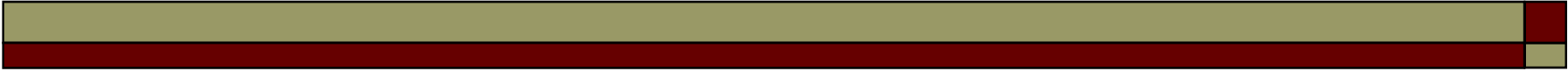
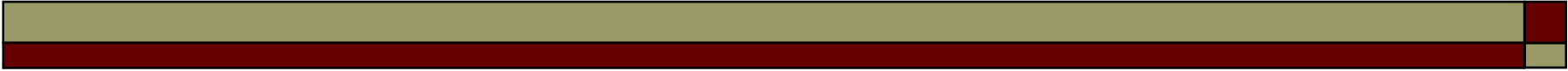


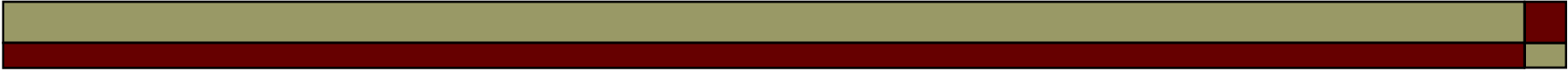
Toward a Definition and Assessment of Binge Gambling

Rina Gupta, Ph.D.
www.youthgambling.com

Responsible Gambling Conference
Halifax, 2011

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- High rates of gambling and problem gambling among youth and young adults highlight the necessity of identifying the factors that influence the development and/or maintenance of gambling.

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- An understanding of varying degrees of gambling participation and can inform the measurement of gambling behaviors and gambling severity.

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- Virtually no studies have investigated the prevalence of episodic or “binge” gambling.



Nower and Blaszczynski (2003) have hypothesized a unique typology of gambler: “binge gamblers”

- intermittent bouts of severe dyscontrol and excessive gambling
- intervening periods of abstinence characterized by an absence of persistent preoccupations and urges.
- rapid escalations of intense uncontrolled gambling binges that may result in important psychosocial consequences.



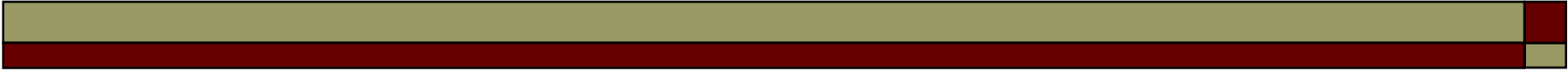
Questions currently being asked in the field of gambling research are:

- ❑ Do young adolescents/young adults engage in binge gambling?
- ❑ What defines a binge episode?
- ❑ Does the presence of binge gambling affect prevalence rates of pathological gambling?



And more specifically

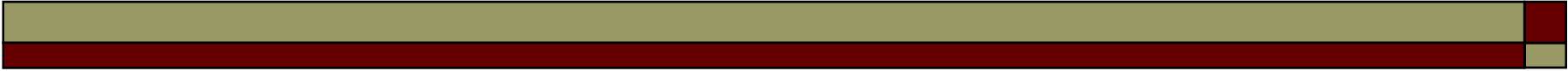
- It is unclear if binge gambling should be considered as undoubtedly distinct from pathological gambling, or if it should be considered a pattern of play amongst pathological gamblers.

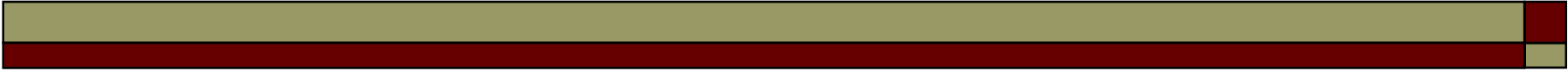


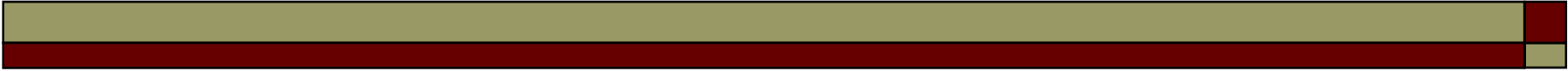
The research presented today will help
to shed light on these questions, in a
preliminary way

