25TH ANNIVERSARY

ICRG CONFERENCE
on Gambling and Addiction

OCT. 6-7, 2024 | THE VENETIAN EXPO | LAS VEGAS

SPEAKER PRESENTATIONS

PRESENTED BY

ICRG
INTERNATIONAL CENTER FOR RESPONSIBLE GAMING

SYLLABUS SPONSORED BY

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ICRG's Conference on Gambling and Addiction

25TH ANNUAL ICRG CONFERENCE ON GAMBLING AND ADDICTION

SELECTED POWERPOINT PRESENTATIONS

TABLE OF CONTENTS

The slides are listed in the order of the conference schedule. The number refers to the tab where the documents are located in this book.

Thanks to Sands, Inc. for sponsoring this year's syllabus.

TAB

1

Treating Gambling Harms

valuable strategies to
engage & retain our clients

James P Whelan, PhD

The Gambling Clinic

Tennessee Institute for Gambling Education and Research

The University of Memphis

2.27.23

Where are we going

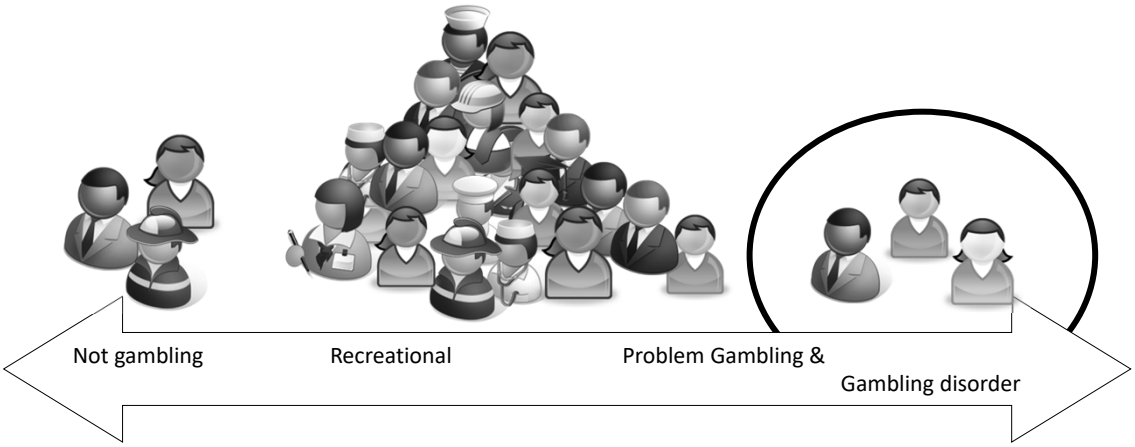
- A bit of background
- Does it work now?
  - What is the evidence about treatment
- What are they waiting for?
  - Client engagement & treatment hesitancy
- Please don't leave!
  - Decreasing premature treatment termination

Background

In 1998…

TGC®
THE GAMBLING CLINIC

PROBLEMS/DISORDER



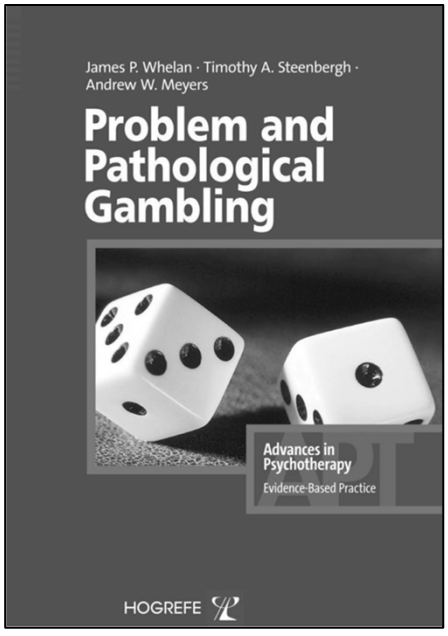
THE UNIVERSITY OF MEMPHIS

TN Department of Mental Health & Substance Abuse Services

EAST TENNESSEE STATE UNIVERSITY

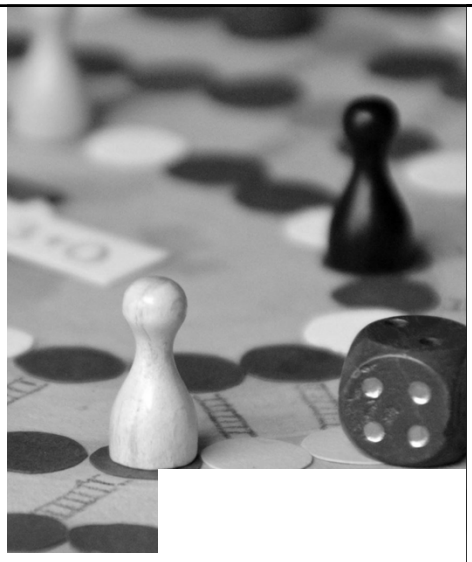
the therapy room

the research lab



Our Mission

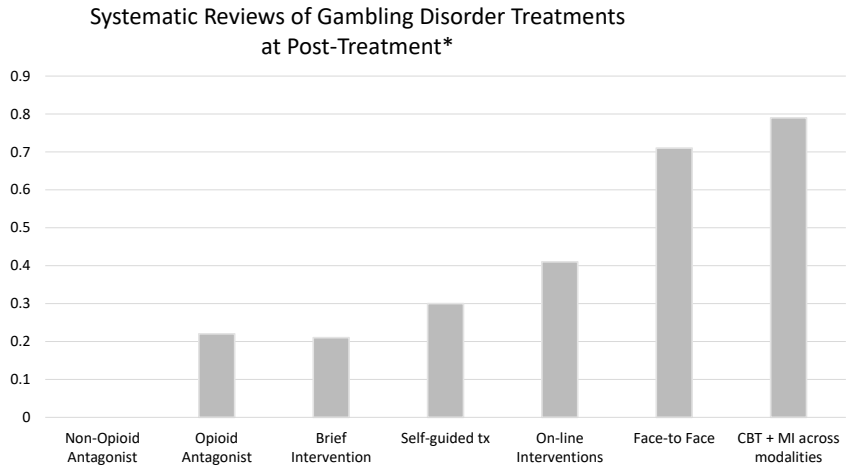
Provide a science-informed system of care to reduce the harms caused by gambling for all Tennesseans



Our Values

- Gambling neutral
- Reduce harm
- Respect for client autonomy
- Person centered
- Build skills, capacity, & self-efficacy
- Efficacious techniques
- Shared responsibility for motivation

Does it work now?



