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Alcohol Use and the Fear of Weight Gain in College: Reconciling Two Social Norms¹

Recent research reports a link between diet-related behavior and alcohol abuse among women, but fails to explain this relationship. In the present study, a grounded theory approach is used to explore the link between diet-related behavior, body image, and alcohol use among a sample of college students. In the feminist tradition of “giving voice,” 78 college students participated in semi-structured, face-to-face interviews to generate insight into the socio-cultural practice of diet behavior and its association with alcohol use. Four specific categories of diet-related behaviors in the context of alcohol use emerged. Students reported altering their eating and drinking patterns, self-induced purging, or exercising to stave off unwanted weight gain believed to be caused by alcohol use. These categories are useful for understanding the alcohol-use and diet-related behavior associations reported in previous studies. Results suggest drinking behavior among some college students is perhaps mutually influenced by socio-cultural pressures to conform both to body-image norms and to drinking norms. Interventions to reduce college alcohol use and the social consequences that accompany such behavior may need to take into account these social and psychological factors.

Introduction

Many studies have identified risk factors associated with problematic alcohol use for women (see Wilsnack and Wilsnack 1997). Diet-related behavior has, for example, been identified as an important risk factor for alcohol-related problems among clinical samples of women (Kozyk et al. 1998; Krahn et al. 1992, 1996; Cooley and Toray 2001). To my knowledge, no studies have attempted to explain why diet-related behavior is predictive of alcohol use or abuse among women, or if this association exists for men. Exploring the diet/drinking association among college students is important for college health professionals, alcohol prevention researchers, and educators given the increasing prevalence and incidence of diet-related behaviors among both women and

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men (Hoyt and Kogan 2001; Luciano 2002) and the stability of problematic drinking behaviors among students despite college-based intervention efforts designed to reduce abusive drinking on campus (Wechsler et al. 1998).

Background: Gender, Body Image, Diet-Related Behavior, and Alcohol Use

While men in college continue to drink more alcohol more often compared to women, self-reported drinking rates among college women remain high (Wechsler et al. 2002). Theories of gender construction have been proposed to explain these gender differences (West 2001). Capraro (2000) argues men drink "to be men" on campus or to construct and reinforce existing normative assumptions about manhood and male behavior. McCreary et al. (1999) and others (West 2001; Cruz and Peralta 2001; Tomsen 1997) have indicated male alcohol use and alcohol problems often are associated with pressures to adhere to hegemonic masculinity standards (see Messerschmidt 1993; Connell 1995).² Indeed, alcohol use appears to be among the repertoire of behaviors men rely upon to construct masculinity (see Messerschmidt 1993; West 2001).

Historically, similar problems with alcohol at the level experienced by men largely have been absent for women (Wilsnack and Wilsnack 1996). Researchers suggest that different societal expectations for female behavior serve as protective factors and thus explain these gender differences (McCreary 1999). While empirical evidence suggests drinking is largely of the "male domain," in general (Wilsnack and Wilsnack 1996) how gender roles influence alcohol use among male and female college students is not well researched.³

The recent proliferation of research on college alcohol use has overlooked the important association between alcohol use and diet-related behavior. Alcohol abuse has been found to be associated with severe and less severe forms of diet-related behavior. This area of research has theoretical promise for explaining gender differences by highlighting differing socio-culturally-based reasons why men and women use substances such as alcohol. The possible impact these reasons have on how substance use is expressed by men and women is also of interest.

Severe and less severe disordered eating patterns in clinical subgroups reportedly have a fairly high comorbidity rate with alcohol abuse (Bulik et al. 1992; Striegel-Moore and Huydic 1993; Bulik 1987), especially eating disorders that involve bulimia (Lacey and Moureli 1986; Strasser et al. 1992). In one study, 225 college freshman women were asked questions on eating behavior and alcohol use; seven months later 104 of the same women were reassessed. Participants who reported greater use of alcohol during their freshman year,

and who were more likely to report signs of alcohol use and abuse, also tended to show worsening symptoms of eating pathologies (Cooley and Tamina 2001).

In another study using a sample of college students, Cooley and Toray (2001) reported heavier alcohol use to be associated with worsening scores on bulimia. Krahn et al. (1992) similarly reported a positive association for college-aged women between alcohol use and dieting severity. In sum, research suggests as dieting severity increases, intensity and frequency of alcohol use also increases. Researchers have concluded diet-related behavior and certain alcohol- and drug-use behavior both appear to be culturally supported for adolescent women (Krahn et al. 1992).

