

## Binge gambling behaviors reported by youth in a residential drug treatment setting: A qualitative investigation

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**Abstract:** Two focus groups conducted with adolescents and young adults in a residential drug treatment facility yield some intriguing information about binge gambling, a relatively unexplored pattern of pathological gambling. Participants discussed the ways in which binge gambling may occur in relation to their drug habits, as a way to raise funds for the purchase of drugs or alcohol, to pass time when high, or as a substitute form of excessive risk-taking when drugs were not available. Binge gambling may be missed with conventional screening instruments, and it is suggested that gambling questions may need to be rephrased for certain high-risk populations.

**Keywords:** Binge, gambling, adolescents, drugs

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**Submitted:** August 08, 2009. **Revised:** September 29, 2009. **Accepted:** October 06, 2009.

### INTRODUCTION

Anecdotal evidence of excessive episodic indulgence with alcohol or drugs has led a number of researchers to investigate bingeing behaviors. Binge drinking, in particular, has gained considerable attention as a public health crisis in the last decade, and has led to some speculation that such semi-frequent heavy drinking may be a feature of adolescent high risk behavior among some youth.

As bingeing implies not only periodic excessive over-indulgence but also the ability to stop the behavior in question between binge episodes, questions arise about the nature of involvement in addictive behaviors and related impulse control disorders. Given the many parallels between youth gambling problems and comorbid behaviors, such as alcohol and drug use, questions have been raised as to

whether young adults can also be said to binge gamble (1). This would posit a unique type of gambler with very different gambling behavior patterns, which may over-inflate the prevalence rates of problem gambling, as gambling screens typically use a limited time framework (e.g., past month, past year). The knowledge that some youth may present as problem gamblers on such screens precludes the current conceptualization of problem gambling as a pervasive problem. The existence of binge gambling as a manifestation of disordered gambling would also have potential repercussions for both prevention and treatment of this kind of behavior.

Although considerable research has been done on the prevalence of continuous and pathological gambling behaviors and associated risk factors, only a single case

study to date has empirically studied the existence of episodic or "binge" gambling behavior as a distinct category (2). Important questions remain as to what defines a binge episode, whether or not adolescents engage in binge gambling, what are the consequences associated with binge gambling, what is the relationship between binge gambling and binge use of other substances, why youth would repeatedly engage in binge gambling behaviors despite their negative adverse consequences, and the nature of the relationship between adolescent binge gambling behaviors and pathological gambling.

This paper draws upon the results of two group interviews with high-risk adolescents that yielded conflicting results when compared with interviews conducted with mainstream high-school and junior college students, as part of a larger study to identify evidence of binge gambling patterns. Although the sample size is admittedly small, the unique response patterns suggests that binge gambling is a legitimate disordered gambling pattern among some adolescents exhibiting co-morbid addictions to drugs and/or alcohol. Particular patterns of use and abuse are suggested, in which gambling and drug use appear to play a complicated interwoven relationship.

#### RESEARCH ON BINGE BEHAVIORS

The research on binge drinking among adolescents points to a persistence of this behavior, particularly among college-age students (3-5). Nevertheless, binge drinking does not appear in the DSM-IV. The difficulties of identifying binge gamblers with conventional survey instruments has parallels in the assessment of alcohol problems, where it has been observed that most surveys of binge drinking failed to differentiate between those drinkers who met the criteria for alcohol dependence and

those binge drinkers who did not (1). However, the existence of binge drinking as an identifiable phenomenon is not in doubt, and there is ample evidence that those who binge drink are at risk for experiencing negative consequences (6). Midanik et al (7) found that drinkers who had binged at least once in the preceding 12 months were more likely than non-binge drinkers to have problems with alcohol dependence and alcohol-related employment problems and to have experienced drunk driving.

There is also considerable literature about binge eating patterns among those struggling with eating disorders and obesity (8-10). Binge eating does appear in the DSM-IV, and is described as 'eating in a discrete period of time an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances' (11), with an accompanying loss of control over eating during the episode. Serious negative physical, psychological, and social implications have been associated with binge eating, whether in conjunction with bulimia (and other eating disorders) or as a separate disorder of its own ("binge eating disorder"). Johnson et al (12) found binge eaters were more than twice as likely as those without an eating disorder to also have problems with alcohol, anxiety, or depression, and more than four times as likely to suffer from panic disorders.