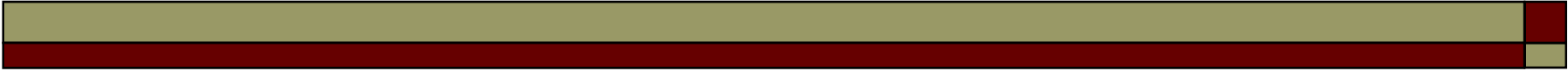


What is binge gambling, does it exist?

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- Unlike binge eating or binge drinking, it is difficult to “quantify” and thus define binge gambling.
 - Nonetheless they can be conceptualized similarly.

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- Food and alcohol are readily quantifiable, can be measured in terms of physical factors such as organ capacity, weight, metabolic rate, and are therefore subject to physical limitation.
 - Gambling is not as quantifiable, is relevant to the gambler's access to money, and is limited by few external controls aside from fatigue and lack of funds.

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- As such, correctly identifying binge behavior will need to take into account numerous factors that diverge from those utilized in substance abuse and eating disorders.

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- Identification of binge gamblers will require evaluation of motivations, intentions, frequency, severity and duration of occurrence in order to qualitatively and quantitatively differentiate episodic gambling from progressive, chronic, patterns of play.

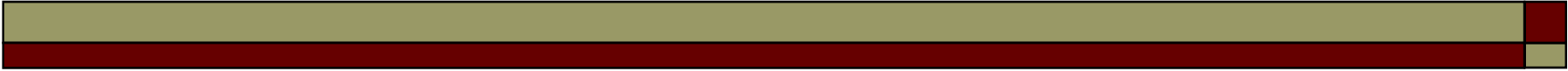


Context

- A pilot project was conducted in 2009, whereby a 6 item binge screen, developed by Nower and Blaszczynski (2002) was administered to students at the high school level. Based upon the findings of the 2009 project, a modified binge gambling screen was proposed.

Binge Gambling Screen (Nower & Blaszczynski, 2002)

I have episodes of excessive gambling that begin with a sudden, uncontrollable urge to gamble.	Yes	No
During an episode, I experience a rapid increase in the frequency and severity of my gambling behavior, which is significantly more than my usual pattern.	Yes	No
The episode of excessive gambling lasts less than two weeks.	Yes	No
Towards the end of an episode, there is a sudden reduction or cessation in gambling.	Yes	No
Between episodes, there is no persistent urge to resume gambling.	Yes	No
Between episodes, there is consistent preoccupation with gambling.	Yes	No

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- Based upon statistical findings, we recommended that the proposed 6 questions be reduced to 4.
 - In addition, questions 2-4 are only to be analyzed among those who endorsed question 1 (conditional to answering yes)
 - We also recommended that a secondary set of questions aimed at better understanding and defining the construct of binge gambling be included. Thus, the new questionnaire is comprised of Part A and Part B



Modified Binge Gambling Screen for adolescents and young adults

Section A- Scored items (yes/no format)

- ❑ *I have episodes of gambling, over a sustained period of time, that seem to have a clear beginning and end
- ❑ These gambling episodes begin with a sudden uncontrollable urge to gamble
- ❑ These gambling episodes are best described by an increase in frequency and intensity of play
- ❑ Between episodes, I do not have a persistent urge to resume gambling.