Historically, overweight men in the United States have been tolerated relative to overweight women. Furthermore, research suggests women in U.S. society are more likely to be dissatisfied with their own bodies than are men (Thompson et al. 1998; Grogan 1999). Dieting is so pronounced among girls in the United States that at any given point in time, between one-half and two-thirds of adolescent girls may be dieting (Huon and Brown 1986). The most recent literature on body satisfaction indicates women continue to be more dissatisfied with their bodies than men (McCreary and Sasse 2000). As a result, women are more likely than men to use dieting and other weight-reduction methods such as fasting and laxative abuse to help acquire a socially desirable body shape. Laxative abuse, extreme dieting regimens (e.g., fasting), and self-induced regurgitation are among the most extreme behaviors reported by women to achieve a desired body shape (Grogan 1999). The pressures to achieve socially approved bodies among women in college may be at odds with similar pressures to engage in social alcohol use. The conflict exists because of the belief that alcoholic beverages are high in calories. These opposing factors create a social context where adaptation is required to meet two expectations of alcohol use and socially acceptable appearance.

We know women are more likely than men to struggle with body-image concerns. We also know associations between dieting behavior, eating disorders, and alcohol use have been reported specifically for women. What we do not know is how the social process of drinking in college and the meanings attached to alcohol and its use are associated with diet-related behaviors. Prior studies of student drinking often fail to ask open-ended questions about drinking behavior and have thus been ill-equipped to address social-contextual questions about student alcohol use. Because prior reliance upon survey methodology restricted students' answers to limited and imposed choices, respondents have not been able to inform investigators about their alcohol-related experiences with meaningful depth. The social pressures and expectations college

students face have gone undetected in the absence of exploratory and in-depth analyses.

Few studies have employed qualitative techniques to understand the socio-contextual mechanisms associated with drinking among college students (West 2001). This research addresses these limitations directly by giving voice to students and employing the exploratory technique of grounded theory. This study does not define dieting and other weight management behaviors as "clinical eating disorders." Instead, I incorporated college students' beliefs as expressed by their narratives to record, document, and chronicle their experiences and views about dieting and physical appearance in relation to student drinking experiences. Narratives capture contextual nuances and reveal the meaning of college drinking in a way prevalence studies cannot.⁴

Method

Participants

Respondents were a self-selected purposive sample of 78 undergraduate students at a medium-sized state university in the mid-Atlantic region. Data were collected between 1997 and 2001. College class ranking ranged from freshmen to senior status. Students lived both on and off campus. Of the sample, 71% were White (N=55) and 26% (N=20) were Black. Two respondents were of Hispanic origin and one respondent self-described as Asian. Fifty-three percent (N=41) were male; 47% were female (N=37). Seventy-two percent (N=56) self-identified as heterosexual, 22% (N=17) self-identified as homosexual, and the remaining 6% (N=5) self-identified as bisexual. The mean (+/- SD) age was 20 years old +/- 2.75. Thirty-two percent (N=24) reported being freshmen at the time of the interview, 15% were sophomores (N=11), 22% were juniors (N=18), and 31% were seniors (N=25). Fifteen percent (N=11) of the sample were members of a fraternity or sorority. Pseudonyms are used to protect the informants' identity.

Instrument

A semi-structured, open-ended interview guide consisting of 12 main questions was developed and pilot-tested by the primary author to study alcohol use among college students. Many questions were presented in projective form to reduce the response effect on threatening questions (see Sudman and Bradburn 1982). Demographic questions were asked in addition to questions about drinking

quantity and frequency, attitudes toward drinking, reasons for drinking, expectations of alcohol use, and consequences of drinking. The questionnaire instrument included: "What do you think of the idea of getting drunk?"; "What have been your experiences with alcohol use on this campus?"; "Do you (or do you know anyone who) diets because of their drinking?"; and "Are you concerned with the caloric content of alcohol?" Respondents were asked if they perceived gender differences for each question.

Analysis

The purpose of this study was to explore issues related to drinking behaviors on a college campus. Grounded theory is the appropriate analytical technique for such a study. This technique allows respondents to inform the development of both theory and relevant hypotheses for testing in future research (see Lincoln and Guba 1985). All interviews were transcribed and coded by the author and three trained research assistants. An initial content analysis was conducted to identify patterns. After the initial analysis, a more thorough examination of the transcripts was conducted to identify emergent themes. Concepts were developed and grouped, based upon the frequency of similar articulations to substantiate emergent themes.

Once concepts were identified, inter-rater reliability was used to verify consistency in coding and interpretation. After each transcript was coded independently, the author and assistants met to identify coding and interpretation discrepancies. Assistants included a sociology professor trained in qualitative methods, a Ph.D. candidate in sociology with expertise in qualitative analysis, and an undergraduate majoring in sociology. Discrepancies involving specific concepts and themes were discussed and resolved through group consensus. The emergent themes produced through this study included: social space (Black, White, homosexual, and heterosexual space); coercion and power; gender construction; social control; and diet-related behavior.

