$

Table 20a: Results of Linear Regression of Social Support and Self-Concealment onto MDPDD

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Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.02	-.16	p = .870
Self Concealment Sum	.08	.08	.93	p = .355

_____

R^2 = .008 $F (2,132) = .51, p = .603$

Table 20b: Results of Linear Regression of Social Support and Self-Concealment onto MDPDD (excluding respondents who scored below the AUDIT cutoff)

_____

Variable	b	Beta	t-value	p
Percentage of Network Supportive	.00	.01	.10	p = .919
Self Concealment Sum	.13	.14	1.22	p = .225

_____

R^2 = .020 $F (2,76) = .51, p = .603$

Table 20c: Results of Linear Regression of Social Support and Self-Concealment onto MDPDD (excluding respondents who scored below the AUDIT cutoff and including support for treatment)

_____

Variable	b	Beta	t-value	p
Percentage of Network Supportive	.00	.02	.19	p = .852
Percentage of Network Supportive Of Treatment Seeking	-.00	-.05	-.39	p = .697
Self Concealment Sum	.14	.15	1.25	p = .217

_____

R^2 = .192 $F (3,75) = .55, p = .650$

Table 21a: Results of Linear Regression of Social Support and Self-Concealment onto MDPW

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.11	-1.21	p = .228
Self Concealment Sum	-.00	-.01	-0.07	p = .947

R^2 = .011 F (2,135) = 0.75, p = .472

Table 21b: Results of Linear Regression of Social Support and Self-Concealment onto MDPW (excluding respondents who scored below the AUDIT cutoff)

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.15	-1.37	p = .175
Self Concealment Sum	.03	.17	1.50	p = .137

R^2 = .059 F (2,78) = 2.44, p = .094

Table 21c: Results of Linear Regression of Social Support and Self-Concealment onto MDPW (excluding respondents who scored below the AUDIT cutoff and including support for treatment)

Variable	b	Beta	t-value	p
Percentage of Network Supportive	-.00	-.15	-1.28	p = .202
Percentage of Network Supportive Of Treatment Seeking	.00	-.01	-.12	p = .905
Self Concealment Sum	.03	.17	1.50	p = .139

R^2 = .059 F (3,77) = 1.61, p = .194

Figure 1: Composite model of factors related to treatment seeking
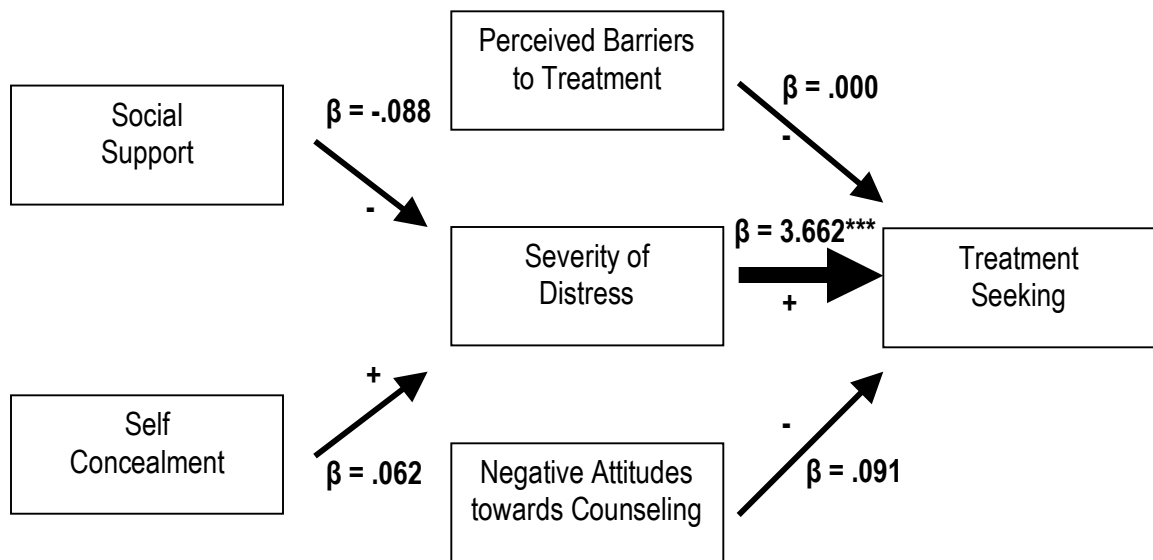
Note: The above values are from analyses using AUDIT scores as the measure of distress in the entire sample of respondents (n = 218). The only supported relationship was between severity of distress and treatment seeking.

† $p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$

Appendix A: Copy of the recruitment advertisement

The following advertisement was posted on various websites:

"Are you worried that you drink too much?

Take an online survey to get

FREE

PERSONALIZED

FEEDBACK

on your drinking habits.

Click here to take the survey."

Appendix B: Copy of announcement and flyer sent to Listservs and community agencies

The following announcement was sent to various listservs and community agencies:

Dear colleagues,

As part of my dissertation research, a web-based survey is now available for individuals worried that they drink too much. The survey takes 20-30 minutes to complete and provides individuals with free personalized feedback on their drinking patterns. This feedback is meant to enhance their motivation for change and provides clinically useful information that they can take to a service provider. It also provides links to resources for locating alcohol and drug use treatment services.

This survey is available to anyone, and lesbian/gay/bisexual individuals are being actively recruited since one of the goals of the study is to identify barriers to treatment seeking and treatment preferences of sexual minorities.

The web address for this survey is:

www.worrieddrinker.com

Attached is a flyer that can be distributed to individuals or placed on bulletin boards, and any help recruiting individuals for this study would be greatly appreciated. Please contact me with any questions you may have about this study or the website itself.

Thank you for your help researching factors that impede lesbian/gay/bisexual individuals from seeking treatment for alcohol and drug use problems.

Sincerely,

Kelly E. Green, M.S.