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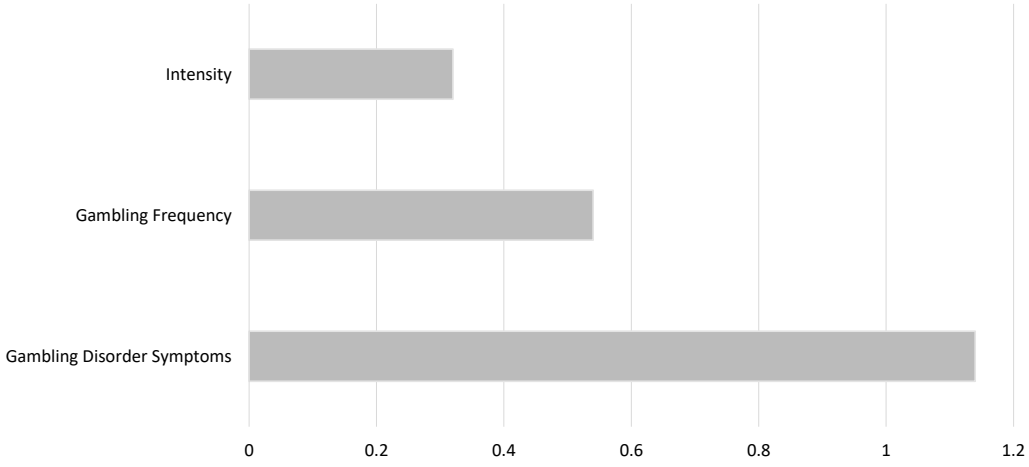
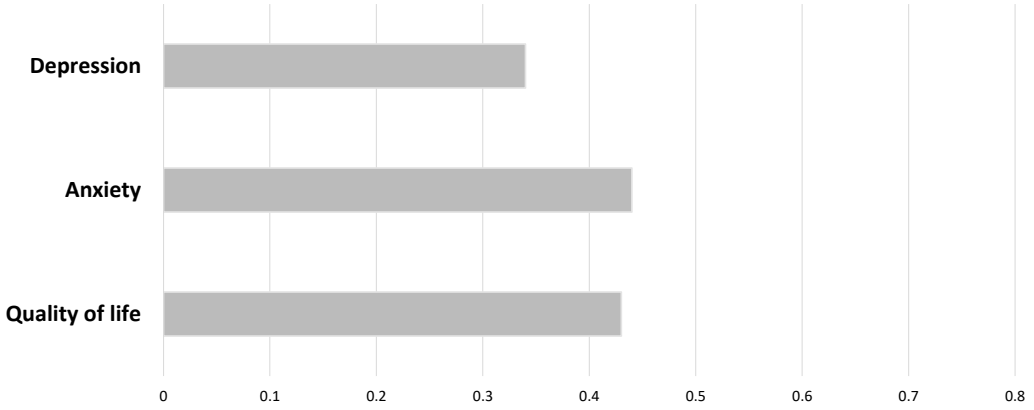
GAMBLING OUTCOMES



Pfund, R.A., Forman, D.P., King, S.A., Zech, J.M., Ginley, M.K., Peter, S.C., McAfee, N.W., & Whelan, J.P. (under review). Effect of Cognitive-Behavioral Techniques for Problem Gambling and Gambling Disorder: A Systematic Review and Meta-Analysis.

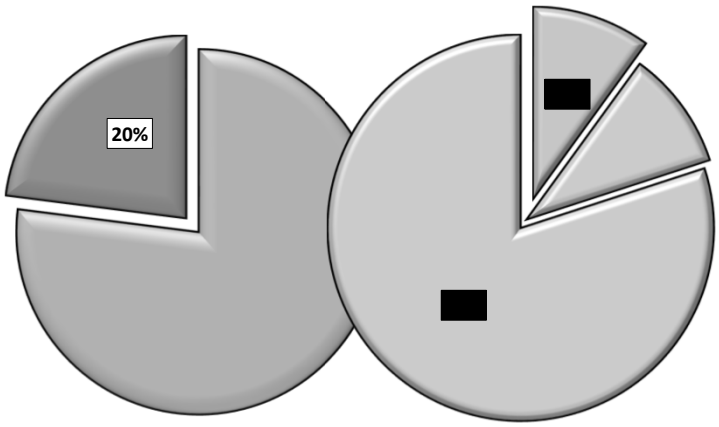
OTHER OUTCOMES



Pfund RA, King SA, Forman DP, Zech JM, Ginley MK, Peter SC, McAfee NW, Witkiewitz K, Whelan JP.(2023). Effects of cognitive behavioral techniques for gambling on recovery defined by gambling, psychological functioning, and quality of life: A systematic review and meta-analysis. Psychol Addictive Behavior

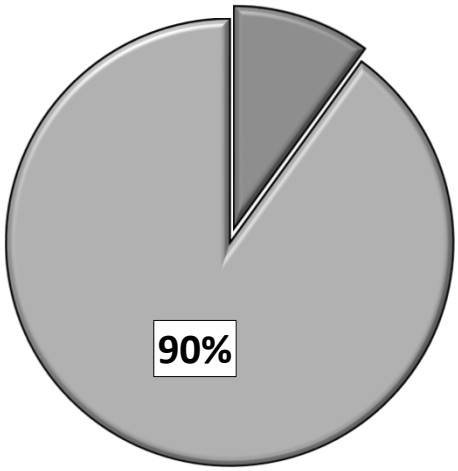
What are you waiting for?

Help Seeking



% of those with gambling problems seeking help

% of those with gambling problems seeking treatment



Treatment Hesitance

What about engagement in alcohol treatment?

Table 1.

Summary of AUD and treatment seeking prevalence rates from national epidemiologic surveys.

National Survey	Year(s) Surveyed	Diagnostic Criteria Used	Current (Past-Year) AUD Prevalence	Current (Past-Year) Treatment Seeking Prevalence	Lifetime AUD Prevalence	Lifetime Treatment Seeking Prevalence
Alcohol Supplement of the National Household Interview Survey (NHIS)[a]	1988	DSM-III-R	Abuse: 2.38% Dependence: 6.25% Total: 8.63%	*Not measured*	*Not measured*	*Not measured*
National Comorbidity Survey (NCS)	1990–1992	DSM-III-R	Abuse: 2.5% Dependence: 7.2%	Abuse: 11.6% Dependence: 24.4%	Abuse: 9.4% Dependence: 14.1%	8.0%[d]
National Longitudinal Alcohol Epidemiological Survey (NLAES)	1991–1992	DSM-IV	Abuse: 3.03% Dependence: 4.38% Total: 7.41%	Abuse: 4.4% Dependence: 13.8%	Abuse: 4.88% Dependence: 13.29% Total: 18.17%	Abuse: 9.2% Dependence: 23.5%
National Epidemiological Survey on Alcohol and Related Conditions (NESARC-I)	2001–2002	DSM-IV	Abuse: 4.7% Dependence: 3.8% AUD: 8.5%	Abuse: 3.1% Dependence: 12.1%	Abuse: 17.8% Dependence: 12.5% AUD: 30.3%	Abuse: 7.0% Dependence: 24.1% Total: 14.6%
NCS Replication (NCS-R)	2001–2003	DSM-IV	Abuse: 10.7%[c] Dependence: 6.3%[c]	Abuse: 37.2% Dependence: 38.4%	Abuse: 13.2% Dependence: 5.4%	Abuse: 12.4% Dependence: 20.7%
NESARC-II[b]	2004–2005	DSM-IV	Abuse: 5.23% Dependence: 3.28%	Abuse: 3.1% Dependence: 12.1%	*Not measured*	*Not measured*
NESARC-III	2012–2013	DSM-5	13.9%	7.7%	29.1%	19.8%

Venegas et al., (2021) Understanding low treatment seeking rates for alcohol use disorder: a narrative review of the literature and opportunities for improvement. The American Journal of Drug and Alcohol Abuse, 47(6), 664-679.