Procedure

This research was a part of a larger study on the drinking behaviors of college students. A qualitative research design was used to document participants' experiences with alcohol at a single mid-sized university in the mid-Atlantic region of the United States. Students responded to class announcements in sociology and criminology courses and to 10 posted notices placed in campus areas frequented by students. Racial and sexual minority students were purposely over-sampled to give voice to those who have been traditionally

excluded from research. Difficulty recruiting minority participants (African-American and gay and lesbian students) prompted the use of \$10 stipends to encourage their participation.

The University Office of Human Research granted ethical approval for the project. Interpersonal, in-depth interviews of 78 participants lasted from 45 minutes to one hour each and were conducted in private university offices. Informed consent was given for participation and all respondents were assured confidentiality. The interviews were conducted by the author (N=64; 82%) who was a 27-year-old male at the time the interviewing began, and a trained 28-year-old female research assistant (N=14; 18%).

Findings

This section presents the findings from the interviews conducted with both men and women at the university. Table 1 presents a summary of the results by gender. Percentages pertain to the number of students who engaged in the stated behavior. Student descriptions of their behavioral processes associated with conforming to both body image and drinking norms produced four major themes: (1) altering eating patterns through skipping meals and/or eating less than usual during a meal to reduce the total number of calories consumed; (2) adopting altered drinking preferences (drinking less) or choosing alcoholic beverages assumed to contain less calories such as "lite" beer to reduce the total number of calories consumed; (3) exercising before and/or after a drinking event to eliminate the body of calories already ingested; and (4) self-induced purging to rid the body of calories already ingested.

Nearly 18% of the sample (17.9%) altered their eating patterns. A similar number altered their drinking preferences in the context of alcohol use. Only 5.1% and 3.8% of the entire sample used exercise or self-induced purging to eliminate ingested alcohol-calories. Women were at least twice as likely to report engaging in any of the four diet-behaviors in comparison to men [See Table 1].

The amount of drinking reported in this study is not as high as that reported in studies using nationally representative samples.⁵ Of the college women in the present study, 9% reported drinking an average of four or more drinks in a row when they did drink. Of the college men, 15% reported drinking five or more drinks in a row when they did drink.⁶ Students in the present study suggest this type of drinking behavior is not necessarily due to a preference for the taste of alcohol over other beverages. In fact, many students reported not enjoying the "taste" of alcohol; other social and psychological reasons were used

Table 1
Percent of Students Who Reported Engaging in Dieting-Related Behaviors in Relation to Alcohol Use by Gender (n=78)

| | Women | Men | Total |
|------------------------------|---------------|-------------|---------------|
| Altered Eating Patterns | 29.7% (11) | 7.3% (3) | 17.9% (14) |
| Altered Drinking Preferences | 27% (10) | 9.8% (4) | 17.9% (14) |
| Exercising | 10.8% (4) | 0 (0) | 5.1% (4) |
| Purguing | 5.4% (2) | 2.4% (1) | 3.8% (3) |

to explain drinking and heavy forms of drinking. A number of students did, however, discuss “drinking to get drunk.” Concerns with body image emerged as a reason indirectly related to the “drinking-to-get-drunk” phenomenon, as illustrated by the following quote. Below, Jan’s account of why she chooses to “drink to get drunk”:

I used to not drink beer because it’s fattening and I’ve had troubles with eating so it’s just like fat is bad, so I don’t drink beer a lot. I don’t understand the concept of drinking socially. I like to drink to get drunk. I mean that is the reason, the sole reason, I am drinking. You know, I mean it tastes disgusting. I don’t like drinking at all. I don’t think I ever will like it, I don’t see a purpose of doing it socially.

Jan reports that it does not make sense for her to drink in moderation. Jan defined “drinking socially” as having a glass of wine with a meal. Dinking socially, i.e., in moderation, does not achieve the intended purpose of drinking, which is believed to be intoxication. If Jan is going to drink, she reports it is necessary to become intoxicated, else she would acquire “empty calories” without having felt the euphoria associated with heavy drinking. Jan suggests reaching the goal of intoxication and hence euphoria counterbalances the ingestion of empty calories. These sentiments were not uncommon and were expressed in the narratives that support each of the four themes described in detail below. Students’ direct experiences with these behaviors are presented first. Students’ knowledge of friends and acquaintances (responses to projective questions) are presented following accounts of personal involvement with said behaviors for each of the four emergent themes.