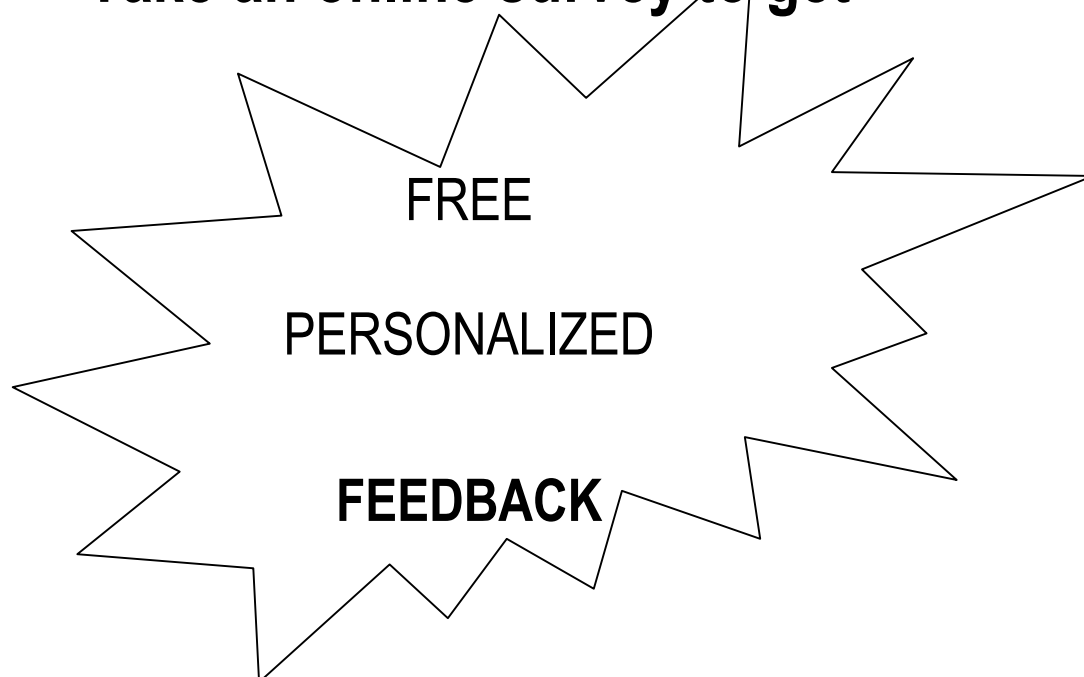Doctoral Candidate

kelgreen@eden.rutgers.edu

(857) 364-4052

Rutgers, The State University of New Jersey

Center of Alcohol Studies

RUTGERS
Center of Alcohol Studies

Are you worried that you drink too much?

Take an online survey to get

FREE

PERSONALIZED

FEEDBACK

on your drinking habits.
<u>www.worrieddrinker.com</u>

www.worrieddrinker.com www.worrieddrinker.com www.worrieddrinker.com www.worrieddrinker.com www.worrieddrinker.com www.worrieddrinker.com www.worrieddrinker.com

Appendix C: Websites and Listservs on which the study was advertised

LGB-related websites and community agencies

Abdill-Ellis Lambda Community Center Association (http://www.abdellis.org)

Affirmations (http://www.goaffirmations.org)

Akron Pride Center (http://www.akronpridecenter.org)

ALLGO – A Statewide Queer People of Color Organization (http://www.allgo.org)

A Rainbow Place (http://www.arainbowplace.org)

Aspen Gay & Lesbian Community Fund (http://www.gayskiweek.org)

AURORA: A Northland Lesbian Center (http://www.thebuildingforwomen.org)

Bay Area Inclusion (http://www.bayareainclusion.org)

Bi Resource Center (http://www.biresourcecenter.com)

Bienestar Human Services, Inc. (http://www.bienestar.org)

Billy DeFrank Lesbian, Gay, Bisexual, & Transgender Community Center

(http://www.defrank.org)

Boulder Pride Community Center (http://www.boulderpride.org)

Bronx Community Pride Center (http://wwwbronxpride.org)

Capitol District Gay Lesbian Community Council (http://www.cdglscc.org)

Center on Halsted (http://www.centeronhalsted.org)

Community Alliance and Action Network (http://www.caanmidwest.org)

Community Triangle of Washington County (http://www.communitytriangle.org)

Compass, Inc. (http://www.compassglcc.com)

Connecticut Pride Center (http://www.ctpridecenter.org)

Dennis R. Neill Equality Center (http://www.okeq.org)

Desert Pride Community Center (http://www.desertpridecenter.org)

Diversity Center (http://wwwdiversitycentersa.org)

Diversity of Rockford (http://www.diversityrockford.org)

Femme Noir, Web portal for Lesbians of color (http://www.femmenoir.net/index21.php)

Gay Alliance of the Genesee Valley (http://www.gayalliance.org)

Gay and Lesbian Alliance of the Central Coast (http://www.ccgala.org)

Gay and Lesbian Community Center of Greater Cincinnati

(http://www.glbtcentercincinnati.com)

Gay and Lesbian Community Center of Pittsburgh (http://www.glccpgh.org)

Gay and Lesbian Community Center of Southern Nevada (http://www.thecenter-

lasvegas.com)

Gay and Lesbian Community Center of South Florida (http://www.glccsf.org)

Gay and Lesbian Community Center of the Ozarks (http://www.glocenter.org)

Gay and Lesbian Community Services (http://www.glcsmn.org)

Gay and Lesbian Resource Center of Cedar Rapids (http://www.crglrc.org)

Gay and Lesbian Service Organization Pride Center of the Bluegrass

(lexingtonglxoc@yahoo.com)

Gay Men of African Descent (http://www.gmad.org/)

Gay, Lesbian, and Bisexual Community Center of Central Florida (http://www.glbcc.org/)

Gay, Lesbian, Bisexual & Transgender Community Center of Baltimore & Central Maryland

(http://www.glccb.org)

Gay, Lesbian, Bisexual & Transgender Community Center of Colorado

(http://www.glbtcolorado.org)

GLBT Community Center of Utah (http://www.glbtccu.org/)

GLBT Resource Center of Michiana (http://www.glbtmichiana.org)

Golden Rainbow Senior Center (http://www.goldenrainbowseniorcenter.org)

Greater Dayton LGBT Center (http://www.daytonlgbtcenter.com)

Herland Sister Resources (http://www.herlandsisters.org)

Houston GLBT Community Center (http://www.hglbtcc.org)