All binge behaviors share common characteristics, including a loss of control, salience, changing moods, conflict, withdrawal symptoms, and denial (2). Wechsler et al (5) suggest that binge behaviors are associated with increased pathology and adverse outcomes. Yet, binge gambling is unlike drug, alcohol, or food bingeing in that there are few physical implications to over-indulgence (aside from exhaustion of both physical and financial resources) (12).

Nower and Blaszczynski (1) conceptualized the idea of binge gambling as a specific pattern of gambling behavior, defined by time-limited bouts of uncontrolled gambling, followed by abrupt cessation with a complete absence of any persistent preoccupations or urges to gamble. Griffiths' (2) case study of a male binge gambler stands as the sole piece of directed research, and yielded some interesting information about specific "triggers" of binge gambling behavior and underlying related problems. When the specific stress and anxiety triggers that caused the gambling binges (i.e. relationship break-up for this individual) were successfully addressed, the problem gambling disappeared. Although Griffiths (2) concludes that binge gambling may be less serious than chronic problem gambling, he nevertheless argues it can result in significant problems for those it affects, and is therefore a "much overlooked area" for research.

Not yet clear is whether binge gamblers remain a subgroup of problem gamblers, or an entirely distinct category of individuals with disordered gambling problems, who might require separate or fine-tuned screening or treatment protocols.

The underlying assumption that problem gamblers experience a chronic and persistent urge to gamble would suggest that binge gamblers may either fall through the cracks if tested during periods of abstinence, or in fact may inflate the current prevalence rates should our conceptualization of a chronic and persistent behavior be used as a major criteria in identifying pathological and problem gambling.

## METHODS

Two 90-minute focus group sessions with two different groups of participants at a residential drug treatment facility in

Montreal shed some new light on the concept of binge gambling as it applies to adolescents. The first group had a total of six individuals (four male, two female) and the second had eight adolescents and young adults (six male, two female). Participants ranged between 16 and 19 years of age.

Participants were selected by treatment program staff for these groups due to their interest in gambling; all participants acknowledged having been addicted to illicit drugs of some kind. Focus groups were conducted in the common room at the facility in which the participants were residents. It should be noted that these teens were very familiar with group therapy sessions as a consequence of their status in this drug treatment program, and were very likely much more forthcoming and candid about their experiences as a result. They shared some intimate stories about their experiences, most likely because they were all very familiar with each other. This is unlikely to be the case in your average high school classroom, where matters of such intimate or socially questionable behavior may not be openly discussed.

Focus group methodology was used for this project in order to gain some insight, depth, and perspective on a form of gambling behavior that can be difficult to gauge in conventional survey instruments. The ability to ask open-ended questions, to follow up on comments or behaviors with additional questions, and to observe the spontaneous interactions between individuals offered invaluable insight unlikely to have materialized in one-on-one interviews.

The protocol for the two groups was the same. Participants sat on couches in a circle with the moderator, a note-taker, and a representative from the treatment facility. It was explained that the proceedings would be audio-taped for transcription. The questions began with general inquiries

about gambling behaviors, activities and patterns observed in other people their age. The participants were not asked specifically about their own gambling activities, although most volunteered information of their own volition. Over the course of the discussion, the questions began to focus more on "binge"-type behaviors and the specifics of episodic gambling.

After the discussions, audiotapes were transcribed and manually coded. The analysis of the transcripts involved drawing connections between different patterns, and identifying recurring words and patterns. Coded passages were grouped into categories and analyzed by examining emerging themes.

### RESULTS

Gambling as an integral part of drug culture Participants were very willing to talk about their gambling behaviors and the way in which these intersected with their drug use. This is likely a factor of their experiences in a drug treatment facility, where group discussions were already commonplace and where they had all become familiar with each others' lives and experiences with drug addiction. For teens who were part of the drug culture on the street or at school, gambling was referred to as an ever-present part of their lives.