Altering Eating Patterns

Dieting is a strategy regularly used for weight maintenance (Huon and Brown 1986), yet prior research has not identified alcohol use specifically as a reason to diet. This study reveals how some men and women report dieting in response to alcohol use. Of the entire sample, 18% reported altering their eating patterns in response to alcohol use. More women in the present study (29.7%) report relying upon limiting food consumption as a solution to the problem of ingesting "high-calorie" or "empty-calorie" alcohol compared to men (7.3%).⁷

Some students noted eating less than usual in order to drink as much as desired without having to worry about gaining weight, while other students skipped meals altogether before a planned night of drinking. Skipping meals was a particularly attractive option, for two reasons. One, students reasoned it took less alcohol to get drunk, which translated into fewer calories ingested; second, food calories acquired through dinner, for example, were entirely avoided. The following narratives illuminate these socio-cultural practices.

Kim: We used to not eat dinner before we would go out and drink. We usually drink lite beer, and maybe if we want to get drunk more quickly we will not eat that day. It sounds really unhealthy and it does become a factor [in staying healthy]. I don't like to think I drink a ton but I don't want to gain weight from drinking.

Kim reported not eating dinner before a "party" night along with her friends in order to avoid the problem of ingesting too many calories. Her account was similar to others. The pressure to participate in alcohol-related social activities and the pressure to maintain or achieve a desired body shape informed Kim's decision to exchange her dinner plans for a night of "partying." Tara reported similar experiences when answering a question about alcohol's caloric content: "I worry about that [alcohol use and eating]. During school we wouldn't eat the entire day and then we would go and drink."

Men similarly expressed types of diet-related behavior discussed above. Take James, for example. A male student who aspired to work in law enforcement, he mirrored the activities and reasoning of his female counterparts documented above:

James: Yeah, I work out. It has to do with what I want to do, [which is] law enforcement. It's my career and I like to be in good shape. I don't want to be fat. I'm not a muscle head, you know, I don't use steroids to stay ripped. But in summertime, especially in summertime, I think about the calories in alcohol and avoid eating and drinking too much as [often] as I can.

Consider the following statement by Jack, a male undergraduate majoring in engineering, regarding his anxiety over the caloric content of alcohol:

Jack: I'm a light eater anyway, but you have to understand that a beer has a minimum of 100 calories and I'm guessing that is for a lite beer. You put down 15 in a night and that's a day's meal for a lot of people, so I try to avoid drinking and eating at the same time as much as possible.

Both men and women discussed their friends' and classmates' attempts to maintain or conform to appropriate body shape norms through diet-related behavior in the context of pressure to use alcohol. Some women and men on "party nights" avoided excess calories by not consuming as much food, which in turn freed them to indulge in heavy alcohol use. With little to no food calories consumed on a night of planned drinking, students reported enjoying the added benefit of requiring less alcohol to become intoxicated. Consider Mary's words in relation to this theme: "I think people do skip meals because they can get drunk quicker and because they will consume fewer calories." Similarly, Julia said, "I know some of my friends would skip meals but they didn't verbalize it [skipping meals] as much." Finally, another female voice provided further insight into what is known about the use of dieting behavior in relation to alcohol use. Christine used the term "lightweight" in relation to her experiences with college women, alcohol use, and diet-related behavior:

Christine: [Many] women here [at the university] will [call themselves] "lightweights" because a lot of them don't eat. Women will feel the effects of alcohol because they are not eating!

Many students discussed this issue with fellow students in their dorm rooms. Jenny's words exemplify how these social behaviors are communicated and discussed among women:

Jenny: We used to talk about it actually, probably freshman year. We used to compare how many calories were in something compared to beer. That didn't last long, but I do know people who, if they were gonna go out and drink, would cut back on their food calories for the day so that they could make up for them [with alcohol].

Some students described their friends as "anorexic" when discussing the question of alcohol use and dieting behavior. Take Stacy's account:

My anorexic friend goes through extremes as far as cutting back a little bit. She just wouldn't eat all day. Sometimes we would say something to her and maybe she would have a piece of bread or something. There was [always] an excuse to drink but never [one] to eat.

Samantha further illuminated this theme in talking about her friend's behavior:

A female friend of mine would skip meals before going out and partying, she was really anorexic but she also used to drink a lot.

These two examples are suggestive of the presence of eating disorders among college females. Unfortunately, there is no way of verifying whether or not any respondents or the friends they speak of are or have been clinically diagnosed with eating disorders. In the next section, the negotiation of drinking and body-image norms are further explored in the context of altered drinking patterns.

Altered Drinking Preferences

Drinking habits are a part of college culture and are routinely controlled by many factors, including socio-cultural control agents (Peralta, 2005). Altered drinking preferences emerged as a theme because the fear of weight gain informed the question of choice of alcohol type (regular beer versus lite beer) and how much alcohol was to be used per sitting (quantity). Of the sample, 18% discussed altering their drinking patterns in response to the fear of weight gain. Primarily women (27%) reported altering their drinking patterns in their attempt to negotiate drinking pressures with pressures to conform to body shape. Nearly 10% of men acknowledged engaging in this behavior.