Hudson Valley LGBTQ Community Center (http://www.lgbtqcenter.org)

Identity, Inc. - Gay & Lesbian Community Center of Anchorage (http://www.identityinc.org)

Inland Northwest LGBT Center (http://www.thelgbtcenter.org)

Jeffrey Owens Community Center (http://www.jocc.org)

Jersey Shore Community Center Project (http://www.jsQspot.org)

Kalamazoo Gay Lesbian Resource Center (http://www.kglrc.org)

L.A. Gay and Lesbian Center (http://www.lagaycenter.org)

Lesbian and Gay Center of New Orleans (http://www.lgccno.org)

Lesbian and Gay Community Center of Greater Kansas City (http://www.lgcckc.org)

Lesbian Community Project (http://www.lesbiancommunityproject.org)

Lesbian Nation (http://www.lesbianation.com/health_and_fitness/index.cfm)

LGBT Community Center of Central Iowa (http://www.lgbt-dsm.org)

LGBT Community Center of The Chippewa Valley (http://www.thecentercv.org)

LGBT Resource Center for the 7 Rivers Region (http://www.7riverslgbt.org)

Long Island GLBT Community Center (http://www.ligaly.org)

Mat-Su Valley Gay & Lesbian Center (jaime@matnet.com)

Memphis Gay and Lesbian Community Center (http://www.mglcc.org)

Men's Resource Center of South Texas (http://www.mrcofsouthtexas.org)

National Association of Lesbian and Gay Addictions Professionals (http://www.nalgap.org/)

New Leaf: Services for Our Community (http://www.newleafservices.org)

New Haven Gay and Lesbian Community Center (http://www.nhglcc.org/)

New Mexico GLBT Centers (http://www.gaynewmexico.org)

New York Area Bisexual Network (http://www.nyabn.org/Pages/NYCGroups.html)

Northland Gay Men's Center (http://www.ngmcduluth.org)

Northwest Arkansas Gay, Lesbian, Bisexual, & Transgender Community Center

(http://www.nwaglbtcc.org)

Oak Park Area Lesbian and Gay Association (http://www.opalga.org)

OutFront Minnesota (http://www.outfront.org)

Outlet Program (http://www.projectoutlet.org)

OutReach (http://www.outrachinc.com)

OUTstanding Amarillo (http://www.outstandingamarillo.org/)

OutWilmington Gay & Lesbian Community Center (http://www.outwilmington.com)

Pacific Center for Human Growth (http://www.pactificcenter.org)

Pacific Pride Foundation (http://www.pacificpridefoundation.org/)

Pikes Peak Gay & Lesbian Community Center (http://www.ppglcc.org)

Planet Out (http://www.planetout.com/people/bi/)

Prescott Pride Center (http://www.prescottpridecenter.com)

Pride Center of Greater Youngstown (http://www.youngstownpride.org)

Pride Center of Western New York (http://www.pridecenterwny.org)

Pride Collective and Community Center (http://www.pridecollective.com)

Pride Community Center of North Central Florida (http://www.pridecommunitycenter.org)

Pride Connections Center of New Jersey (http://www.hudsonpride.org)

Pride Lafayette Community Center (http://wwwpridelafayette.org)

Pride Place (http://www.prideofnepa.org)

Q Center (http://www.pdxqcenter.org)

Quad Citians Affirming Diversity (http://www.qcaffirmingdiversity.org)

Queens Community House (http://www.queenscommunityhouse.org)

Queens Lesbian & Gay Community Center (http://www.gaycharlotte.com)

Queens Rainbow Community Center (http://www.queenspride.com)

Rainbow Center (http://www.rainbowcntr.org)

Rainbow Community Center (http://www.rainbowxwv.org)

Rainbow Community Center of Contra Costa County (http://www.rainbowcc.org)

Rainbow Outreach Resource Center (http://www.rainbowoutreach.org)

Resource Center of Dallas (http://www.rcdallas.org)

Richmond Queer Space Project (http://www.queerspace.org)

R.U.1.2? Queer Community Center (http://www.ru12.org)

Sacramento Gay and Lesbian Center (http://www.saccenter.org)

Safe Zone Foundation (http://www.safezonefoundation.tripod.com)

San Francisco LGBT Community Center (http://www.sfcenter.org/)

San Joaquin Pride Center (http://www.stocktonprice.homestead.com)

Seattle LGBT Community Center (http://www.seattlelgbt.org/)

Services and Advocacy for Gay, Lesbian, Bisexual & Transgender Elders

(http://www.sageusa.org/)

Shenandoah Valley Gay and Lesbian Association (http://www.scgla.org)

SHOUT Magazine (http://www.shouttexas.com/)

Solano Pride Center (http://www.solanopride.org)

South Carolina Gay and Lesbian Pride Movement (http://www.scglpm.org)

Spectrum (http://spectrummarin.org)

Stanislaus Pride Center (http://www.stanislauspridecenter.org)

Stonewall Alliance Center of Chico (http://www.stonewallchico.org)

Stonewall Columbus Community Center (http://www.stonewallcolumbus.org)

South Bay Lesbian, Gay, Bisexual & Transgender Community Organization

(http://www.southbaycenter.org)

The Audre Lourde Project, Community Organizing Center for Lesbian, Gay, Bisexual, Two

Spirit, and Transgender People of Color (http://www.alp.org/)

The Bloomington Beacon (http://www.bloomingtonbeacon.org)

The Bridge (http://www.thebridgelgbtcc.org)

The Center for Alternative Lifestyles (http://www.glbtcommunitycenter.org)

The Center Hawaii (http://www.alohapridecenter.org)

The Center, Home for GLBT in Metro DC (http://www.thedccenter.org/)

The Center Orange County (http://www.thecenteroc.org)

The Center Project (http://www.TheCenterProject.com)

The Center West (http://www.thecenterwest.org)

The Diversity Center (http://www.diversitycenter.org)

The Edge – Men Together Project (http://www.mentogether.org)

The Family Tree (http://www.familytreecenter.org)

The Gay & Lesbian Community Center – Key West (http://www.glcckeywest.org)

The Lambda Community Center (http://www.lambdacenter.org)

The Lesbian & Gay Community Network of West Michigan (http://www.the-lgbt-

network.org)