* only those indicating “yes” to the first item should be scored on the 3 proceeding items



Section B- Qualitative information

These gambling episodes usually come to an end because

- There is a decrease in the urge to gamble
- The gambling opportunity came to an end
- I ran out of funds
- I realized it was too risky to continue in that fashion

These gambling episodes last for:

- Less than 3 days
- 3 days to 2 weeks
- 2 weeks to one month
- More than a month

The period of time in between these gambling episodes usually lasts:

- A few days
- A few days to a week
- A week to a month
- More than a month



Methodology

Sample

- The total sample includes **1254 participants** (507 males; 747 females), ranging in age from 17 to 23 (mean age 18.69).
- Primarily language spoken at home: 20% indicating French, 18% indicating English, 20% indicating Italian, and the remaining 40% indicating a blend of the three listed above or another language such as Portuguese, Russian, Chinese, or Tamil.
- Household income: 27% reported income levels below \$50,000 annually, 73% indicated household income at \$50,000 or more.

Instruments

- ❑ *Gambling Activities Questionnaire-Adapted (GAQ)*
- ❑ *DSM-IV-MR-J*
- ❑ *DSM-IV-TR Pathological Gambling Criteria*
- ❑ *Modified binge gambling screen.*
- ❑ *Binge drinking screen:* This consists of two questions, tapping into the occurrence of having consumed at least 4 or at least 5 alcoholic drinks in one sitting over the previous two week period of time. Females who indicated consuming 4 or more drinks in one sitting met the criteria for binge drinking, whereas males has to indicate 5 or more drinks to meet binge drinking criteria (32).
- ❑ *AUDIT:* Alcohol Use Disorders Identification Test (AUDIT) (39). The AUDIT is a 10-item self-administered screening instrument designed to detect hazardous (score greater or equal to 8) and harmful (score greater or equal to 10) alcohol consumption over the previous year. Responses for each item are scored 0 – 4, with a maximum score of 40. The AUDIT is widely accepted and has been used in numerous alcohol use prevalence studies as it demonstrates sensitivities and specificities comparable, and typically superior, to those of other self-report screening measures. Test-retest reliability and internal consistency are good (40).



Binge screen findings

- The total sample from which we can run data on the question of Binge gambling is 1162, as 92 people did not complete all the binge questions on the questionnaire. In this sample, 191 (16.4%) endorsed question 1, while 971 (83.6%) did not.



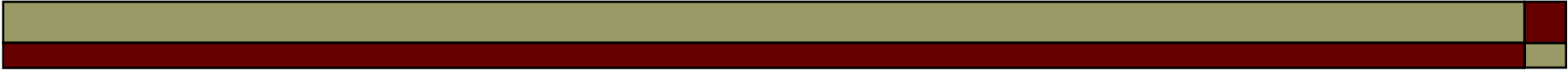
Part A

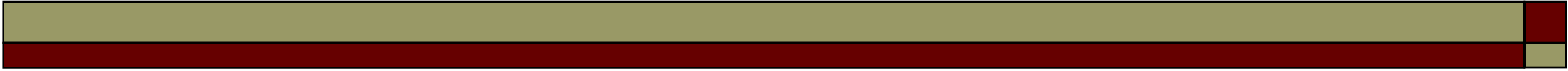
Analysis of usefulness of 4 questions



Question 1: I have episodes of gambling, over a sustained period of time, that seem to have a clear beginning and end

- Amongst the sample of gamblers 16.4% (191/1162) responded positively to this question.
- In examining endorsement rates by classification of gambler, the distribution is reflective of the sample, such that 82% are social gamblers, 14% are at-risk gamblers, and 3.7% are PPGs. Therefore, all classifications of gamblers are represented

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- However, to better understand how binge gambling applies to problem gambling, an examination of those who endorsed question #1 within each gambler subtype indicates that 22.4% of social gamblers, 69.2% of at-risk gamblers, and 77.8% of PPG's did so.