Perhaps a change in how we think

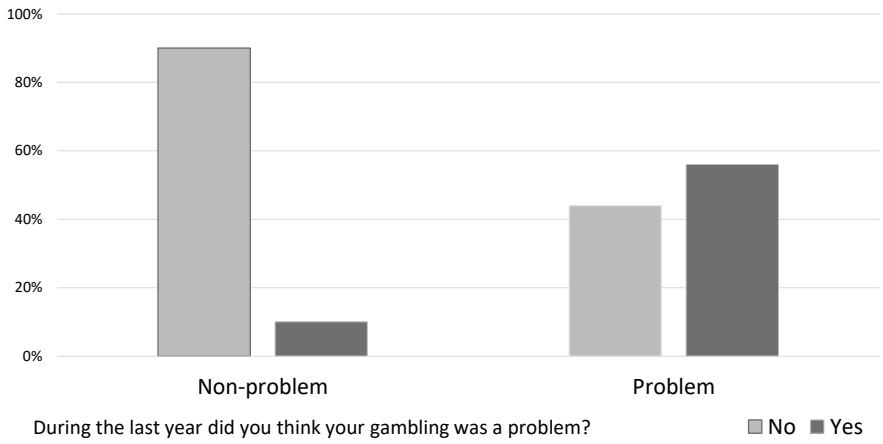
- Traditional View
  - Barrier = the client
  - Needs to want to change
  - has not hit bottom

- **Systemic View**
  - Change perspective
  - Understanding contextual barriers
  - Make people intrigued by the idea to pursue treatment

Treatment Hesitancy

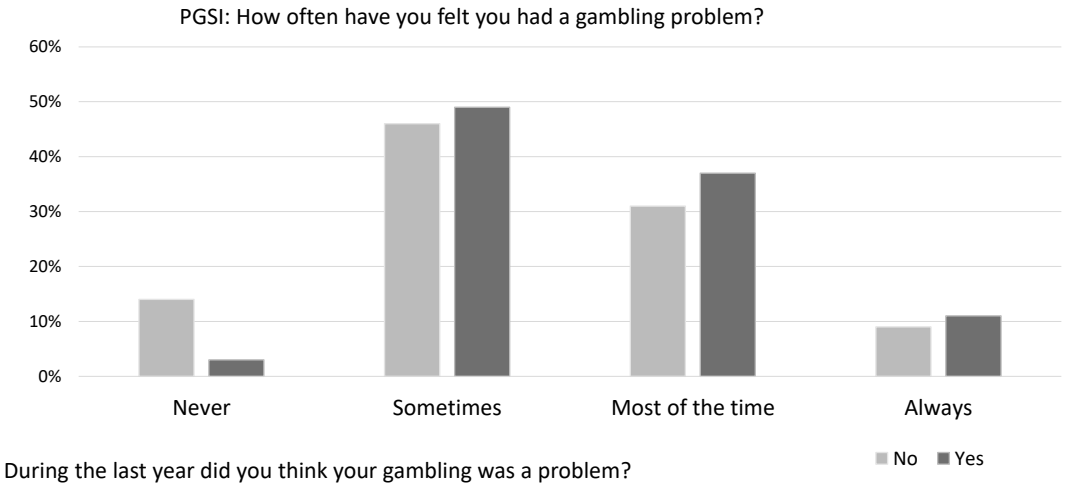
- **Reasons for *not seeking gambling* treatment**
  - Low awareness of problems/harms
  - Stigma - Public and Self
  - Low awareness of services & service effectiveness
  - Never being able to win back their losses

Awareness

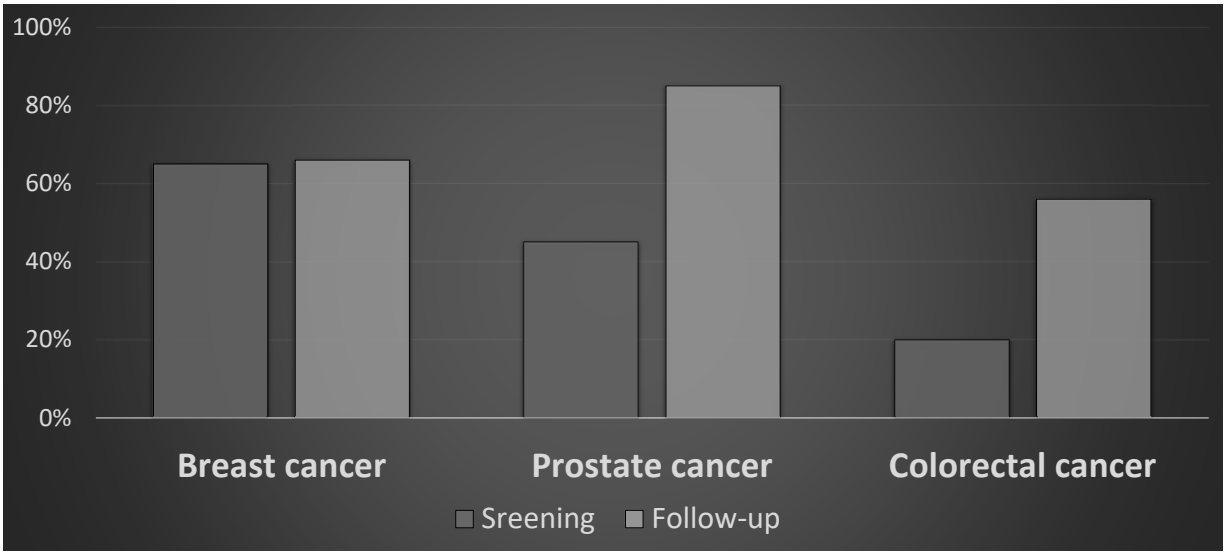


Boughter, J. R., McPhail, A, & Whelan, J. P. (2022, October). Exploring frequent gamblers' insight into their own gambling problems. Presented at the annual conference of International Center for Responsible Gaming in Las Vegas, NV.

Awareness



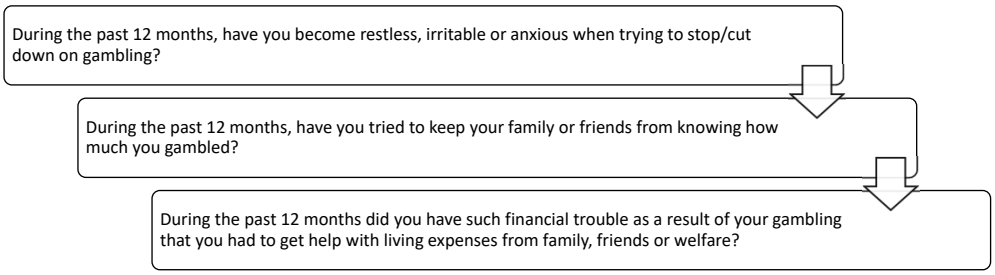
What % screen & follow-up for serious health problems?



Perhaps it is how we screen

- Successful screenings tend to be convincing biological tests with definitive outcomes.
- These outcomes are connected to treatment consultations
- Very different from how we screen…

Brief Biosocial Gambling Screen



Problem Gambling Severity Index

1) Have you bet more than you could really afford to lose?
2) Have you needed to gamble with larger amounts of money to get the same feeling of excitement?
3) When you gambled, did you go back another day to try to win back the money you lost?
4) Have you borrowed money or sold anything to get money to gamble?
5) Have you felt that you might have a problem with gambling?
6) Has gambling caused you any health problems, including stress or anxiety?
7) Have people criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true?
8) Has your gambling caused any financial problems for you or your household?
9) Have you felt guilty about the way you gamble or what happens when you gamble?