The Lesbian, Gay, Bisexual, and Transgender Community Center

(http://www.gaycenter.org/)

The Lesbian Gay Bi Transgender Community Center of Metropolitan St. Louis

(http://www.findmycenter.com)

The LOFT (http://www.loftgaycenter.org)

The Milwaukee LGBT Community Center (http://www.mkelgbt.org)

The Phoenix Center (http://www.phoenixcenteronline.com)

The Pride Center of New Jersey (http://www.pridecenter.org/)

The Rainbow Center – Olympia (http://www.rainbowcenteroly.org)

Triangle Community Center (http://www.ctgay.org)

Triangle Community Works (http://www.tcworks.org)

Up the Stairs Community Center (http://www.utscc.org)

Utah Pride Center (http://www.utahpridecenter.org)

Ventura County Rainbow Alliance (http://www.lgbtventura.org)

Western Montana Gay & Lesbian Community Center (http://www.gaymontana.org)

Wyoming Equality (http://www.wyomingequality.org)

William Way Lesbian, Gay, Bisexual, and Transgender Community Center

(http://www.waygay.org)

Wilson Resource Center (http://www.wilsonresource.org)

Wingspan (http:www.wingspan.org)

Non-LGB websites

About Alcoholism (http://alcoholism.about.com/)

African American Health Coalition, Inc. (http://www.aahc-portland.org/)

At Health Alcohol Abuse Information

(http://www.athealth.com/Consumer/rcenter/resource_data.cfm?TopicCF=AlcoholAbuse)

Black Womens Health (http://www.blackwomenshealth.com/Alcohol_Abuse.htm)

Latino Health Access (http://www.latinohealthaccess.org/)

Mental Help.Net (http://www.mentalhelp.net/)

Psych Central (http://www.theforumsite.com)

Psychological Research on the Net (http://psych.hanover.edu/research/exponnet.html)

Self Help Magazing (http://www.selfhelpmagazine.com)

Appendix D: Copy of the Internet survey

[NOTE: Items in brackets will not be shown on screen and include measure names and instructions for thewebsite design. Variable names listed before the questions will not be shown on screen, but will instead be the variable names in the database.]

[Online Survey of Problem Drinkers]

[Consent Process:]

You are invited to participate in a research study that is designed to help us understand drinking problems, reasons people are or would be uncomfortable seeking treatment for their drinking, and treatment preferences of individuals who are concerned about their drinking.

This online survey is anonymous. You will not be asked your name or other identifying information. Participation in this study is completely voluntary, you may refuse to answer any questions with which you are not comfortable, and you may withdraw from the study at any time without penalty. Participation will involve completion of an online survey that should take 20-30 minutes to complete. The primary risk of participation is possible embarrassment or emotional distress from answering personal questions.

Following completion of the survey you will receive free personalized feedback based on your responses and information about counseling services that are available should you decide to seek treatment for your drinking. You may benefit from participation by gaining insight into your drinking

habits and reasons you are uncomfortable seeking treatment. Additionally, your responses will help

treatment providers understand the treatment needs and preferences of individuals who are

concerned about their drinking.

By clicking below, you are agreeing to participate in the above described research study. You are

also verifying that you are over the age of 18 and have not been coerced to participate in any way.

If you have any questions about this research, you may contact:

Kelly E. Green, M.S.

Center of Alcohol Studies

607 Allison Road

Piscataway, NJ 08854

Tel: (732) 445-6111 ext. 915

e-mail: kelgreen@eden.rutgers.edu

If you have any questions about your rights as a research subject, you may contact the Sponsored

Programs Administrator at Rutgers University at:

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e-mail: humansubjects@orsp.rutgers.edu

CLICK HERE TO START THE ONLINE SURVEY

"In order to better understand substance use patterns and reasons people do and do not seek treatment, we are interested in having people from different backgrounds and with different lifestyles respond to this survey. Therefore, some questions may not be relevant to you, but please answer them as best as you can."

REC1: How did you find out about this survey?

    LGBT website

    Alcohol related website

    Health related website

    Dating website

    Special Interest Group website

    From a friend or family member

    From a professional counselor/therapist

DEM1. What is your sex?

    Male

    Female

    Intersex

    Transsexual (male to female)

    Transsexual (female to male)

DEM2. How old are you?

    ___ years

DEM3. What is your ethnicity? Check all that apply.

    White

    Black/African-American

    Hispanic/Latino

    Asian/Pacific Islander

    American Indian

    Alaskan Native

    Mixed Race

    Other

DEM4. What is the best description of the highest level of education you completed?

    Middle School

    High School / GED

    Trade School

    Some college, no degree

    2-year degree

    4-year degree

    Advanced/Professional degree

DEM5. Which best describes your employment status?

    Employed full-time (35 hours per week or more)

    Employed part-time (less than 35 hours per week

    Homemaker   [skip to DEM7]

    Full-time student   [skip to DEM7]

Unemployed (on temporary or permanent disability)   [skip to DEM7]

Unemployed (not on disability)   [skip to DEM7]

Retired   [skip to DEM7]

DEM6. What do you do for a living (what is your occupation)?

_____

DEM7. What is your annual household income (in U.S. dollars)?

$0 - $15,000

$15,001 - $30,000

$30,001 - $45,000

$45,001 - $60,000

$60,001 - $75,000

$75,001 - $100,000

$100,001 - $125,000

$125,001 - $150,000

over $150,000

DEM8. Where do you live?

United States

Canada   [skip to DEM10]

Eastern Europe   [skip to DEM10]

Western Europe   [skip to DEM10]

Central or South America   [skip to DEM10]

Australia or New Zealand   [skip to DEM10]

Africa   [skip to DEM10]

Asia   [skip to DEM10]

Other   [skip to DEM10]

[If respondent does not live in the US, they will be receive this message:

"Please note that personalized feedback is based on data from the United States. Therefore, your feedback may not accurately reflect your drinking related to others from your country. You are still invited to complete the survey."]

Which state do you live in?

[Insert list of states in alphabetical order]

DEM9. Which state do you live in?

[Insert list of states in alphabetical order]

DEM10. Which best describes the area where you currently live?