In terms of quantity, students reported the fear of weight gain as altering their drinking behavior in an unexpected direction. At first glance, one would think heavy drinking would be avoided due specifically to the caloric content of alcohol, especially for those men and women concerned with body image. But for some men and women the exact opposite was the case. As one female student plainly said, "If you are going to drink, you better get drunk," because "it makes no sense to drink alcohol if you don't get some kind of buzz." Specifically, it makes "no sense" to drink for the pleasure of having a single drink or having a glass of wine with a meal because of the unnecessary consumption of empty calories and the dreaded possibility of weight gain.

Women were more likely than men to self-report favoring lite beers, shots, or mixed drinks. Men were more likely to avoid lite beers or other "feminine" drinks, while a minority of men did seek out these lower-calorie alcoholic beverages. Women preferred lite beer, shots, and mixed drinks because of the perceived lower caloric content of these drinks. Men self-reported favoring beer, especially heavier or dark beers, unless they themselves took steps to adhere to body image norms.

While most men did not alter their drinking preferences due to body image concerns, some did. The following two accounts specifically demonstrate how men sometimes altered their drinking preferences due to body image concerns. Greg discussed his diet, which involved choosing between certain types of alcohol⁸:

Greg: "Recently I have been watching [my weight]. I've started this diet where I need to drink all lite beer. I'm not crazy about it, but you know. The guys call me "Coors Lite", [or] "Girls Lite."

Finally, Adam below discusses why he chooses "hard" liquor over beer:

Adam: Yes, I think about it [calories in alcohol]. I guess that's the advantage of drinking hard liquor. It's not as hard on the appearance of your body. I'm sure hard liquor is worse for you internally [Adam is referring here to alcohol-related health consequences] but I still do it to avoid the calories.

The calorie-percent-to-alcohol ratio of mixed drinks and lite beers compared to regular beer or other types of drinks was actively sought out by those concerned enough about body image to alter their drinking patterns. Take Meg's account as an example of how choice of alcohol is influenced by body image concerns for acquaintances and friends of respondents: "One of my best friends went on a diet and she stopped drinking beer altogether while she was on that diet." Another student named Amy mentioned how she would frequently "over-hear" people in her dorm discuss their concerns over the caloric-content of alcohol. Choosing lighter drinks was thought to compensate for the threat of weight gain posed by partying.

Tamara: I remember one time I asked for a Sam Adams and this girl was like, "How can you drink that? It has so many calories!" Girls definitely care about what they drink and it affects me. We don't want to gain weight.

Comparatively, most men interviewed did not report being concerned about alcohol's caloric content enough to alter their own alcohol use. Some men, however, reported knowing of women's concerns with the caloric content of alcohol. Mike's statement is an example of how some men discuss women's concerns over the "fattening" aspects of alcohol use. He reported, "The girls always complain about the amount of calories in alcohol. I've never really thought about it." Mike constructed the concern as primarily a "woman's issue."

Many men recount examples of their female acquaintances engaging in specific drinking styles. Mitch, for example, said, "I know girls who will drink only shots or they will drink like mixed drinks that are sugar free [due to caloric content of other types of alcoholic beverages]." Tyler observed, "Women will drink a lite beer and will drink less because they don't want to get fat." Justin further noted, "The girls who worry about how they look, they're usually the ones who drink more; they're the ones who worry about their self image."

Women, too, had their stereotypes of female drinking behavior.

Meg: If women are that concerned about calories, which they are, I don't think they should be drinking beer at all, because the food is going to be better for you than beer, and if you're that worried about your shape you should not drink beer.

Some students reported altering drinking habits is a way for them to curb their intake of calories, whether it be through limiting their intake of alcohol or by choosing one form of alcohol over another (e.g., beer versus hard liquor, or regular beer versus lite beer). Engaging in these behaviors helps women and men avoid the stigmatized status of being "overweight" (Schur 1984) while complying with the normative culture of college alcohol use.

Exercise and Self Induced-Purgung

Reliance upon exercise and self-induced purging were the third and fourth sets of behaviors associated with college students' alcohol use. Of the sample, 5% reported engaging in these behaviors as a result of alcohol use. The use of exercise as a strategy to maintain an ideal weight or to lose weight has been well established in the research literature (Thompson and Chad 2002; O'Dea and Abraham 2002). Excessive exercise and self-induced purging after meals are understood as symptomatic of eating disorders (Thompson and Chad 2002; O'Dea and Abraham 2002) and alcohol problems among clinical samples of women (Bulic 1987).