Peter, C.S.*, Whelan, J.P., & Pfund, R.A. (2022). Text comprehension analyses to improve assessment Accuracy demonstration using gambling disorder screening. Journal of Gambling Studies 38(4), 1269-1287. doi: 10.1007/s10899-022-10110-0

Treatment Hesitancy

- **Reasons for *seeking* treatment**
  - Financial distress
  - Conflict with others
  - Negative Emotions
  - Work or Legal problems
  - Health & Well-being

- **Reasons *not related* to seeking treatment**
  - Lifestyle change
  - New understanding about gambling
  - Loss of interest in gambling

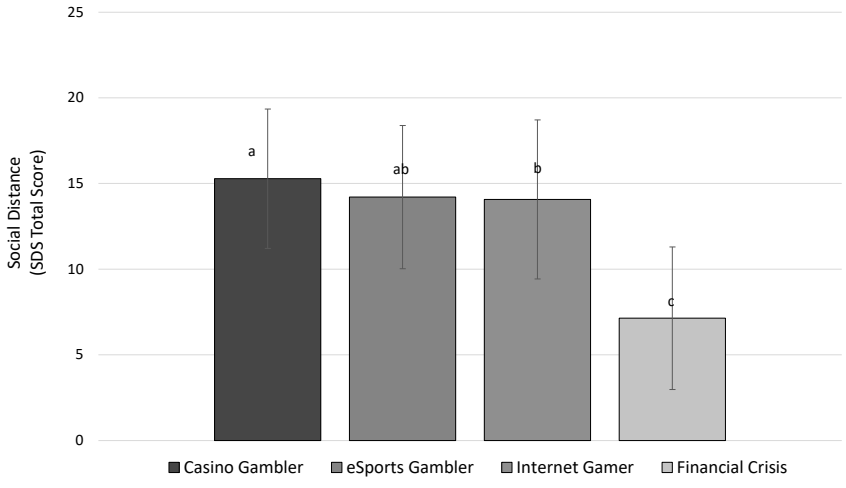
Exercise: Promoting awareness

- Small groups of 4 – 5
- Brainstorm ideas for how to promote awareness of gambling problems within your community
- Be specific about the messages and the forum
- Groups will report back on their ideas
- 5 min to brainstorm & 5 minutes to report out

Stigma

AQ-27 Subscale	Study Condition: Casino Gambler	eSports Gambler	Internet Gamer	Financial Crisis	F(3, 393)	Partial η2	p-value
Blame	19.26 (5.26)[a]	18.76 (5.43)[a]	18.81 (5.92)[a]	11.43 (5.51)[b]	62.79	.28	< .001
Anger	17.49 (6.70)[a]	16.38 (6.98)[a]	15.94 (7.14)[a]	6.87 (5.36)[b]	75.77	.32	< .001
Pity	17.59 (6.23)[a]	17.57 (4.86)[a]	17.11 (5.76)[a]	20.40 (5.13)[b]	10.34	.07	< .001
Helping	11.91 (5.66)[a]	11.51 (4.88)[ab]	11.64 (5.92)[ab]	9.95 (5.10)[b]	3.83	.03	.02
Danger	9.44 (5.39)[a]	8.42 (5.42)[a]	6.05 (4.42)[b]	5.57 (4.33)[b]	18.51	.11	< .001
Fear	7.62 (5.01)[a]	7.22 (5.10)[ab]	5.45 (3.91)[bc]	5.42 (4.73)[c]	7.75	.05	< .001
Avoidance	18.88 (5.24)[a]	17.58 (5.28)[a]	17.42 (6.10)[a]	10.06 (4.91)[b]	73.56	.31	< .001
Segregation	6.27 (4.40)[ab]	6.54 (4.99)[a]	5.62 (4.13)[ab]	5.09 (3.89)[b]	3.08	.02	.04
Coercion	12.00 (4.81)[a]	12.30 (5.20)[a]	10.79 (5.55)[a]	7.24 (4.58)[b]	29.36	.15	< .001

Stigma



Peter, S. C., Li, Q., Pfund, R. A., Whelan, J. P., & Meyers, A. W. (2019). Public stigma across addictive behaviors: Casino gambling, eSports gambling, and Internet gaming. Journal of Gambling Studies. 35(1), 247-259.

Exercise: Watching our language

Each group (4-5) will consider some

- How can you engage in more person first language?
- What mental health terms do you use and what do you avoid?
- What is the best way to talk about harms and symptoms?
- What language should be use with significant others?
- What language would make change more desirable (i.e., promote self-efficacy)?

Promoting awareness of services

Carl's search for help

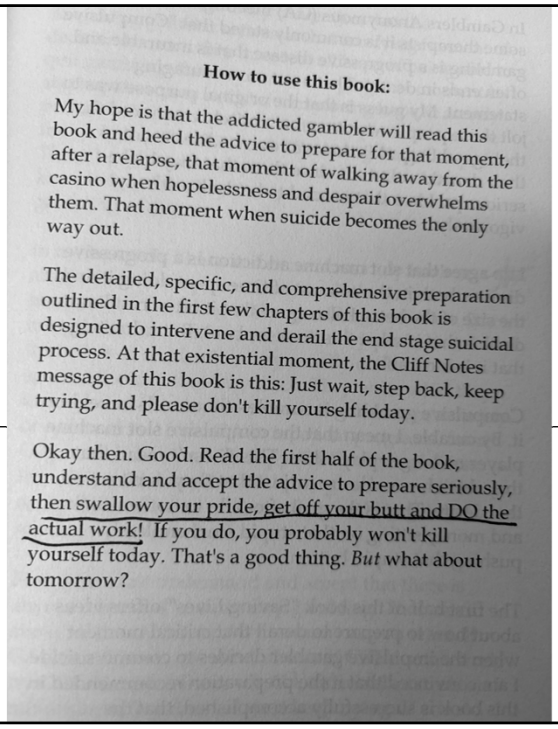
- Was his struggles a real problem?
- Will treatment help?
- How do I find a therapists?
- How do I know if that person is any good?

I believe meaningful connection changes people — this is what the therapeutic process is about. I am passionate about encouraging growth and restoration for those questioning their purpose and searching for meaning. I works with those facing questions, concerns, self-evaluation, personal development, and more.

I believe that your story is vital to understanding who you are. How you view the world, relate to people, your emotions and body responses all hold clues to where you may need heal. Raising your insight may be the clue to unlocking more of your story and creating the environment you need to live the flourishing life you desire.

Does this online information provide Carl with answers?

Does this self-help guidance provide answers?



How to use this book:

My hope is that the addicted gambler will read this book and heed the advice to prepare for that moment, after a relapse, that moment of walking away from the casino when hopelessness and despair overwhelms them. That moment when suicide becomes the only way out.

The detailed, specific, and comprehensive preparation outlined in the first few chapters of this book is designed to intervene and derail the end stage suicidal process. At that existential moment, the Cliff Notes message of this book is this: Just wait, step back, keep trying, and please don't kill yourself today.