*I didn't see much gambling in my high school. But I noticed a lot of gambling in street youth. [...] I knew there were things like scratch-and-wins and bingos and I knew that was gambling. It's an addiction, I believe. [...] It's an addiction to money, kind of ties into the addiction to drugs.*

A lot of my friends are really into dice, and actually one of the dealers I used to deal with, he used to carry around a miniature

roulette, and we used to play with that. And I lost a lot of my money. But I would've said, if we didn't have money, we would gamble drugs. Like, 'I'll give you a five-piece for a five-piece, or a gram for a gram, or an ounce for an ounce,' or even sometimes a pill for a pill, depending on the situation, like, you'd always gamble with something of value. One participant admitted that he could not see gambling as distinct from his drug use:

*When I gambled, it was so tied into my addiction, with the alcohol and the—especially when I was drinking—I would be, like, watching the Super Bowl, and me and my friends would be going wild over it, putting down money, putting down drugs to bet -- is Chicago going to win? Are the Seahawks going to win? Who's going to win? So we'd be, really, like, betting a lot, that's something that I used to love.*

These general comments about the familiarity of gambling activities for adolescents using drugs emphasize three important roles gambling plays for youth in the drug culture that emerged over the course of this focus group discussion:

- a) as a way to raise money (or drugs) to get high;
- b) as a way to pass time or entertain themselves; and
- c) as an extension of the excitement and risk these youth seem to crave.

Of these three, most discussion centered around the first role, as drug addicts are constantly seeking new and alternative ways to gain the funds necessary to preserve their high, or get high again. As one adolescent said, "once you hit rock bottom, you need more."

This type of gambling was described as episodic, in that it was precipitated by a desperate need for money to get more drugs. Other sources of money (allowance from parents, drug dealing, stealing, pawning objects or prostitution) were not always dependable, possible or palatable, so gambling to acquire money was perceived to be another option. Because there can be no guarantee on the outcome of a gambling event, participants described intensive periods of binge gambling until enough money could be raised for the next purchase of drugs, at which point the gambling activities may cease altogether for an indefinite period. Gambling behaviors might include cards, dice, lottery tickets and scratch cards, roulette, or just casual betting on interpersonal behaviors ("Get hit by a car, I'll buy you a 40."). The following comment provides another example:

*Like the bottom line for my gambling issue, obviously depends on who you are, how your brain works: addict/non-addict, some people do it for fun, but I gamble—it wasn't only lotto tickets—I gambled because I wanted money, I wanted something. You know, whenever I'd get ripped off for drugs—I used to sell drugs—whenever I got ripped off and didn't have enough money, I would often pawn. I'd steal laptops, um, MP3s, iPods, cause that's a form of gambling, right? Pawning anything for money, it was all feeding my drug addiction, so I can't come from a good place to really say, you know, I gambled just for money. I gambled for drugs.*

The participants report that gambling activities generally continue until either sufficient funds have been raised for the next "hit", or until so much debt had incurred that the others refuse to continue.

Sometimes, however, the gambling activity itself takes over and the player keeps engaging in this behavior even though they have more than enough drugs or money for their immediate needs. This inability to stop, even in the face of the physiological symptoms of a drug addiction, can be described as binge gambling, when occurring sporadically and in no particular pattern, as in this example:

*At one of those parties, the roulette was going, and he started playing darts. He was really good at it. He won—they were doing it for a week—he was in debt 50 bucks. He ended up winning 24 grams—so I don't know if that means anything to you, but that's a lot, it's like an ounce and a little bit—so he ended up winning 24 grams. By the end of the night, he was in debt 50 bucks plus five grams.*

Interviewer: And would that make him want to stop?

*No, he had—like for me, as soon as—I told him, I was looking at him, I bet and I lost 5 bucks, and I was, like, "No," cause I want to keep my money, and I said, "Dan. That's 24 grams. Stop!"—okay, so we both came up to him, and we were like "Stop, stop, stop," and he wouldn't stop. It was that drive to want more, to need more. "I want this much," and "I want twice this much," you know? And for me? When he lost everything, it was like, "There you go, we told you to stop and you didn't stop.*

One female participant described how binge gambling provided an occasional novel way to raise money for drugs. She said she or her boyfriend would steal a credit card, and go to one of the few

convenience stores she knew in her town that would accept credit cards when purchasing scratch cards. She described buying \$80-\$100 worth of scratch cards, because they knew they were likely to win at least \$10 in cash. They could then take this to their dealer for their next drug purchase.

#### **Gambling to pass time**

Gambling was often described by these youth as a way to pass time and as an extension of the euphoria received from drugs and/or alcohol. During these periods, participants reported that gambling often ended up as the sole, prolonged experience for an excessive period of time.

*Yeah, [we gambled] when there was a big game, like, I know a lot of people who do that, I mean, like, everybody pretty much does that, right? And it's all tied in. I mean, now that I'm really thinking about it, related to what Tom was saying, all the addictions tie in, because if you have an addictive personality, then you're going to start, you're going to gamble, you're going to drink, you're going to do drugs, all at the same time, it's closely related. [Talking, attempted interjection]. I mean, my dad, he was a gambler too, but he was also an alcoholic, so it's kind of tied in.*

Gambling as a way to pass time was one clear way in which bingeing happened. A female participant described a familiar routine for her and her boyfriend. He would work as a roofer long enough to make money, so they could purchase enough crack cocaine, beer and energy drinks to keep them going for a while. They would log onto Party Poker and play Internet poker for hours or even days, until they ran

out of drugs. At that point, she describes them logging off the poker sites and drying out so they could return to work just long enough to get the supplies for their next binge. She says, "We would stop for a while, just to get a paycheck to get some money back. We'd stop out of necessity, because we ran out of money or we needed to buy drugs."

Another participant, a male, also describes the gambling that would occur on prolonged drug binges: "For sure, we would have days and days of going until you end up with nothing." All of the participants saw gambling binges as a familiar pattern, and said they would continue until they ended up "in jail or debt or rehab."

Gambling while high on drugs may qualify as binge gambling where it occurs periodically, with unpredictable stretches of gambling-free time (which may or may not spent high) in between. This was described by some participants, but for others gambling was simply what they did each time they got high.

#### **Gambling as an extension of risk**

Gambling occurred in different forms for the participants in these groups and was not focused on cards or dice. One young man said that although he wouldn't really call his overall gambling activity bingeing, rather he reported bingeing on certain behaviors; perhaps going to the casino constantly for a week, and then stopping so he could play cards with friends or get back into sports betting. The overall behavior remained consistent, but the choice, frequency, and duration of gambling activity had a binge quality to it.

This type of gambling appeared to be predominantly about maintaining the element of risk and passing time. The gambling was sometimes described in terms

that would qualify as bingeing behavior, in which the constant assumption of risk was the main issue, and the use of gambling to achieve it occurred for intensive periods of time only sporadically, intermixed with other high-risk behaviors.

One participant was quite explicit about the pleasure he received from the experience of risk itself, in which gambling was one way to achieve that level of excitement. The following excerpt describes his increasing unwillingness to stop as the risks intensified and the stakes increased for him in very real ways.

*But personally, like, with my experience with gambling, [pause], yeah, gambling has a lot to do with chance, yeah, I agree with what everyone said here, but gambling started for me was the rush from selling drugs, I was about 12 years old, 13 years old when I started selling drugs, and um, it's a gamble, always going out there, it's a chance, you win some you lose some. But when everything's coming in and everything's fluent, there's nothing going wrong, and it's that rush that you get from it. Same with gambling, same with selling drugs. It's that rush. Same with even using drugs, you get that same rush, same adrenaline high, something's on the line, you know what I mean?*

Interviewer: It's the risk?

*"—exactly, right, so like, for me, like, it went on for a few years, started getting cops involved, and the court, and it's even more of a risk now, and then you get red-flagged in certain towns, and it's even more of a risk. It was this big rush. And by the time I was 17, I was still into it, and then I went to my first casino, and it's the lights and the tables and the people and the money and the*

*chips and ... It was so much fun, the first time I went to my first casino. I only went in with about fifty, sixty bucks with - my dad actually took me. And I hit up my first roulette table, that's where it went. I went in with sixty bucks and came out with two hundred, three hundred bucks. It was fun, you know?*

One young woman talked about how binge gambling was sometimes a stop-gap measure when drugs weren't available.