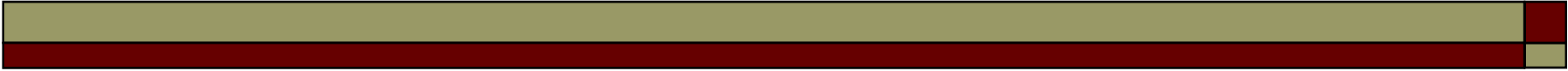


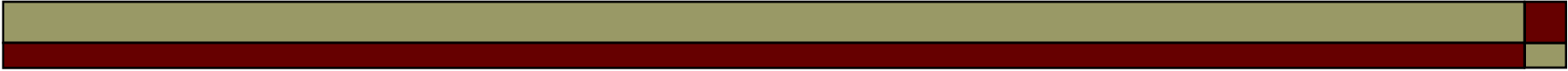
The following three questions in Part A are analyzed out of a total sample of 191 (only relevant to individuals who endorsed #1)



Question 2: These gambling episodes begin with a sudden uncontrollable urge to gamble

- The majority of potential binge gamblers (83%) did *not* report that their episodes begin with a sudden uncontrollable urge, suggesting that the criteria of binge gambling needing to begin with sudden urges is not a necessary prerequisite.

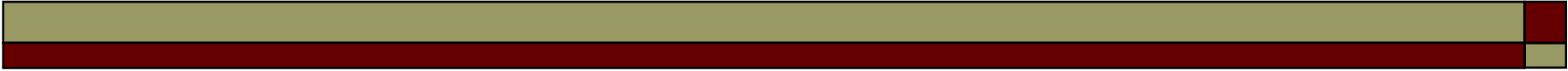
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- The issue of uncontrollable urges, or loss of control, is one that likely pertains to individuals experiencing gambling-related problems. In fact, only 10.3% of social gamblers endorsed this question, whereas 44.4% of at-risk, and 57% of PPGs indicated that their gambling episodes were launched by an uncontrollable urge.

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- As such, it appears as though the issue of uncontrollable urges triggering gambling episodes can serve as a factor that distinguishes between binge gambling and problem gambling.



Question 3: These gambling episodes are best described by an increase in frequency and intensity of play

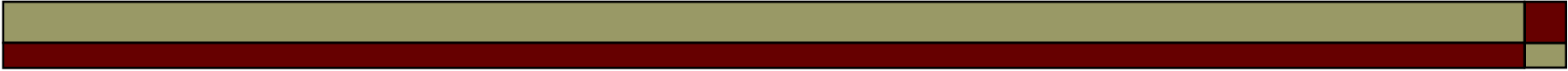
- Approximately a third of the sample of potential bingers (35.6%) report that their gambling episodes are best described by an increase in frequency and intensity of play. It is possible that this subset represent the *true* binge gamblers, as the notion of binge usually implies an increase in frequency and/or intensity of an activity.

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- If we examine this issue of increased frequency and intensity as it relates to gambling severity, 29% of social gamblers, 67% of at-risk gamblers, and 71% of PPG gamblers endorse this construct. While the overall sample size of problem gamblers is small, they do suggest that this notion of increased intensity and frequency applies to all potential bingers, and increases in a linear fashion as problem gambling severity increases.



Question 4: Between episodes, I do NOT have a persistent urge to resume gambling

- The issue of not experiencing gambling urges between episodes is divided among the sample of potential binge gamblers. Slightly more than half (106/189) endorse this as being an adequate descriptor, whereas 43% do not.

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- No meaningful relationship with gambling severity. Overall, 57% of social gamblers, 57% of at-risk gamblers, and 57% of PPG gamblers endorse this question. Therefore, it is difficult to determine whether this question was properly understood by respondents, as it may be confusing due to its focus on the lack of symptoms (I do NOT have a persistent urge).



Part A: Scale reliability

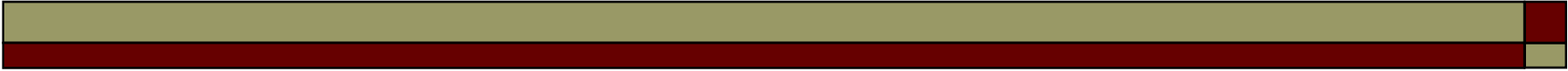
- A Cronbach's Alpha of .547 suggests the scale is not very reliable.
- The inter-item correlation matrix reveals overall poor correlations with question #4 (coefficients ranging from .10 to .18), further supporting the idea that question #4 was not properly understood by respondents.