What follows is an analysis of college student narratives pertaining to these two diet-related behaviors as they are utilized in relation to alcohol use. Only 10.8% of these women reported regularly exercising before or after a night of drinking to "burn the alcohol calories off." Use of exercise was the only diet behavior men did not report using to stave off unwanted weight gain due to alcohol use. Patty's account illustrates how women use exercise in relation to their alcohol use:

Patty: I exercise a lot before and after drinking because of the calories. I got pretty skinny and I thought I looked great. But I have to keep an eye on it [the drinking and exercise to maintain my weight].

Perhaps the most disturbing theme to emerge was the reliance upon self-induced purging as a way to negate superfluous alcohol-calories. Two women and one male student reported purging purposefully after a night of drinking. While this behavior is not meant to be indicative of existing eating disorders for students in this study, students did discuss this behavior in relation to their own existing eating disorders. Sarah, for example, explicitly refers to herself as "anorexic":

Sarah: It's different for me because I exercise all the time and a lot of times I won't eat. So that affects me. Because I'm anorexic, it's a disease I will have forever. That's one of the reasons I get so drunk when I drink. After I drink, I make myself throw up.

While this was one of the least self-reported behaviors, many students reported knowing someone who did engage in self-purging due to the fear of gaining weight from alcohol calories. A female student recalled how her friend would "throw up" after drinking:

I know women who are concerned with the calories. A friend of mine throws up after she drinks, especially after she realized a Corona has 600 calories per bottle! I used to be concerned with my body, but now I am comfortable with it. When I was dieting, I would only drink hard alcohol and not beer because hard alcohol has empty calories whereas beer just goes straight to your thighs. Everyone thinks this; if you are at all concerned about your body, this is what you do.

Kim was asked if she knew anyone who made conscious decisions about what type of alcohol they were going to drink:

Kim: Girls will sometimes not eat as much because then it takes less to get drunk which means you absorb fewer calories...and if you don't eat a lot, then maybe you can throw up. Some girls like to because then they think they are getting rid of [the calories].

Jessica described the intertwined aspects of exercise and self-induced purging in relation to alcohol use:

Jessica: I have a friend who likes to make herself throw up when she's been drinking and we try to talk her out of it because it's not healthy to do, and sometimes we will all exercise a lot at the beginning of the week if we know we are going to be drinking a lot later in the week.

While the majority of students did not describe themselves as engaging in purging and exercise directly, these same students did report knowing of someone who exercised to burn off alcohol calories. Students suggested I should visit the school gym on Thursday or Friday early evenings ("party nights") or on Sundays ("recovery days") to witness the "packed" gym. Students felt the gym was packed with students who were ridding their bodies of unwanted calories obtained from weekend drinking activities. Ben and Angie provided narratives illustrative of this behavior among students other than themselves:

Ben: Girls are concerned with the amount of calories in alcohol ... like last night we did shots, like four or five apiece, and the one girl who doesn't work out didn't say anything about the calories but the other girl who works out was complaining about the calories and how she had worked out really hard that day and so she ended up burning off those calories that she drank in the shots ... and so that it 'evened it out' for her, she said. She wasn't complaining about it as much as she was stating how she was going to go work out again in order to burn more off ... she mentioned her workout that day [needed to] equalize her drinking.

Angie's narrative similarly illustrates the use of this diet-related behavior to negotiate the problem of weight gain caused by the social pressure to drink among friends, classmates, and college acquaintances.

Angie: I know people that exercise to make up for heavy nights of drinking. Some friends actually during the day when they know they are going to go out that night will say, "Oh, we better get our exercise in right now so we will burn calories by the time tonight comes." This [exercising] also happens the day before [planned drinking events].

While the behaviors described in this section were the least self-reported among students interviewed, many students knew of other students who engaged in these specific diet-related behaviors. The socio-cultural pressure to remain or become thin or fit, couched in a culture of alcohol use, appears to produce adaptations in students' behavior that range from modifying eating and drinking practices to using exercise and self-induced purging to rid the body of excess calories.

Women and men alike reported feeling pressure from their peers to drink. This social context represents a component of what students referred to as the "college drinking culture." Students felt this "drinking culture" was a significant aspect of their college experience. While not all students reported drinking to the point of intoxication, many students did imply that drinking implicitly meant heavy drinking.⁹

Similar to drinking pressures, both male and female students reported feeling pressure to maintain or construct an "ideal" body type. In the present study, 40% of students reported concern about the calories in alcohol. To be successful at meeting the demands of drinking and staying thin, students admitted to engaging in more extreme forms of dieting activity to reconcile the two competing pressures of drinking and maintaining an appropriate body shape. Implications for these self-reported behaviors are discussed below.