*Sometimes when [my boyfriend] would have cash on him, he would be, like, 'Okay, well, let's go pick up.' And then he would try to call his dealer. He wouldn't be able to get a hold of him, so he would, like, plan B would be, like, 'Oh, like, let's go to the casino,' and would spend every single penny he had at the casino trying to make more. So I think it definitely ties into, like, addictive behavior, and it's almost, like I said, it's almost like filling a void or kind of trying to fill a black hole with something, some kind of addiction. So whether it be one form or another.*

Another young man reported being excited about the risks of the drug and gambling culture, which he referred to as "that whole fast lifestyle."

*Especially for me, like, the drugs, being chased by the cops, the casino [...] The fabulousness, if that's even a word, just the always having your life on the line. The change, ballin' money, that kind of stuff, you know, I think an addiction—I think, I think gambling should be treated like a drug addiction, an addiction, that I believe, personally, is a brain disease. You're born with it, you die with it, not*

*everyone has this disease, I think it's a chemical imbalance. Some people have it, and some people, like he said, [indicating another participant] can have it once in a while, but especially people who are prone—like drug addicts—it's not something. I, the first time I did a scratch-and-win, I'd never done one before, and the next day I was buying one every couple of minutes, then pawning comes in, it's all about fast, quick, cash, money, clothes, drugs, posse, lights, machines, uh, stay up late, fast, hard, rush, high, it's just all those words, just a brainstorm of all those words that tie into that.*

**Binge gambling: Prolonged activity and/or inability to stop**

A number of individuals make specific reference to periodic episodes of loss of control or the inability to control behavior, which is typical of a binge episode: *"the first time I did a scratch-and-win, I'd never done one before, and the next day I was buying one every couple of minutes."* His list of high-intensity, high-risk activities offers an account of bingeing on one type of behavior and then moving on to another, only to return to the original after an unpredictable time interval.

*One young man used the words "binge gambling" to describe his own behavior, saying he simply could not control his behavior: "I wasn't, like, an everyday gambler, maybe once a week, or like, once every two weeks. But, like, when I gambled, I didn't stop until I lost, like, anything I had on me."*

**DISCUSSION**

The parallel abuse of drugs, alcohol, and gambling suggests that for some high-risk adolescents, this is a relationship in which

gambling is both a pragmatic way to raise funds and a form of entertainment and excitement (for the pleasure derived from risk itself). It is important to understand how these elements fit together in concrete ways, such that more effective methods of assessment, treatment and prevention can be developed through future research in this area.

These focus groups shed additional light on the loss of control in these behaviors and on how the abuse patterns can fit together in complex ways. For many of these youth it appears that gambling, drug, and alcohol use frequently serve as triggers for each other in different and often surprising yet predictable ways. Binge gambling may be precipitated by—or conversely may precipitate—the abuse of drugs or alcohol. The very concrete ways in which gambling and drug use are experienced by these adolescents underline the need for these elements to be addressed in treatment situations, lest exposure to one cause a trigger for the other.

The complex interweaving of drug use and gambling by the participants in this study underlines the need to screen high-risk youth for gambling problems along with other substance use. This is particularly true for adolescents diagnosed and in treatment for drug and alcohol abuse.

Two patterns in particular can be extrapolated from these focus groups—that of the importance of co-morbid trigger behaviors and that of personality types which may predispose some individuals to the development of gambling problems. Although which dysfunctional behavior comes first is not entirely clear in every case, it appears that excessive drug use and gambling have a particularly strong behavioral connection for these substance-abusing youth. Moreover, existing research on personality types points to a strong



positive correlation between problem gambling severity level and high levels of traits such as Disinhibition, Boredom Susceptibility, Cheerfulness, and Excitability, and low levels of Conformity and Self-Discipline (13). Linkages between problem gambling and underlying factors such as abuse, patterns of loss, and low self-esteem are also common (14). It would be interesting to further this line of inquiry for those individuals prone to binge gambling. The relatively sparse literature on binge gambling nevertheless underscores the need for a more sensitive gambling screening tool as binge gamblers may not be identified if the current instruments are used during periods of gambling abstinence (6). Binge gamblers may also skew prevalence rates on these surveys if episodic problems exist but are neither long-term nor pervasive. Gambling frequency questions may also have to be rephrased for certain high-risk groups. If binge gambling is a possibility, than asking general questions about whether gambling has occurred in the preceding year will yield little useful information about actual behavior patterns. As with binge drinking, it is likely that individuals who binge gamble are more at risk than the normal population for developing future problems with their binge behavior.

As binge gambling differs considerably from the usual course of unremitting and progressive gambling addiction, it offers different challenges for both treatment and prevention. Griffiths (2) found that when the underlying trigger circumstances of his subject's life were resolved, the disordered binge gambling behavior would disappear for a while. His case study of a male binge gambler had periods several years in length when the gambler was completely free of problem gambling behavior, only to have it present itself during times of stress and

anxiety. Similarly, one of the two case studies reported by Nower and Blaszczynski (1) reported binge gambling when other psychosocial stressors in his life were present.

Binge gambling in normal samples (as opposed to drug-addicted youth) may take on different qualities and motives. For example, within the normative population, binge drinking is a commonly reported activity; perhaps this is also the case for binge gambling. We need to investigate these relatively unexplored behaviors for a better indication of how they may present themselves. The concept of binge gambling is so new that it remains necessary to define it first in normative populations, and then move into additional inquiry within treatment populations.

Additional research is first required to explore the prevalence and specific patterns of binge gambling in normal adolescent and adult groups. Survey instruments must be refined in order to pick up on the subtle variations in frequency and intensity that differentiate binge gambling behaviors from both normal and pathological gambling behaviors. Subsequent exploration of binge gambling with co-morbid addicted populations will require in-depth discussions with the small number of adolescent addicts who would be amenable to talking about their experiences. Once we know more about how binge gambling plays out in the mainstream, it will be possible to pursue field research in youth centers to gain more insight into the interplay between drug and alcohol addictions and problem gambling.

#### REFERENCES

1. Nower L, Blaszczynski A. Binge gambling: A neglected concept. *Int Gambl Stud* 2003;3:23-35.
2. Griffiths M. A case study of binge problem gambling. *Int J Ment Health*

- Addiction 2006;4:369-76.
3. Jefferis BJMH, Power C, Manor O. Adolescent drinking level and adult binge drinking in a national birth cohort. *Addiction* 2005;100:543-49.
  4. Jennison KM. The short-term effects and unintended long-term consequences of binge drinking in college: A 10-year follow-up study. *Am J Drug Alcohol Abuse* 2004;30:659-84.
  5. Wechsler H, Lee JE, Kuo M, Seibring M, Nelson FN, Lee H. Trends in college binge drinking during a period of increased prevention efforts. *J Am Coll Health* 2002;50:203-17.
  6. Banta, JE, Przekop P, Haviland MG, Perea M. Binge drinking among California adults: Results from the 2005 California health interview survey. *Am J Drug Alcohol Abuse* 2008;34(6):801-9.
  7. Midanek LT, Tam TW, Greenfield TK, Caetano R. Risk functions for alcohol-related problems in a 1988 U.S. national sample. *Addiction* 1996; 92:1427-37.
  8. Castonguay LG, Eldridge KL, Agras WS. Binge eating disorder: Current state and future directions. *Clin Psychol Rev* 1995;15:865-90.
  9. Fairburn CG, Cooper Z, Doll HA, Norman P, O'Connor ME. The natural course of bulimia nervosa and binge eating disorder in young women. *Arch Gen Psychiatry* 2000;57:659-65.
  10. Munsch S, Beglinger C, editors. *Obesity and binge eating disorders*. Bibliotheca Psychiatrica, Series No 171; 2005.
  11. American Psychiatric Association (APA). *Diagnostic and Statistical Manual of Mental Disorders 4<sup>th</sup> ed. text revision*. Washington, DC: APA, 2000.
  12. Johnson JG, Spitzer RL, Williams JBW. Health problems, impairment, and illnesses associated with bulimia nervosa and binge eating disorder among primary care and obstetric gynaecology patients. *Psychol Med* 2001;31:1455-66.
  13. Gupta R, Derevensky JL, Ellenbogen S. Personality characteristics, and risk-taking tendencies among adolescent gamblers. *Can J Behav Sci* 2006;38: 201-13.
  14. Jacobs DF. A general theory of addictions: A new theoretical model. *J Gambl Behav* 1986;2:15-31.