Metropolitan/Urban area

Suburban area

Country/Rural area

DEM11. How do you describe your sexual orientation?

Heterosexual / Straight

Homosexual / Gay / Lesbian

Bisexual

Questioning / Undecided

Asexual

None of the above

DEM12. Thinking of your last year of your life, which best describes the sex of your sexual

partners?

Only opposite-sex partners

Mostly opposite-sex but some same-sex partners

About the same number of opposite-sex and same-sex partners

Mostly same-sex but some opposite-sex partners

Only same-sex partners

No sexual partners in the past year

DEM13. Are you currently involved in a romantic relationship?

Yes

No   [skip to DEM18]

DEM14. How long have you and your partner been together?

0-3 months

3-6 months

6 months-1 year

1-3 years

3-5 years

5-10 years

10-25 years

25+ years

DEM15. What type of relationship is your current/primary relationship?

Opposite sex

Same sex

Transgender

DEM16. Do you and your current/primary partner live together?

Yes

No

DEM17. Have you and your current/primary partner been married or participated in a commitment ceremony?

N/A, I am not in a relationship

Yes

No

DEM18. Do you or your current/primary partner have children?

Yes

No

[Marital Happiness Scale (MHS) **(Azrin, Naster & Jones, 1987)]**

MHS1. The dots on the following line represent different degrees of happiness in your relationship.

The middle point, "happy," represents the degree of happiness of most relationships. Please circle

the dot which best describes the degree of happiness, all things considered, of your relationship.

N/A, I am not in a relationship

0	1	2	3	4	5	6
Extremely	Fairly	A Little	Happy	Very	Extremely	Perfect
Unhappy	Unhappy	Unhappy		Happy	Happy	

[*Alcohol Use Disorders Identification Test (AUDIT;* **Babor, Biddle-Higgins, Saunders, &**

Monteiro, 2001; Saunders et al., 1993)]

AUD1. How often do you have a drink containing alcohol?

      Never

      Monthly or less

      Two to four times a month

      Two to three times a week

      Four or more times a week

NOTE: For answering these questions, one "drink" is equal to 12 ounces of beer, or 5 ounces of

wine, or 1 ½ ounces of liquor.

AUD2. How many drinks containing alcohol do you have on a typical day when you are drinking?

      1 or 2

2 or 4

5 or 6

7 to 9

10 or MORE

AUD3. How often do you have six or more drinks on one occasion?

Never

Less than monthly

Monthly

Weekly

Daily or almost daily

AUD4. How often during the last year have you found that you were not able to stop drinking once you had started?

Never

Less than monthly

Monthly

Weekly

Daily or almost daily

AUD5. How often during the last year have you failed to do what was normally expected from you because of drinking?

Never

Less than monthly

Monthly

Weekly

Daily or almost daily

AUD6. How often during the last year have you needed a first drink in the morning to get

yourself going after a heavy drinking session?

    Never

    Less than monthly

    Monthly

    Weekly

    Daily or almost daily

AUD7. How often during the last year have you had a feeling of guilt or remorse after drinking?

    Never

    Less than monthly

    Monthly

    Weekly

    Daily or almost daily

AUD8. How often during the last year have you been unable to remember what happened the night

before because you had been drinking?

    Never

    Less than monthly

    Monthly

    Weekly

    Daily or almost daily

AUD9. Have you or someone else been injured as a result of your drinking?

    Never

Yes, but not in the last year

Yes, during the last year

AUD10. Has a relative or friend, or a doctor or other health worker been concerned about your

drinking or suggested you cut down?

Never

Yes, but not in the last year

Yes, during the last year

"The following set of questions addresses your personal drinking and drug use. This section may

seem long and tedious, but in order for your personalized feedback to be accurate it is important

that you answer each question to the best of your ability. Though it may be difficult to remember or

estimate patterns of drinking and drug use, please take the time to choose your best answers."

ALC1. Do you consider yourself:

An abstainer from alcohol / non-drinker

A non-problem / normal / social drinker

A problem drinker

An alcoholic

[*Daily Drinking Questionnaire-Revised (DDQ-R;* **Kruse, Corbin, & Fromme, 2005; Collins,**

Parks, & Marlatt, 1985)]

DDQ1. Of the past 13 weeks (3 months), how many Mondays have you consumed any alcohol?

0   [skip to DDQ4]

1

2

3

4

5

6

7

8

9

10

11

12

13

DDQ.2 Thinking about ONLY the <u>Mondays</u> you consumed alcohol, how many standard drinks did you typically consume?

NOTE: For answering these questions, one "drink" is equal to 12 ounces of beer, or 5 ounces of wine, or 1 ½ ounce of liquor.

1 drink only

2 drinks

3 drinks

4 drinks

5 drinks

6 drinks

7 drinks

8 drinks

9 drinks

10 or more drinks

[Repeat the above (DDQ1-2) for Tuesday through Sunday]

[*Readiness Ruler (RR;* CASAA Research Division, 1995)]

RR1. At this time, how much do you want to cut down your use of alcohol or stop drinking altogether?

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7 ---------- 8 ---------- 9 ---------- 10

Not ready to change │   Unsure   │   Ready to Change   │   Trying to Change

[if 1 – 5, then skip to DRG1]

RR2. How soon do you intend to try to cut down your use of alcohol or stop drinking altogether?

I am already trying

Within the next week

Within the next month

Within the next 3 months

Within the next 6 months

Within the next year

Unsure / undecided

[History of Drug Use]

"These next questions ask about your drug use. Remember that your responses are anonymous, so please answer honestly. It may be difficult to answer some of these questions, but please make your best guess for each question."

DRG1. For the following list of substances, please select those that you have ever used in your lifetime:

marijuana or hashish

powder cocaine

crack cocaine

heroin

morphine

prescription sedatives (more than were prescribed or that were not prescribed to you)

(e.g. barbiturates/benzodiazepines)

prescription stimulants (more than were prescribed or that were not prescribed to you)

(e.g. Ritalin, Aderol)

prescription opiates (more than were prescribed or that were not prescribed to you)

(e.g. Vicodin, Oxycontin, Percocet)

amphetamines (speed, crank)

methamphetamine (meth, crystal, tina)

MDMA/ecstasy

GHB

ketamine/Special K

IPA/Mountain [NONSENSE DRUG for validity check]

LSD/mushrooms/mescaline

PCP/angel dust

inhalants/poppers/whippets

anabolic steroids

DRG2. For the following list of substances, please select those that you have used in the past
year:

marijuana or hashish

powder cocaine

crack cocaine

heroin

morphine

prescription sedatives (more than were prescribed or that were not prescribed to you)

(e.g. barbiturates/benzodiazepines)

prescription stimulants (more than were prescribed or that were not prescribed to you)

(e.g. Ritalin, Aderol)

prescription opiates (more than were prescribed or that were not prescribed to you)

(e.g. Vicodin, Oxycontin, Percocet)

amphetamines (speed, crank)

methamphetamine (meth, crystal, tina)

MDMA/ecstasy

GHB

ketamine/Special K

IPA/Mountain [NONSENSE DRUG for validity check]

LSD/mushrooms/mescaline

PCP/angel dust

inhalants/poppers/whippets

anabolic steroids

DRG3. For the following list of substances, please select those that you have used in the past month:

marijuana or hashish

powder cocaine

crack cocaine

heroin

morphine

prescription sedatives (more than were prescribed or that were not prescribed to you)

(e.g. barbiturates/benzodiazepines)

prescription stimulants (more than were prescribed or that were not prescribed to you)

(e.g. Ritalin, Aderol)

prescription opiates (more than were prescribed or that were not prescribed to you)

(e.g. Vicodin, Oxycontin, Percocet)

amphetamines (speed, crank)

methamphetamine (meth, crystal, tina)

MDMA/ecstasy

GHB

ketamine/Special K

IPA/Mountain [NONSENSE DRUG for validity check]

LSD/mushrooms/mescaline

PCP/angel dust

inhalants/poppers/whippets

anabolic steroids

The following questions address issues related to your current social network (group of friends and family).

*[Important People and Activities (*Longabaugh & Zywiak, 1999; Zywiak, Longabaugh, & Wirtz, 2002)]*

Now I am going to ask you some questions about the people that have been important to you and with whom you have had contact during the PAST SIX MONTHS. These people may be partners, family members, friends, people from work, or anyone that you see as having had a significant impact on your life, regardless of whether or not you liked them.

Please take a moment to think of the people that have been important in your life during the PAST SIX MONTHS. Then narrow down the list to the 5 MOST IMPORTANT PEOPLE to you during the

past six months. If you are currently in a relationship, please list your partner as the first person on your list.

IPA1. What are the initials of important person #1 (current/primary partner if applicable): _____

IPA2. What are the initials of important person #2: _____

IPA3. What are the initials of important person #3: _____

IPA4. What are the initials of important person #4: _____

IPA5. What are the initials of important person #5: _____

IPA6. What type of relationship do you have with [IPA1]?

　　　Current/primary partner

　　　Romantic partner (not your primary relationship / someone you are dating)

　　　Casual sexual partner

　　　Family member aged 12 or older (parents, siblings, older children, etc.)

　　　Family member aged 11 or younger (children, grandchildren, etc.)

　　　Friend

　　　Co-worker

　　　Other _____

IPA7. During the past SIX MONTHS, on average, how often have you had contact (telephone, computer, in person) with [IPA1]?

　　　Daily

　　　3 – 6 times a week

　　　Once or twice a week

Every other week

About once a month

Less than monthly

Once in the past six months

IPA8. To what extent is this person generally supportive of you by being sensitive to your personal

needs, helping you to think about things, solve problems, and by giving you the moral support you

need?

Extremely supportive

Very supportive

Supportive

Somewhat supportive

Not very supportive

Not at all supportive

IPA9. What is [IPA1]'s drinking status?

Heavy drinker

Moderate drinker

Light drinker

Abstainer

Recovering alcoholic

IPA10. How often does [IPA1] use alcohol?

Daily

---

3 – 6 times a week

1 – 2 times a week

About every other week

About once a month

Less often than monthly

Once in the past six months

Not in the past six months

IPA11. If you were to use alcohol in front of [IPA1], how would s/he react?

Be upset and leave

Discourage my use but tolerate it

Be neutral

Be supportive of my use

Encourage my use, use with me, etc.

Don't know

IPA12. How has or would [IPA1] react if you were to seek treatment for your alcohol use?

Would strongly support it

Would support it

Would be neutral

Would be mixed

Would oppose/discourage it

[Repeat questions IPA 6 – 12 for people given for IPA 2 – 5]

[Treatment History, Treatment Seeking, and Treatment Preferences]

These next questions deal with treatment for alcohol and drug problems NOT including cigarettes. Please report treatment designed to help you reduce or stop your alcohol or drug use. Please include detoxification and any other treatment for medical problems associated with your alcohol or drug use.

TX1. Have you ever received treatment or counseling for your use of alcohol or any drug, not counting cigarettes?

     Yes

     No   [skip to TX3]

TX2. How many days in the past 12 months (365 days; 52 weeks) have you received treatment or counseling for your use of alcohol or any drug, not counting cigarettes?

     0 - 365

TX3. Have you ever received treatment for your alcohol or drug use in a self-help group such as Alcoholics Anonymous, Narcotics Anonymous, or SMART Recovery?

     Yes

     No   [skip to TX5]

TX4. How many days in the past 12 months (365 days; 52 weeks) have you received treatment for your alcohol or drug use in a self-help group such as Alcoholics Anonymous, Narcotics Anonymous, or SMART Recovery?

     0 – 365

TX5. Are you currently considering treatment for you alcohol use?

     Yes

     No

TX6. Has your spouse/partner suggested that you seek treatment for your alcohol use?

     Yes

     No

TX7. Has a close friend or relative other than your spouse/partner suggested that you seek treatment for your alcohol use?

     Yes

     No

This next section asks about reasons that may have (either in the past or present) stopped you from seeking help for your drinking. Reasons people do not seek treatment is not well understood, and your answers to these questions can help treatment providers make treatment a better option for people like you. This section is somewhat lengthy, but please answer each question to the best of your ability.

[*Barriers Questionnaire (BQ;* Miller & Tonigan, 1995)]

There are many reasons why drinkers do not seek help. Here are some reasons that people give, as to why they don't seek treatment or other kinds of help. If you are currently in treatment, please indicate how important each of these reasons was to your decision to seek help. If you are NOT in treatment, please indicate how important each of these reasons is to your decision to NOT seek help at this time.

Was or is this an important reason why you did not or would not seek help with regards to your drinking?

0 - No, not at all

1 - Somewhat Important

2 - Important

3 - Very Important

[instead of showing values (0 – 3) on screen, show their corresponding answers listed above]

BQ1. My drinking seemed fairly normal to me. 0 1 2 3

BQ2. No one told me I had a problem with alcohol or encouraged me to seek help. 0 1 2 3

BQ3. I didn't think I had a serious problem with alcohol. 0 1 2 3

BQ4. I thought I could handle it on my own. 0 1 2 3

BQ5. I didn't think of myself as an alcoholic. 0 1 2 3

BQ6. I was concerned about what other people would think of me if I went for help. 0 1 2 3

BQ7. I was too embarrassed or ashamed. 0 1 2 3

BQ8. I thought that my family would be embarrassed. 0 1 2 3

BQ9. I thought my job might be in danger if I went for help. 0 1 2 3

BQ10. I didn't know where to go for help. 0 1 2 3

BQ11. I didn't want to be told to stop drinking. 0 1 2 3

BQ12. I didn't think it would do any good. 0 1 2 3

BQ13. I couldn't afford to pay for help. 0 1 2 3

BQ14. I had no transportation, no way to get there. 0 1 2 3

BQ15. I needed someone to take care of my children while I was getting help. 0 1 2 3

BQ16. I didn't have the time. 0 1 2 3

BQ17. I was afraid I'd be put into a hospital. 0 1 2 3

BQ18. I didn't think I needed any help. 0 1 2 3

BQ19. Someone important to me disapproved of my getting help. 0 1 2 3

BQ20. I hate being asked personal questions. 0 1 2 3

BQ21. I was afraid that I would fail, or that it wouldn't help me. 0 1 2 3

BQ22. I thought I was too young to be getting help or treatment. 0 1 2 3

BQ23. I didn't want somebody telling me what to do with my life. 0 1 2 3

BQ24. I've had a bad experience with treatment before. 0 1 2 3

BQ25. Somebody I know had a bad experience with treatment. 0 1 2 3

BQ26. I was afraid of what might happen in treatment. 0 1 2 3

BQ27. My drinking wasn't causing any problems as far as I could see. 0 1 2 3

BQ28. I don't like to talk in groups. 0 1 2 3

BQ29. I liked drinking and didn't want to give it up. 0 1 2 3

BQ30. I thought I'd lose my friends if I went for help. 0 1 2 3

BQ31. I was worried about the bad feelings of going through withdrawal from alcohol. 0 1 2 3

BQ32. I didn't know how I could live without drinking. 0 1 2 3

BQ33. I thought that going for help might get me in legal trouble. 0 1 2 3

BQ34. It just seemed like too much trouble to go for help. 0 1 2 3

BQ35. I liked getting drunk. 0 1 2 3

BQ36. I couldn't get time off from work. 0 1 2 3

BQ37. Drinking was a way of life for me. 0 1 2 3

BQ38. Drinking really had not caused much trouble or problems for me. 0 1 2 3

BQ39. I was afraid of the people I might see. 0 1 2 3

BQ40. Drinking was not my main problem. 0 1 2 3

BQ41. I didn't feel safe going where I'd have to go for help. 0 1 2 3

BQ42. There seemed to be more good than bad about drinking for me. 0 1 2 3

BQ43. Other people discouraged me from seeking help. 0 1 2 3

BQ44. I don't like to talk about my personal life with other people. 0 1 2 3

BQ45. I thought people would make fun of me. 0 1 2 3

BQ46. I didn't know what would happen to me. 0 1 2 3

BQ47. I didn't want to go to Alcoholics Anonymous or other twelve-step groups. 0 1 2 3

BQ48. I thought that "help" was for people who had worse problems than mine. 0 1 2 3

BQ49. I had no insurance to pay for it. 0 1 2 3

BQ50. I thought my troubles would just go away without any help. 0 1 2 3

BQ51. I was afraid that I would lose my friends if I quit drinking. 0 1 2 3

BQ52. I was afraid that I would not be able to enjoy myself without drinking. 0 1 2 3

BQ53. I was afraid that I would not be able to perform sexually without drinking. 0 1 2 3

BQ54. I was afraid that I would not enjoy sex as much without drinking. 0 1 2 3

BQ55. I was afraid that I would not be able to approach women/men I was romantically interested in without drinking. 0 1 2 3

BQ56. I was afraid that I would not be safe or would be harassed/attacked in a treatment environment. 0 1 2 3

BQ57. Were any other important reasons why you did not seek help? If so, please write them here:

_____

[Treatment History, Treatment Seeking, and Treatment Preferences]

TX8. Are you currently receiving counseling or treatment for your alcohol use?

    Yes

    No   [skip to TX10]

TX9. What type of treatment are you currently receiving for your alcohol use?

    Inpatient/Residential (where you stay overnight)

    Outpatient (where you do not stay overnight)

    Self-help group (where you attend community groups such as AA/SMART)

    Self-help book (where you read a book to help you change)

    Online support (either online groups or computer-guided sessions)

TX10. If you were to seek help for your alcohol or drug use, what type of treatment would you prefer?

    Inpatient/Residential (where you stay overnight)

    Outpatient (where you do not stay overnight)

Self-help group (where you attend community groups such as AA/SMART)

Self-help book (where you read a book to help you change)

Online support (either online groups or computer-guided sessions)

TX11. If you were to seek treatment for your alcohol or drug use, which gender of therapist would you prefer?

Male therapist

Female therapist

Either sex therapist

Don't know

TX12. If you were to seek treatment for your alcohol or drug use, which type of therapist would you prefer?

A lesbian/gay/bisexual therapist

A heterosexual/straight therapist

A therapist of any sexual orientation

Don't know

TX13. We would like to know the one GOAL you have chosen for yourself about drinking at this time. Please read the goals listed below and choose the ONE goal that best represents your goal at this time.

I have decided not to change my pattern of drinking.

I have decided to cut down on my drinking and drink in a more controlled

manner – to be in control of how often I drink and how much I drink.

I have decided to stop drinking completely for a period of time, after which

I will make a new decision about whether I will drink again.

I have decided to stop drinking regularly, but would like to have an occasional

drink when I really have the urge.

I have decided to quit drinking once and for all, even though I realize I

may slip up and drink once in a while.

I have decided to quit drinking once and for all, to be totally abstinent, and

never drink alcohol again for the rest of my life.

None of this applies exactly to me. My own goal is: _____

Thank you! You are now finished with the assessment portion of this survey, and we greatly appreciate your participation.

As a token of our appreciation, you will receive personalized feedback based on your reported pattern of substance use. Additionally, you will receive information on available resources and services that will be helpful should you decide to seek help for your alcohol or drug use.

Should you have any questions about this research or your feedback, please contact Kelly E. Green at kelgreen@eden.rutgers.edu

Thank you again for your participation!

Click here for personalized feedback

Appendix E: Template of Personalized Feedback

Personalized Feedback Based on Online Survey

Thank you for completing this online survey and participating in our research. The following statements have been generated specifically for you based on you responses to the survey.

- Based on your responses, you have consumed an estimated ___ *[total drinks]* ___ drinks within the past three months.

- This translates into *$*___ (based on $4 per drink) that you have spent on alcohol. If your drinking habits remained constant at this level for a year, you would spend *$*___ on alcohol within that year.

- The amount of alcohol you typically drink each week consists of an estimated ____ calories. This is the estimated caloric content of the ALCOHOL ALONE with out any mixers (e.g. soda, juice).

- Based on your responses, you typically consume ___ *[mean drinks per week]* ___ drinks per week. This means that you usually drink more than ___ percent of the ___ *[Men / Women]* in the U.S.

Drinking at the level you reported has a variety of health and emotional consequences.

Heavy drinking can lead to a variety of medical, emotional, and social consequences. It can lead to cancer of the throat and mouth, liver damage, stomach ulcers, heart failure, high blood pressure, breast cancer, and inflammation of the pancreas. High-risk drinking can also weaken your immune system and lead to frequent colds and illness. For men, drinking can impair sexual performance.

For women, drinking can cause complications during pregnancy and lead to deformed, retarded, or low birth weight babies. Moderate and heavy drinking also increases aggressive behavior and is associated with domestic violence. Drinking can also cause depression and anxiety. Driving while under the influence of alcohol is never safe and you risk your life and the lives of others when you decide to drive after drinking.

Based on some of your responses,

[if audit = 1 – 7, then audfb = it is unlikely that you have a drinking problem. However, if you are concerned about your drinking you can seek counseling from some of the resources listed below.]

[if audit = 8 – 40, then audfb = it is likely that you have a drinking problem. Your reported drinking pattern is likely hazardous and you should consider cutting down your alcohol use or stopping altogether. This process can be very difficult for some people and if you would like help changing your drinking pattern or would like further evaluation, you can seek counseling from the resources listed below.]

It is important to understand what leads to your drinking and/or substance use. Research has shown that substance use habits of partners and peers mutually influence each other. In other words, the way your partner/peers drink can influence the way that you drink and vice versa. Particular people and places often become triggers to substance use. Social support from loved ones is a very valuable asset to individuals who are trying to change their substance use patterns, and individuals with little or no support for abstinence often benefit from support groups.

At this point, you may be surprised or upset by the feedback you have just received. Many people have similar reactions and it may take some time for you to decide whether or not you want to make changes to your drinking habits. If you do decide that you want to seek help for your drinking, there are many support groups and professionals who can assist you.

Following is a list of agencies and websites that can help you find treatment services available in your area. Should you decide that you want help with cutting down or quitting drinking, these sites can help you find qualified professional.

Substance Abuse Treatment Facility Locator: http://dasis3.samhsa.gov/

Mental Health Services Locator: http://mentalhealth.samhsa.gov/databases/

Self-Management and Recovery Training (SMART): http://smartrecovery.org/

Alcoholics Anonymous: http://alcoholics-anonymous.org/

Thank you again for your participation in this research study. Should you have any questions about this research or your feedback, please contact:

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CURRICULUM VITA
(October, 2008)

Kelly E. Green

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B.A.   2002   Hunter College of the City University of New York
Major: Psychology
Minor: Religious Studies
Advisor: Kenneth N. Levy, Ph.D.

M.S.   2005   Rutgers, The State University of New Jersey
Thesis title: Quantitative Difference in Drinking Within Alcoholic Couples
Advisor: Barbara S. McCrady, Ph.D.

Ph.D.   2008   Rutgers, The State University of New Jersey
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2002 – 2003   **Research Assistant**
Research Foundation for Mental Hygiene of the New York State
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2003 – 2007   ***Clinical and Research Interviewer***
Women's Treatment Project-II
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2005 – 2007	***Psychology Trainee*** The Psychological Clinic, Graduate School of Applied and Professional Psychology, Rutgers, The State University of New Jersey
2007 – 2008	***Psychology Internship*** **(APA approved)** Boston Consortium and VA Boston Healthcare System
2008 – present	**Postdoctoral Fellowship (APA approved)** VA Boston Healthcare System

PEER-REVIEWED PUBLICATIONS:

Green, K.E., Pugh, L.A., McCrady, B.S., & Epstein, E.E. (in press). Unique aspects of female-primary alcoholic relationships. *Addictive Disorders and Their Treatment.*

Green, K.E., & Iverson, K. (in press). Computerized cognitive-behavioral therapy in a stepped care model of treatment. *Professional Psychology: Research and Practice.*

BOOK CHAPTERS:

Green, K.E., Worden, B., Menges, D, & McCrady, B.S. (2008). Assessment of alcohol use disorders. In: Hunsley, J., Mash, E.J. (Eds.), *A Guide to Assessments that Work.* New York: Oxford University Press.

Epstein, E.E., **Green, K.E.,** & Drapkin, M.L. (in press). Relapse prevention for depression in individuals with substance use disorders. In: Richards, C.S., Perri, M.G. (Eds.), *Relapse Prevention for Depression.* Washington, DC: American Psychological Association.