Discussion

This study explores why diet-related behaviors might be associated with alcohol use. A relationship between alcohol use and diet-related behavior was evident from interviews, and therefore corroborates existing research (see Kozyk, Touyz, and Beumont 1998; Krahn et al. 1992, 1996; Cooley and Toray 2001). Student narratives reveal how the cultural pressures to use alcohol are intertwined with similar cultural pressures to conform to beauty standards. Emergent themes suggest drinking behavior and efforts to comply with dominant standards of "health" (perhaps a code word used for beauty) intertwine, rein-

force, and inform one another in a body-image conscious society. These findings call attention to the importance of socio-cultural pressures to conform to perceived body-image and drinking standards and their effect on drinking behavior among college students.

Women in college, like men, use alcohol in part to be accepted by peers (Wechsler et al. 2002). Historically, women have had to meet strict beauty norms compared to men (Schur 1986). Men, however, are increasingly exposed to rigid standards of beauty (Luciano 2001). Thus, both women and men are likely to feel social pressure to reconcile drinking norms with the desire for a socially acceptable body shape. While in college, cultural pressures to drink, as well as cultural pressures to conform to body image norms, may be playing a role in shaping drinking behaviors.

Empirical evidence for a relationship between diet-related behaviors and drinking behaviors rooted in a socio-cultural landscape of conflicting norms and expectations emerged from this study. What is more, this relationship was found for both college men and women, suggesting men also are susceptible to the interrelationship between alcohol-use norms and pressures to conform to beauty norms. Data presented here suggest a number of women and men in the present sample express sufficient anxiety over caloric content of alcohol to engage in diet-related behaviors of varying severity. These behaviors appear to be adopted specifically to avoid the possibility of alcohol-related weight gain. Moreover, students who did not admit to engaging in these reported diet-related behaviors did mention that they were aware of friends and acquaintances who engaged in these behaviors for similar reasons. The four specific emergent themes identified here were: (1) altered eating patterns; (2) altered drinking preferences; (3) use of exercise; and (4) self-induced purging. These themes highlight how diet-related behaviors can be associated with the use of alcohol.

The first two themes can be understood as changes in consumption behaviors resulting from a concern for calories. Some students reported alcohol and eating cannot fit harmoniously into their daily lives. Of the interviewed students, 18% were categorized as students who were conscious of food and alcohol calories and tended to eat less or skip meals altogether before or after a night of drinking. Eighteen percent of students were found to be conscious of the caloric content of alcohol and thus active in limiting their alcohol use or altering the type(s) of alcohol consumed. These behaviors are reportedly being used to enable students to conform to perceived drinking standards and to beauty norms.

The last two themes can be understood as behaviors designed to eliminate alcohol calories already absorbed by the body. Five percent of students re-

ported negotiating the drinking and weight gain problem through exercise. These diet-related behaviors comprised the third theme emerging from the present study. Finally, nearly 4% of the sample reported using self-induced purging as a strategy to negotiate the alcohol-diet dilemma and purging behaviors do not require students to curb their eating or drinking like the first two descriptive categories. These behaviors allowed students to continue eating and drinking what they desired despite competing body image norms which may have blocked others from doing so. Concerns with body image were dealt with through exercise or purging in the time before or after drinking events. These behaviors can thus be understood as behaviors used to rid the body of excess calories acquired through alcohol use.

These data have implications for university student policies. College health professionals, college administrators, and researchers alike should consider diet-related behaviors among men and especially among women as potential risk factors for alcohol abuse. When considering prevention efforts, college counselors, coaches, and health professionals should note body image concerns may be associated with alcohol use. Moreover, students presenting with alcohol abuse problems may need to be screened for eating disorders. Finally, risks associated with under-eating or fasting before a night of partying may need to be included in educational presentations, pamphlets, and other alcohol-related material distributed to college students.

It is important to note the strengths and weaknesses of this study. Conducting qualitative research on college drinking is a valuable yet underutilized technique. This methodology allows for students to discuss at length what alcohol use means to them and what the social processes involved in drinking entail. The open-ended questioning technique and grounded theory approach used here generated data rooted directly in the experiences of students. Use of these techniques grants students the opportunity to effectively contribute to the development of empirically rooted theories about gender, diet-related behaviors, drinking and alcohol among students. The question of diet-related behaviors was not considered at the outset of the study. Pilot interviews with students revealed the importance and relevance of body-image consciousness and diet behavior to the use of alcohol. In keeping with qualitative methodology, themes concerning diet behavior in relation to alcohol use emerged on their own.

Two limitations of the present study are addressed here. First, because this was an exploratory study designed to develop theoretical constructs and to explore the meaning of alcohol use for college students and the social context of college alcohol use, purposive and non-probability sampling was used. Different experiences may be found at universities with differing populations and

locations. Our understanding of the relationship between alcohol use and diet behavior would benefit from replicating this study at other universities. Adopting representative samples would provide generalizable and more conclusive data about the association between drinking behaviors and diet-related behavior. Second, this research cannot identify the cause-and-effect relationship between dieting behavior and drinking. Did the drinking or the diet behavior emerge first, or did they develop simultaneously? Longitudinal work may reveal important patterns relevant to the etiology of drinking and dieting behavior.

As with many studies, this research produced more questions than answers. Drinking behaviors among female college students are especially important to understand given women's particular risk for physical and sexual victimization associated with alcohol use (Vicary et al. 1995; Harrington et al. 1994; Wechsler et al. 1998; Synovitz and Byrne 1998) as well as school-related and other health-related problems unique to women. Moreover, the drinking styles reported here (such as drinking "on an empty stomach") may place students, especially women, at risk for various forms of victimization and may in turn partly explain why women who use alcohol are at elevated risk for specific alcohol-related problems such as sexual assault, date rape, and rape (Vicary et al. 1995; Harrington et al. 1994; Wechsler et al. 1998; Synovitz and Byrne 1998; Bachman and Peralta 2001).

Two research questions in particular emerge from this study: (1) Are women and men who engage in the types of diet-related behavior described above at increased risk for interpersonal violence while in college given their susceptibility to higher levels of intoxication compared to those who do not diet? and (2) What is the prevalence of these behaviors in relation to alcohol use in the general population? While use of exercise and purging behaviors was less common for this sample compared to the first two categories of diet-related behavior, it is important to determine the prevalence and incidence of these behaviors for college students and people in general given the corresponding increased risk for alcohol-related and health-related consequences (e.g., bulimia and anorexia).

Finally, one of the goals behind examining the drinking experiences of students was to gain an understanding of student's general experiences with alcohol, particularly the positive and negative consequences of alcohol use. Although there is a growing body of knowledge about the prevalence and consequences of alcohol use among students (Wechsler et al. 2001), it remains unclear how the social context of the college environment influences alcohol use for students. What meaning does alcohol hold for these men and women,

and more importantly, what are the social processes involved in the use of alcohol? Are alcohol use and associated concerns with body image of concern to college students of color, and if so, how? Answers to these questions can inform the literature on alcohol use, college health, and larger sociological questions of gender and race simultaneously.

Notes

1. I would like to thank professors Cynthia Robbins, Margaret Andersen, and Ronet Bachman for their support and guidance on all aspects of this research. I am indebted to the insight and suggestions made on drafts of this paper from J. M. Cruz, Ph.D., and P. Guerino. To Tricia Wachtendorf and Erin Gladding, thank you for all your assistance in the collection and analysis of data. For the careful and critical thought put into an earlier draft of this paper, I would like to acknowledge the anonymous reviewers at *Gender Issues*. And finally, I am grateful to the students who shared with me their views and experiences with alcohol use.

2. Alcohol problems include health problems, alcohol-related violence, problems with addiction, and other social problems stemming from the abuse or dependence on alcohol.

3. What is more, the narrowing gender gap in substance use has not been adequately explained. This is in part due to a lack of systematic research on the question of gender construction in substance abuse research (Johnson et al. 2001). Socio-cultural questions related to gender issues such as "dread of weight gain" may explain some of the lower rates of drinking we have seen and continue to see among college women.

4. It is important to note the question of race in this research. Future manuscripts will document systematically the racial differences emerging from the present study and their sociological implications for alcohol abuse, race relations between and among students, and differing social constructs of beauty. The majority of Black women interviewed ($N=20$) reported very little if any alcohol use. Further, Black women did not report engaging in any dieting-related behavior associated with alcohol whatsoever. These important racial differences speak to cultural differences as well as to the racialized space of the college campus where the study took place (see Peralta, 2005). Thus, the data presented in this paper speak to the experiences of White college student participants.

5. This may be due to the sampling technique employed and/or the face-to-face interview aspect of the present study, which differs from research designs used by large, national probability samples.

6. The prevalence of "binge" drinking reported here is far below the national figures reported in the literature. Wechsler et al. (2001) report over 40% of college students engage in risky and heavy drinking behavior. The lower rates reported here may be an artifact of the sample. It is unknown whether students who engage in heavier drinking practices engage in more diet-related behaviors.

7. "High-calorie" and "empty-calorie" were terms used by students to describe alcoholic beverages.

8. Greg's reference to "Girls Lite" refers to the gendered nature of alcoholic beverages. "Lite beer" connotes a female beverage because women are expected to be more concerned with body image than are men. Despite the fact that Greg admits to drinking lite beer, his narrative suggests men who drink lite beers are a contradiction in terms, as men are not supposed to consume beverages meant for women and are hence susceptible to ridicule.

9. Four or more drinks for women, five or more for men has been defined as "binge" drinking for students in the college student alcohol use literature (see Wechsler et al. 2001).

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