Factor analysis confirms the overall lack of cohesiveness of the scale.

Question #	Communalities	Eigenvalues	% of variance
1	.487	1.9	47.7
2	.547	.94	23.4
3	.696	.72	17.9
4	.180	.44	10.9

Factor analysis for part A., question #4 removed.

Question #	Communalities	Eigenvalues	% of variance
1	.479	1.8	60.8
2	.608	.74	24.8
3	.737	.43	14.4

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- The scale reliability of Part A is improved by removing question #4, the Cronbach's alfa increasing from .547 to .634
 - Question #1 accounts for approximately 61% of the variance, suggesting its usefulness.
 - It should be noted that since question #2 was only endorsed by a small percentage of potential binge gamblers, a negative endorsement of the construct pertains to the definition of binge gambling.



Part B: Qualitative descriptors of binge gambling



Reasons why binges end

- The two most endorsed reasons for why episodes come to an end were due to decreased urges, or a recognition that the gambling was becoming too risky (34.4% and 35.9% respectively). Other reasons included the ending of the gambling opportunity (18.2%) and the depletion of funds (11.6%). Given they were not highly endorsed they might not serve as adequate defining qualities



Con't- by gender

- Gender distinctions were found such that females are more likely to stop gambling due to a reduction of urges (46% females, 28% males), whereas males were more likely to stop as a result of feeling the risks they were incurring were getting too high (40% males, 28% females).



Con't- by gambling severity

- social gamblers end their gambling episodes primarily due to decreased urges
- at-risk gamblers are less likely to endorse decreasing urges as a reason, and PPG's do not endorse that reason at all.
- As gambling problem severity increases, so does the percentage of individuals endorsing either ending their gambling episode as a result of a lack of funds.



Episode duration

- Most indicated that their episodes lasted for a period of 3 days or less (79%), with an additional 14.4% endorsing a period of time lasting between 3 days and 2 weeks.
- Negligible amounts of respondents indicated lengths of time longer than 2 weeks (6.7%).



Con't- by gender

- females are slightly more likely to end their episodes within the 3 day window (87% females, 75% males).



Con't- by gambling severity

- Most social gamblers, 81%, indicate their gambling episodes lasting < 3 days. While still a highly endorsed period of time among at-risk and PPGs, the percentages of those endorsing this small time frame decreases as the severity of gambling increases.
- At-Risk and PPG indicate a larger time frame of gambling episode duration, with up to 14% of PPGs indicating times frames greater than a month.



Length of time between episodes

- Slightly more than half of the sample indicated *at least* one month between gambling episodes (56.4%), with another 22% endorsing a period of time lasting from a week to a month. Together, these categories capture over 75% of the responses.



Con't- by gender

- Females were more likely to endorse a period of time greater than a month than males (70.5% females, 49% males), whereas males were more inclined to indicated slightly shorter amounts of time between episodes (26% of males vs. 13 % of females indicating a week to a month)



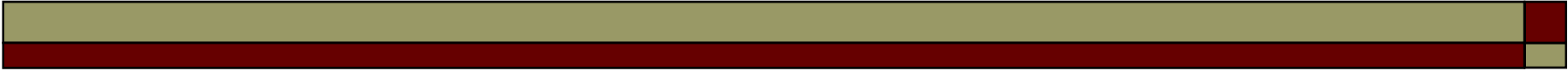
Con't- by gambling severity

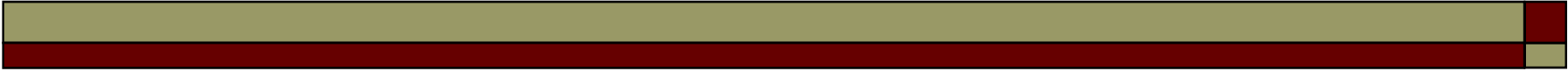
- The length of time between episodes is longer among those not experiencing gambling-related problems
- 62% of social gamblers indicating time frames > month.
- At-risk gamblers were more likely to indicate a window of time varying from one week to one month (46%)
- PPGs were more inclined to indicate a shorter period of time of “a few days”



Prevalence of Binge Gambling

- The preliminary study conducted in 2009 and the current results suggest that there are varying degrees of binge gambling.

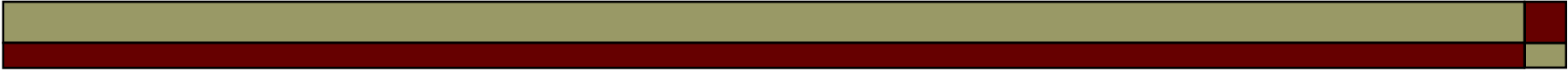
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- In the current sample, 191 individuals endorsed the first question on the binge screen, thus reporting gambling in episodes that have a clear beginning and end. This represents 16% of the total sample. This is a liberal criteria and thus encompasses both light and heavy binge gamblers.

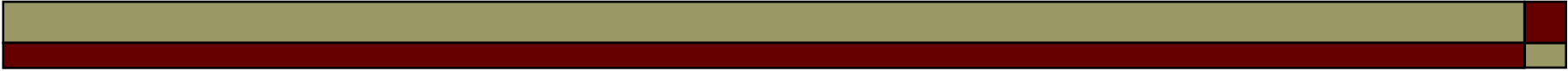
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- If we apply stricter criteria whereby all three questions from Part A of the gambling screen are endorsed, 91 individuals, or 7% of the total sample met the criteria for binge gambling.
 - For purposes of communication, I will refer to these as “heavy binge gamblers”

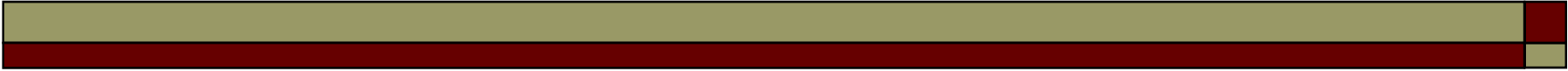


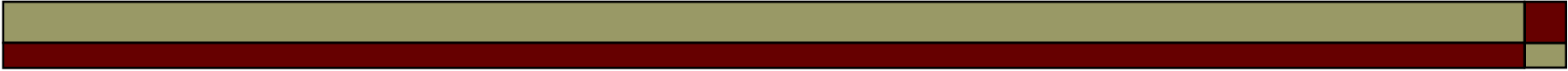
Toward Building a Construct of Binge Gambling

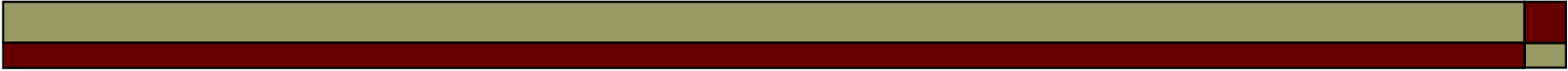
- The results of the 2009 study and the current study support the idea that a meaningful percentage of the young adult population gamble in defined period of time that have a clear beginning and end (16%)

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- Consistent with previous findings, these binge gambling episodes occur among social gamblers, or those who do not report significant gambling-related issues.

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- While binge patterns of gambling are also present among at-risk and PPG gamblers, they tend to take on a more intense quality, happen more frequently, and last longer.

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- Gambling behavior is not quantifiable as to be able to define it as a number of hands played (primarily due to the fact that there are so many types of gambling activities with such varying lengths of time that “one game” can occur within) or amount wagered.

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- attempt at a definition leaning more towards the occurrence of gambling *episodes*, the quality of the play within those episodes, approximate length of episodes, and reasons for engaging in these episodes

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- Among social gamblers, it could be stated that gambling episodes are defined as being periods of time where *gambling behavior started out as a planned activity* and is *sustained for a few days*.
 - They typically end as a result of *reduced urges or reduced desire* to play, or because *risks are too high (internal factors)*.
 - *Periods of times in between episodes are usually longer than a month..*



PPG or binge?

- Arguably, gambling episodes among most of the PPGs in the current sample are better described as being part of the addiction cycle as opposed to binge gambling given that they are more likely to start gambling as a result of uncontrollable urges, less likely to stop as a result of decreased urges, more likely to gamble until their funds are depleted, and more likely to endorse very short intervals of time in between gambling episodes.



Binge

- Planned
- End due to decreased desire or risk too high
- Episodes < 3 days
- $>$ one month between episodes

PPG

- Uncontrollable urges
- End due to depletion of funds
- Episodes > 3 days
- Few days in between episodes



Does the presence of binge gambling affect prevalence rates of pathological gambling?

- While binge gamblers may meet diagnostic criteria if screened during a binge episode, they are likely to elude classification by traditional measures at other occasions.
- If we are to argue that binge gambling and ppg are distinct, then the prevalence rates could be theoretically inflated if binge gambling is not screened out.



To include in a prevalence measure to weed out bingers

- Gamble primarily as a result of uncontrollable urges or planned?
- Tend to gamble to depletion of funds, or because it seems wiser to stop?
- Extended periods of time (> 1 month) without gambling activity because there is no real desire to do so, or short time frame in between episodes?



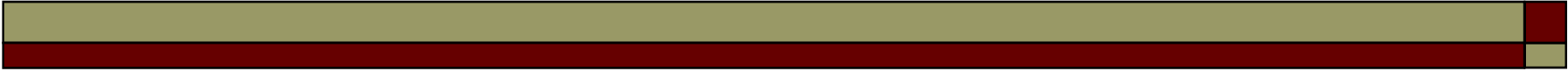
Future steps

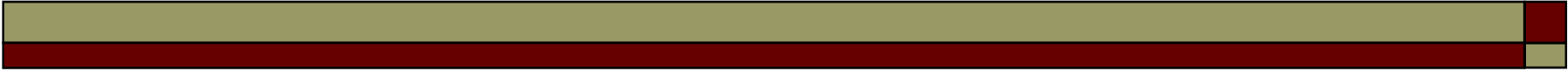
- We need to learn more
- Are binge gamblers something to be concerned about?
- Are they more at risk? (parallel with binge drinking)
- Refinement of assessment tool, with different age groups.



Relationship with binge drinking

- In total 40.8% of the sample reported at least one binge drinking episode in the previous two week time frame. Binge drinking was slightly more prevalent among males, with 47.3% of males and 36.5% of females reporting the behavior among this college age sample.

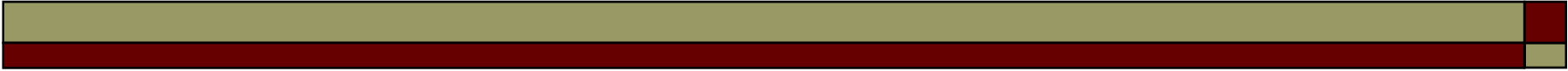
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- The relationship between binge gambling and binge drinking is evident, with 55% of binge gamblers also being identified as binge drinkers. This trend is more pronounced among males, with 67% of binge gamblers also reporting binge drinking. For females, 35% of those who report binge gambling also report binge drinking.

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- Among binge drinkers, 26% also report binge gambling. Therefore, from both perspectives, the occurrence of one form of binge behavior increases the likelihood of the other by approximately 10%.



Problem drinking (AUDIT)

- problem drinking shares a stronger relationship with heavy binge gambling than light binge gambling. Of those who endorse all three binge questions, 47.3% meet the criteria for problem drinking, compared to 28% of those who endorsed the first binge question but not all three.

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- females who were heavy bingers were more likely to experience problems with alcohol. Specifically, heavy female bingers were 1.93 times more likely to be heavy drinkers, whereas males were .65 times more likely.
 - heavy binge gambling might represent a risk factor for females more than for males.