Okay then. Good. Read the first half of the book, understand and accept the advice to prepare seriously, then swallow your pride, get off your butt and DO the actual work! If you do, you probably won't kill yourself today. That's a good thing. *But* what about tomorrow?

Exercise: Your message to clients

Each group (4-5) will brainstorm what message they can send potential clients with gambling problems to more clearly communicate why the person should come to their treatment program

"The Letter Project"

- 50% do not show for 1st appointments
- Solution – Address hesitancy with mailed personal letter
  - Use motivational elements
  - Inform treatment expectations

Para #1: Central Components of the MI Spirit

- Partnership
  - Message about being a companion who collaborates with the other person's own expertise
- Acceptance
  - Communicates nonjudgmental understanding of people as they are
- Compassion
  - Benevolent intention toward the person's well-being
- Evocation
  - Eliciting the other person's own motivation for a particular change

Para #2: From the research on treatment expectations

- Build Credibility
  - What do you know? How can you help?
- Treatment rationale
  - Why are offering the treatment you offer?
- Treatment experience
  - What is this treatment going to be like for the client?

Results

	regular reminders	motivational letter
% attending	**51%**	**76%**

Then COVID

Email	Telehealth	In-Person
Telehealth	**82%**	**88%**

"caretaker" "navigator"

Exercise: Watching our language

Each group (4-5) will consider some

- Write two paragraphs about what you might say on a webpage or brochure

We are glad you called. Calling for an appointment can be hard to do. It means you are thinking about how gambling has caused you problems. It might help to think about how your recent gambling may conflict with the way you want to live your life and you may be unsure about what to do. We want work with you to explore the costs and benefits of what you have been doing. Doing this often helps people to decide if they want to make changes. While you need to decide about your gambling, we look forward to learning more about you. We are here to help and support you in any changes you might want to make.

partnership acceptance compassion evocation

We are glad you called. Calling for an appointment can be hard to do. It means you are thinking about how gambling has caused you problems. It might help to think about how your recent gambling may conflict with the way you want to live your life and you may be unsure about what to do. We want work with you to explore the costs and benefits of what you have been doing. Doing this often helps people to decide if they want to make changes. While you need to decide about your gambling, we look forward to learning more about you. We are here to help and support you in any changes you might want to make.

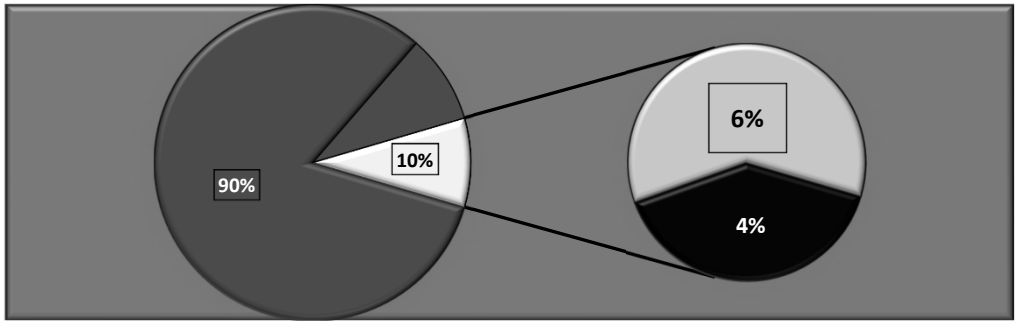
partnership acceptance compassion evocation

In advance of your appointment, we would like to tell you about us. The Gambling Clinic started in 1999. We had learned that many struggle due to their gambling. Since opening the clinic, we have worked with over 1,000 individuals. We also have done a great deal of research on how to help people make changes. As a result of our work, we have become known as a national leader in helping people with their gambling.

Some people wonder about how our treatment works. There are several likely causes of your gambling problems. We know that understanding a person's gambling history is essential. Together we find skills that can create new ways of thinking and behaving. Once a person starts to change, it is important to be in control of your gambling and get on a path of better financial health. We believe that change happens if we work together to find different choices. We have learned that most people can create and maintain change in less than 10 one-on-one meetings with a member of our staff.

- Credibility
- Treatment rationale
- Treatment experience

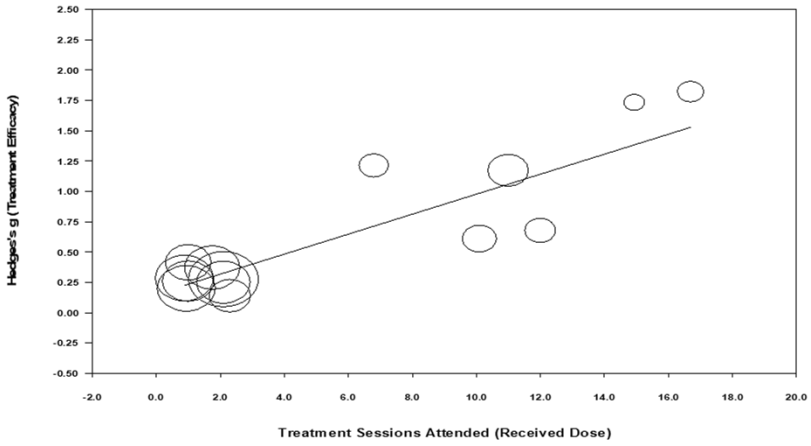
Please don’t leave!



Treatment Discontinuation 39%

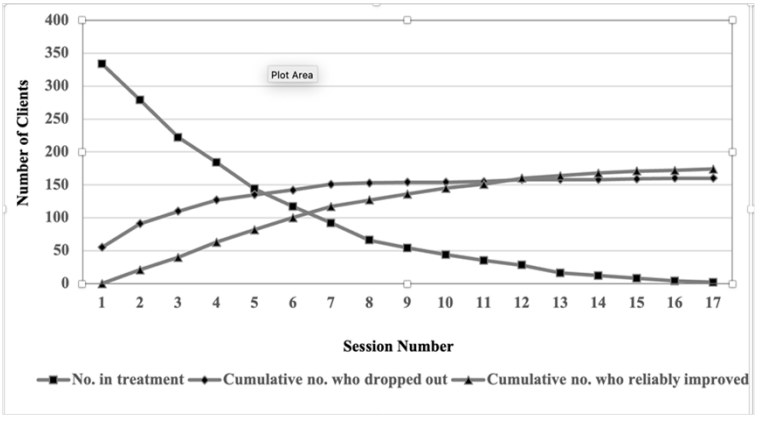
Pfund, R. A.*, Peter, S. C.*, Ginley, M. K.*, Whelan, J. P., & Meyers, A. W. (2021). Dropout from face-to-face, multi-session psychological treatments for problem and disordered gambling: A systematic review and meta-analysis. Psychology of Addictive Behaviors, 35(8), 901-913.

THERAPEUTIC DOSE



Pfund, R. A., Peter, S. C., Whelan, J. P., Meyers, A. W., Ginley, M. K., & Relyea, G. E. (2020). Is more better? A meta-analysis of dose and efficacy in face-to-face psychological treatments for problem and disordered gambling. Psychology of Addictive Behaviors, 34, 557-568.

TREATMENT DISCONTINUATION

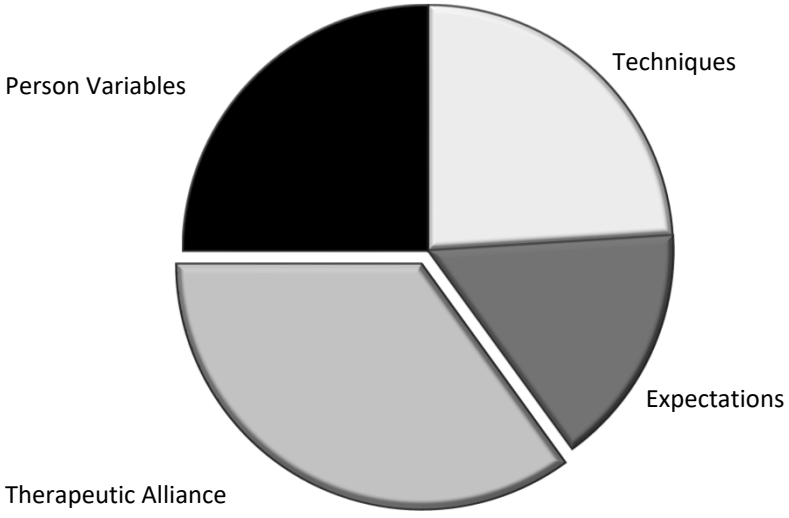


Pfund, R. A., Peter, S. C., Whelan, J. P., & Meyers, A. W. (2018). When does premature treatment termination occur? Examining session-by-session dropout among clients with gambling disorder. Journal of Gambling Studies, 32(2), 617-630.

Predictors of Discontinuation

Predictors (*k*)	
Age (22)	Age first gambled (4)
Gender (23)	Current debt (5)
Race (9)	Gambling disorder severity (22)
Martial status (12)	Comorbid anxiety symptoms (12)
Education level (14)	Comorbid depression symptoms (12)
Income (6)	Comorbid substance use (12)
Employment status (11)	Treatment satisfaction (3)

Perhaps a change in thinking?



LEVERAGING THE RELATIONSHIP

- Actively manage expectations
  - review what's next & why important
- Be collaborative
  - setting treatment goals
  - indications of treatment success
- Engage in periodic outcome assessment
  - provide feedback that informs planning

Exercise: use leverage

Each group should identify 5 specific actions where you can use the therapeutic relationship to encourage continued engagement

Exercise: Create momentum

Each group should identify 5 specific actions where you can use the therapeutic relationship to encourage continued engagement

- Actively manage expectations
- Be collaborative
- Engage in periodic outcome assessment
- Create engagement between sessions

TREATMENT DISCONTINUATION

- Talk about it!
- Process
  - Near end of 1st session
  - Describe the probably of not continuing
  - Ask about what likely factors for client
    - Why return
    - Why not return
  - Estimate probably
  - Discuss how to increase chance of returning

Exercise: Let's talk about coming back

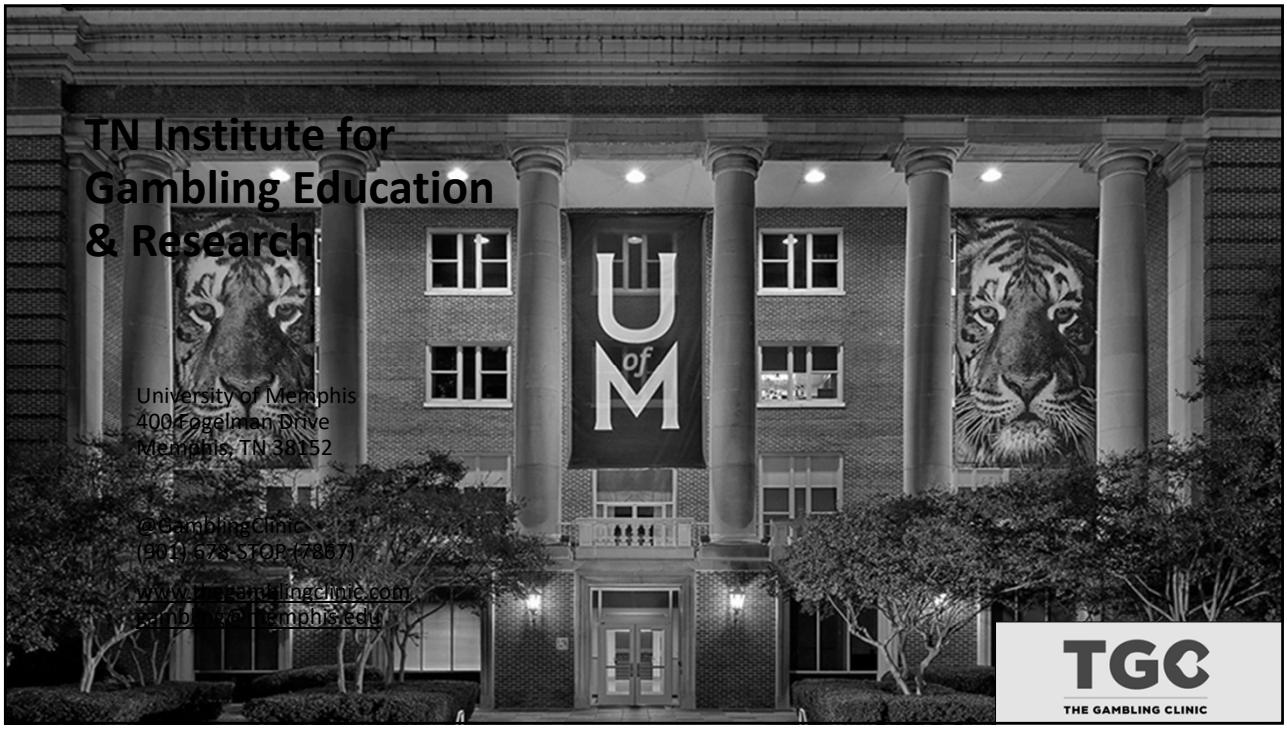
Volunteers??

CONTINGENCY MANAGEMENT

Contingency Management

- Operant reinforcement strategy
  - Tangible reward (money on gift card) for behavior adherence/change
- Empirically support – substance use treatment
  - Escalating payments for treatment attendance

- Does it work now?
  - Looks like it can
- What are they waiting for?
  - Let's thinking differently
  - Be a concierge
- Please don't leave
  - New thinking again
  - Develop an active plan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TAB

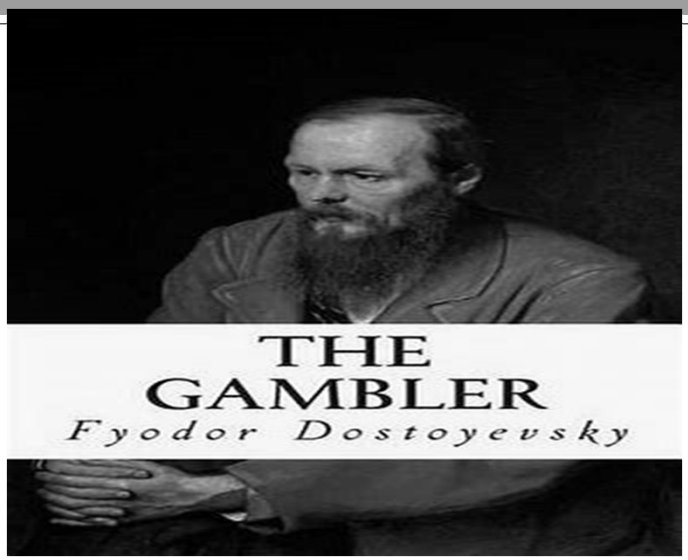
2

MEDICAL INTERVENTIONS FOR GAMBLING DISORDER: THE PAST, PRESENT, AND FUTURE

Jon E. Grant, JD, MD, MPH
Professor, University of Chicago
Chicago, IL USA

Faculty Disclosure

- **Dr. Grant**: Research Grant—Biohaven and Janssen Pharmaceuticals (unrelated to this talk/topic).
- Off label use of medication: No medication has been approved for gambling disorder.



1866

Freud

- Dostoevsky and Parricide (1928), a psychoanalysis of Dostoevsky and his gambling addiction.
- Freud saw the addiction as a surrogate for masturbation, “the primal addiction”.
- Freud explained Dostoevsky’s neuroses, his feelings of guilt, his epileptic fits, his jealousy, his patriotism and veneration for Tsar Alexander II, as well as his gambling addiction as results of an unsolved Oedipus complex, a subconscious desire for self-castigation and parricide

Modern History

- Recognized by both Emil Kraepelin (1856–1926) (“gambling mania”) and Eugen Bleuler (1857–1939),
- Disordered gambling behavior was first officially recognized in DSM-III as pathological gambling (1980).
- DSM-III included it as an “impulse control” disorder with kleptomania, pyromania, trichotillomania, and intermittent explosive disorder.

First Medication Trial

- 1992
- Clomipramine
- Cross-Over design
- N=1
- Outcome:

Selective Serotonin Reuptake Inhibitors (SSRIs)

- Based on an idea that pathological gambling was part of the OC spectrum disorders – compulsive engagement, rituals
- Late 1990s – 2 Prozac trials, 1 Zoloft trial, 2 Paxil trials, 2 Luvox trials – Spain and USA
- Some of these trials were actually quite successful

Selective Serotonin Reuptake Inhibitors (SSRIs)

Mixed results overall

Large placebo response

Serotonin plays a role in behavioral cessation

Escitalopram positive in gamblers with co-existing anxiety disorders

Selective Serotonin Reuptake Inhibitors (SSRIs)

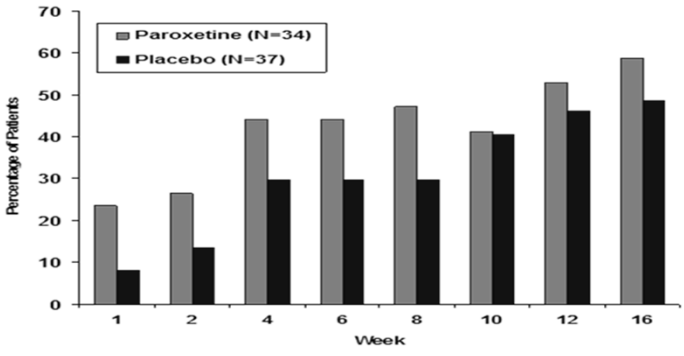
Questions:

Dosed appropriately?

Comorbidity matter?

Effective in a subgroup?

Selective Serotonin Reuptake Inhibitors (SSRIs)

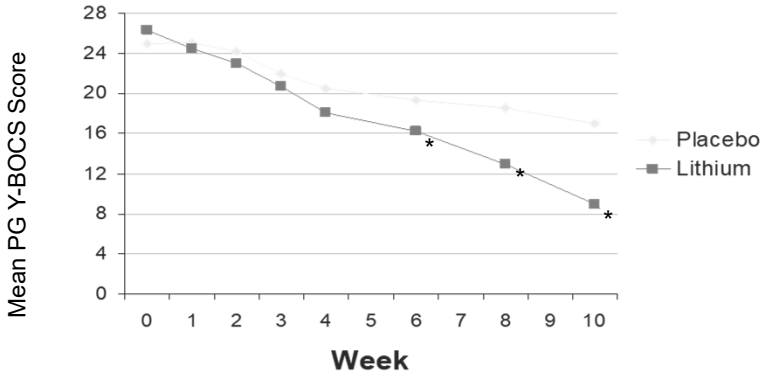


- 59% response rate in the paroxetine group
- 49% response rate in the placebo group

Mood Stabilizing Medications

- Is Gambling part of a Affective Spectrum disorder?
- Divalproex (Depakote) – 1 trial
- Lithium – 2 trials
- Olanzapine – 2 trials
- Topiramate – 1 trial
- Divalproex and lithium successful

Bipolar Spectrum Gamblers
PG-YBOCS Total Score Over Time



* p<.05

Hollander et al, 2002

Substance-Related and Addictive Disorders

- Evidence that gambling behaviors activate reward systems similar to those activated by drugs of abuse;
- Phenomenological similarities
- Common patterns of comorbidity
- Has been termed a behavioral addiction (2001)
- This new category in DSM-5 as of 2013.

Opioid Antagonists/Partial Agonists

The mu-opioid system:

Underlies urge regulation through the processing of reward, pleasure and pain, in part via modulation of dopamine neurons in mesolimbic pathway.

The kappa-opioid system:

Plays a role in urges and mood

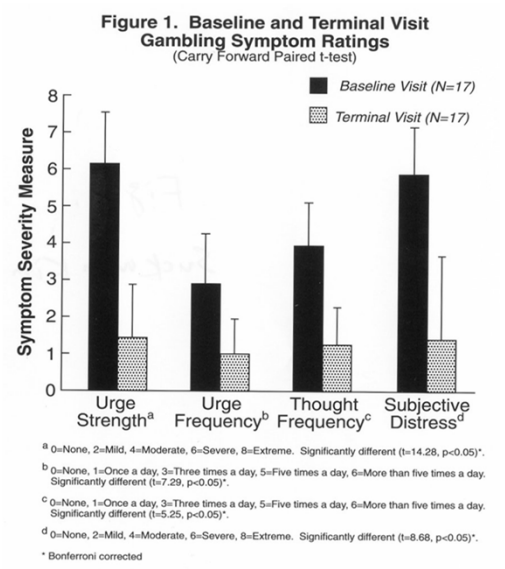
Naltrexone for Gambling Disorder

METHODS

- n=77 with GD
- Double-blind, placebo-controlled
- 11-weeks
- Dose titration: 25mg/d – 250mg/d

RESULTS

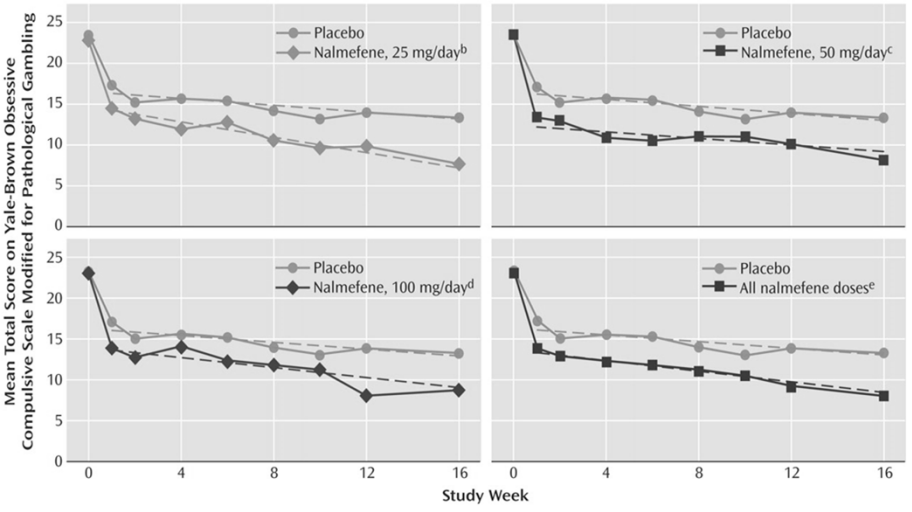
- Significant Improvement (both patient and clinician-rated)



Kim SW, et al. Biol Psychiatry. 2001 Jun 1;49(11):914-21.

Kim et al. Biol Psychiatry 2001;49(11):914-21

Nalmefene



Predictors of Opioid Antagonists/Partial Agonists Response

Variable	Parameter Estimate	Standard Error	Chi-Square	Pr>ChiSq	Hazard Ratio
FH-AUD	0.55	0.24	7.53	**0.006**	1.74

Baseline urges were significantly associated with response to higher doses of opiate antagonists (i.e. nalmefene 50mg or 100mg or naltrexone 100mg or 150mg) (parameter estimate = 1.77; SE= 0.84; Wald $\chi 2$ =4.41; p= .036; HR= 5.86; HR 95% CI=1.12-30.6

Glutamate Modulators – A New Era?

Used in substance addictions

Used in habit disorders

Seems to affect frontal systems about decision-making and flexibility

N-acetylcysteine (NAC)

- Amino-acid and antioxidant
- Potentially modulates brain glutamate transmission
- Levels of glutamate within the nucleus accumbens mediate reward-seeking behavior
- Lacks significant side effects

Open-Label study of NAC in Gambling Disorder

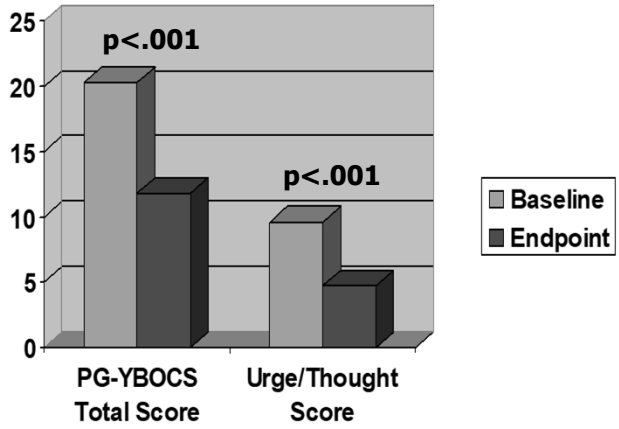
- n=27 subjects, mean age 50.8 years, 44.4% female
- Dose titration from 600mg/d to 1800mg/d
- Required to have moderate cravings to gamble

Grant JE, et al. Biol Psychiatry. 2007 Sep 15;62(6):652-7.

Open-Label Study of NAC in GD

RESULTS

• YBOCS: Scores decreased 41.9% from baseline to endpoint



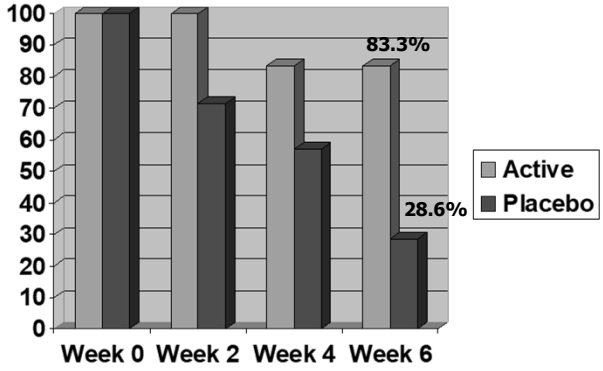
Open-Label Study of NAC in GD

Responders (≥30% decrease in PG-YBOCS and "Much" or "Very much" improved on CGI-I scale) randomized to NAC or placebo for 6-weeks

RESULTS

- N=16 (59.3%) met responder criteria
- Mean effective dose: 1476.9 (±311.3) mg/d

Figure. Percentage of subjects meeting responder criteria each week of the double-blind discontinuation phase



Memantine

Memantine antagonizes NMDA (N-methyl D-aspartate) receptors, a type of glutamate receptors.

Impulsive decision-making may be dependent on neural regions within the prefrontal cortex that are under probable glutamatergic control.

Open-Label Study of Memantine in Gambling Disorder

RESULTS

- Cognitive flexibility improved from baseline to endpoint
- GD subjects were comparable to healthy controls at study endpoint

	Baseline v Endpoint		Baseline v Controls		Endpoint v Controls	
	T	**P-value**	**T**	**P-value**	**T**	**P-value**
IDE total errors	2.20	**0.037**	2.09	**0.041**	1.06	0.294

- Pharmacological modulation of the glutamate system may reduce gambling and may do so by improving neurocognitive function related to cognitive flexibility.

Frontal Dopamine – Using Cognitive Enhancers to Treat Gambling

Improve executive functioning

Core cognitive problem in gambling disorder

COMT Inhibitors: Open-Label Study of Tolcapone in Gambling Disorder

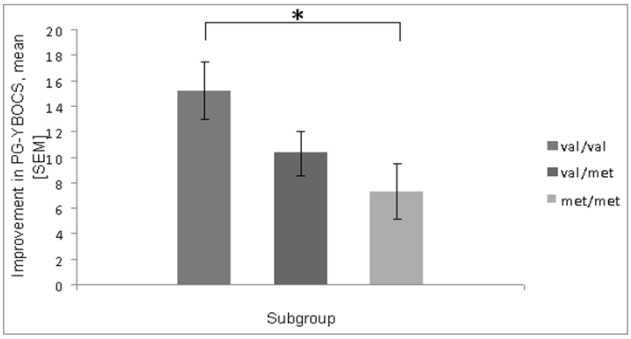
- Lower dopamine levels in the prefrontal cortex are thought to contribute to deficits in cognitive processing
- Suboptimal prefrontal cortex dopamine levels may mean that irrelevant sensory information is not filtered out of processing and cannot focus more on salient features of the environment

Open-Label Study of Tolcapone in Gambling: Genotyping

RESULTS

- **val/val** COMT polymorphism was associated with significantly greater improvement from tolcapone compared to **met/met**

Figure. Change in PG-YBOCS from baseline to end of treatment in different COMT Gambling Disorder subjects



Tolcapone and genotype appear to have interactive effects on dopamine-related executive functioning, with tolcapone enhancing Val-COMT subjects but either not improving or impairing Met-COMT subjects

Grant JE, et al. Eur Neuropsychopharmacol. 2013 Nov;23(11):1587-96.

What about other treatments?

- Psychodelics?
- Brain stimulation?
- New drugs or therapies on the horizon?

Issues as we move forward

- Can medication be used to reduce gambling instead of abstinence?
- