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# Technology-Based Brief Interventions for At-Risk Young Adult Gamblers

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# Acknowledgments

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# Gambling among Young Adults

- Rates of “problem/pathological” gambling are higher in college students than the general adult population
  - Meta-analysis indicated 8% of college students met SOGS criteria for “disordered” gambling (Blinn-Pike et al., 2007)
- Disordered gambling among college students is associated with other health risk behaviors (e.g. Huang et al., 2011; Stuldreher et al., 2007)

Contemporary young adults have grown up in an era of wide-spread legalized gambling

- ❑ Casino expansions
- ❑ Online gaming
- ❑ Fantasy sports/Daily fantasy sports

Gambling has received more mainstream media exposure

- ❑ Televised poker
- ❑ Commercials for gambling sites
- ❑ Regular discussion of odds for sporting events

# Brief Gambling Interventions for Young Adults

- Brief Motivational Interventions (BMIs) refer to a class of interventions designed to increase motivation to change behavior
- Common model involves a single session with an interventionist/counselor, often guided by personalized feedback (i.e., the “BASICS model”; Dimeff et al., 1999; Marlatt et al., 1998)
- Providing personalized feedback in the absence of clinician contact has also been shown to be effective (Miller et al., 2013)

- Promising findings for gambling prevention
  - Larimer et al. (2012) and Petry et al. (2009) found positive effects among college gamblers for an in-person BMI that were consistent with findings from the general adult population (e.g., Hodgins et al., 2009)
  - One small study showed promising effects for an intervention that included personalized feedback without an in-person meeting with a clinician (Cunningham et al., 2009)

# Delivering Personalized Feedback Interventions

- Feedback is usually created by computer, and either printed out or delivered electronically
- The manner in which young adults receive information is changing-less likely to use email, desktops, etc.
- Delivering intervention content via smartphones/SMS has important potential implications for dissemination purposes

# Our Research Lab's Efforts

- Have conducted two clinical trials examining the efficacy of brief, personalized feedback-based interventions among at-risk college student gamblers
- In study 1 the feedback was delivered via computer; in study 2 it was delivered via smartphone/SMS



# Study 1 (Martens et al., 2015)

Participants (N = 333) recruited via screening emails sent over the university announcement system

- Eligible if 3+ on the SOGS or 1+ on the Brief Biosocial Gambling Screen, and gambled in the past 60 days
- 60% Male
- Mean age = 21.91

- Randomized to one of three conditions:
  - Personalized Feedback (PFB)
  - Educational Information (EDU)
  - Assessment-Only (ASSESS)
- After completing baseline measures, those in the PFB and EDU conditions reviewed their materials for 10 minutes in a private room
- They completed a two-item quiz as a fidelity check regarding the information they reviewed
- Follow-up questionnaires were completed 3-months post-baseline (98% retention rate)

# Project WAGRS

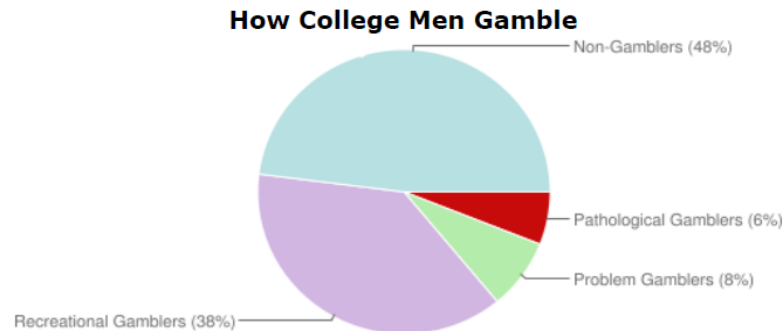
## Your Gambling Compared to Others

According to the information you provided, on average you gambled **11 times** per month over the previous two months, and you estimated that the typical MU student gambled **4 times** per month. Campus-wide data indicates that the typical MU student gambles **less than one time per month.**\*

\*Note: This information comes from a random sample of 3,073 students.

## Hazardous Gambling

Using a scale assessing low- to high-risk for problems associated with gambling, you are considered a **pathological gambler**. Only about 6% of male college students meet this classification. Your classification is highlighted **in red** in the chart below.



## Gambling Behavior

- Over the past two months you spent **37.5 hours** gambling.
- Over the past two months you planned to wager **890 dollars**. You actually wagered **935 dollars**. Thus, you actually wagered **105%** of what you initially intended to wager.

## **Problems Associated with Gambling**

Over the past three months you reported experiencing the following problems associated with gambling:

- You have bet more than you could really afford to lose
- You went back another day to try to win back the money you lost
- You borrowed money or sold something to get money to gamble
- You felt that you might have a problem with gambling
- People have criticized your betting or told you that you had a gambling problem
- Gambling has caused financial problems for you or your household
- You have felt guilty about the way you gamble or what happens when you gamble
- I have taken foolish risks when I have been gambling
- I've lost track of large stretches of time while gambling
- My gambling has gotten me into situations I later regretted
- I often have ended up gambling on nights when I had planned not to gamble
- I have borrowed money to finance my gambling
- When gambling, I have done impulsive things I regretted later
- I have spent too much time gambling
- I have become very rude obnoxious, or insulting while gambling

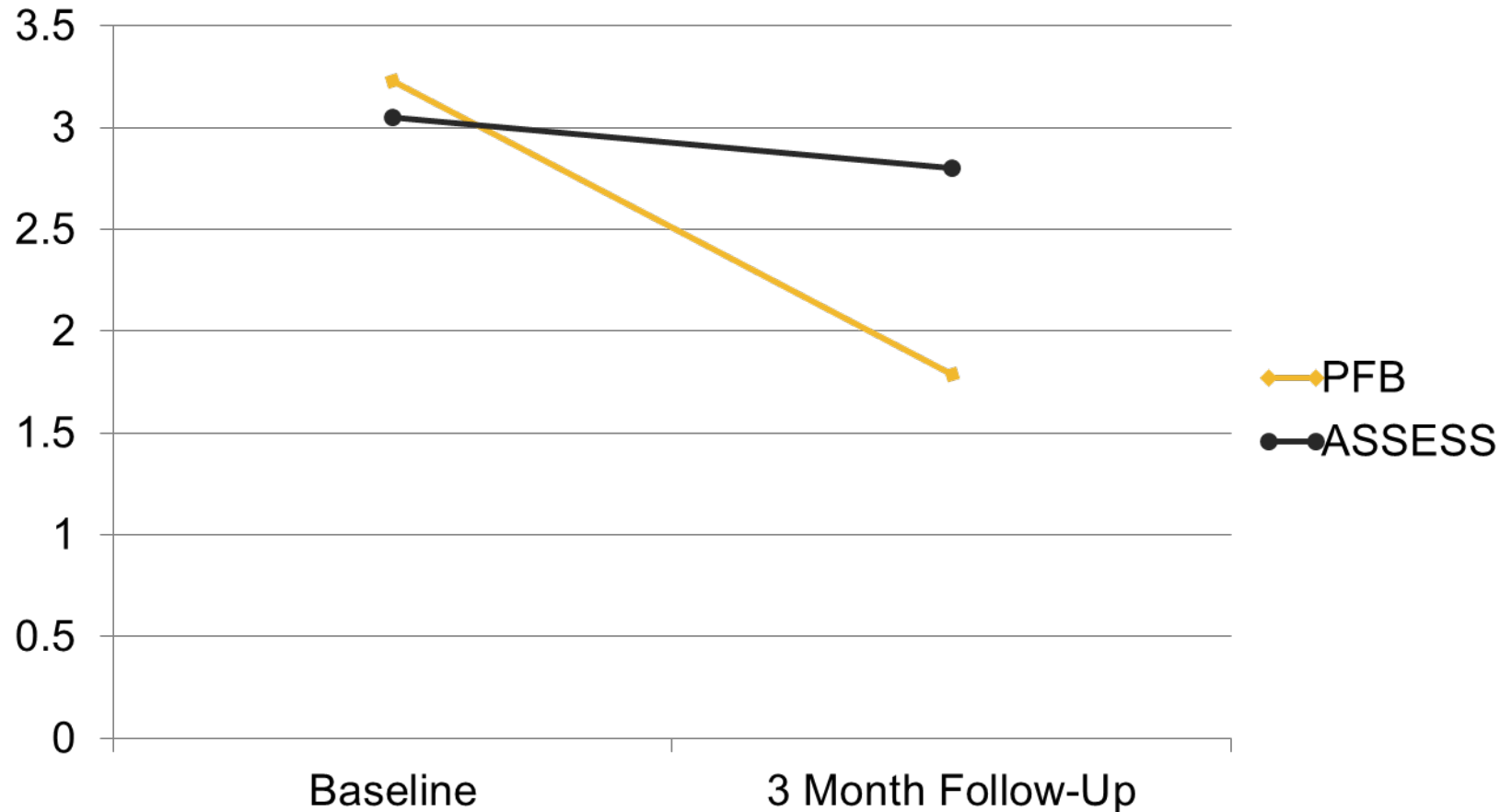
## **Ability to Refuse Gambling**

Below are some situations where you indicated it can be difficult for you to avoid gambling:

- When I'm in places where I usually gamble
- When my friends were gambling
- When I saw other people gambling
- When someone offered me the chance to gamble
- When I was thinking that it is likely that I would win
- When I was remembering wins I have had in the past
- When I was thinking about how I have good luck when I gamble
- When I was thinking of ways to solve my money problems
- When I was thinking how much money I have lost
- When I was thinking of things i could do to help me win
- When I was feeling happy

- At follow-up, participants in the PFB condition reported fewer gambling problems ( $d = .32$ ,  $p < .01$ ) and fewer dollars wagered ( $d = .25$ ,  $p = .03$ ) than those in the ASSESS condition
- No between-group effects for PFB vs. EDU or for EDU vs. ASSESS
- No intervention effects for days gambled

# Changes in CPGI (PG Subscale) Scores: Past 3 Months



## Study 2 (Martens et al., ongoing)

- Participants (N = 255) recruited via same procedure and with same inclusion criteria as Study 1
  - 62% Male
  - Mean age = 22.21

- Randomized to one of three conditions:
  - Personalized Feedback + Targeted Text Messages (PFB-TXT)
  - Personalized Feedback + Educational Information (PFB-EDU)
  - Assessment-Only (ASSESS)
- Those in the PFB conditions received a link on their phone delivered via SMS that contained the feedback
  - Follow-up text messages addressing goals and use of protective behavioral strategies (PFB-TXT) or general gambling information (PFB-EDU)
- Follow-up questionnaires were completed at 1- and 6-month follow-up



wagrs-txt.rivulent.com



## Your Gambling Compared to Others

According to the information you provided, on average you gambled **3 times** per month over the previous two months, and you estimated that the typical MU student gambled **5 times** per month. Campus-wide data indicates that the typical MU student gambles **less than one time per month.\***

\*Note: This information comes from a random sample of 3,073 students.



Swipe to navigate



## Problems Associated with Gambling

Over the past three months you reported experiencing the following problems associated with gambling:

You needed to gamble with larger amounts of money to get the same feeling of excitement

You went back another day to try to win back the money you lost

Gambling has caused financial problems for you or your household

You have felt guilty about the way you gamble or what happens when you gamble

You have taken foolish risks when you have been gambling

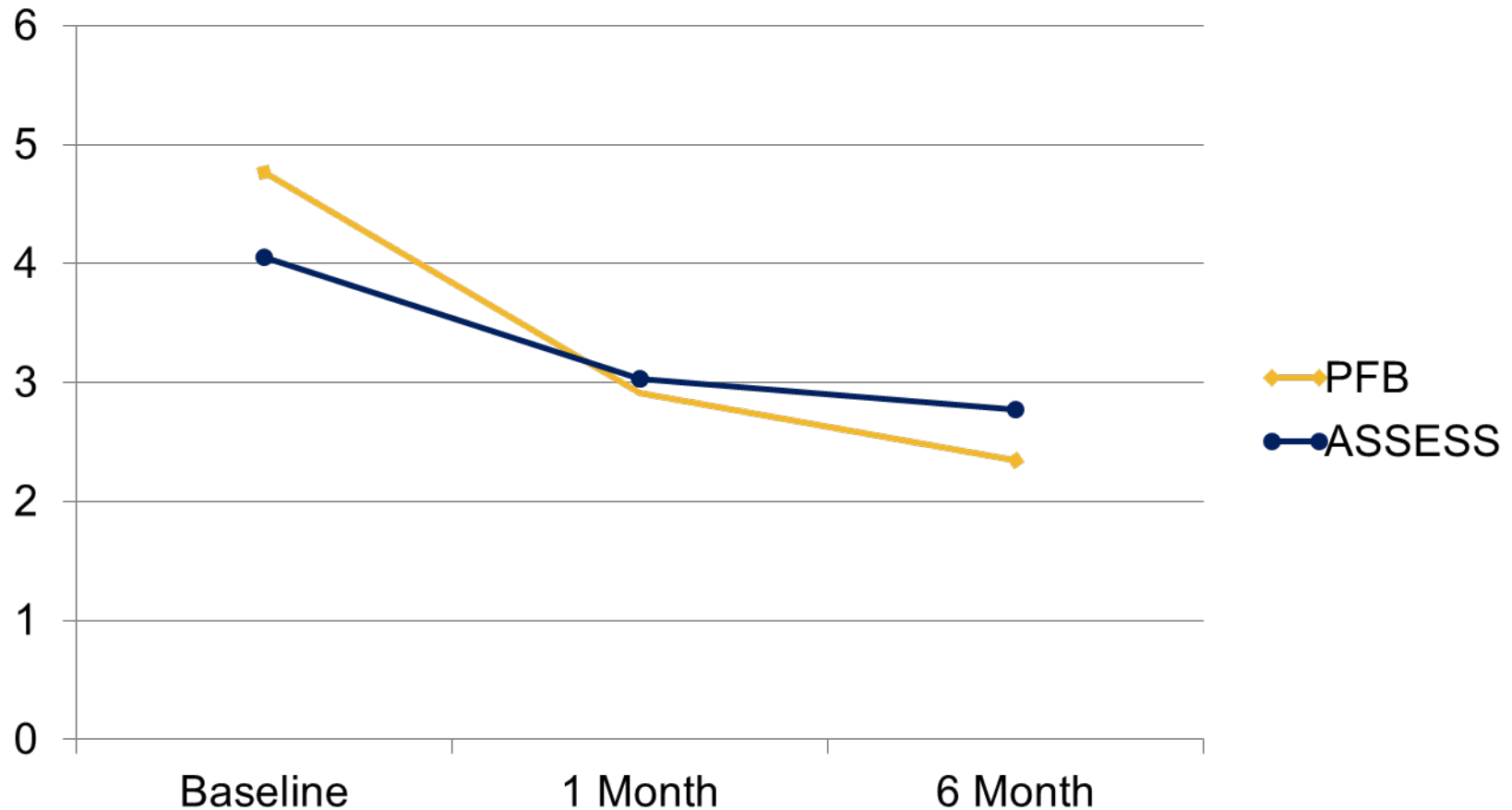
You've lost track of large stretches of time while gambling

When gambling, you have done impulsive things you regretted later

You have become very rude obnoxious, or



# Preliminary Findings-Changes in CPGI Scores (6 month follow-up ongoing)



# Conclusion

- Preliminary support for personalized feedback delivered via computer or smartphone
- A number of challenges in terms of delivering via smartphone
- Implications for dissemination
- Future directions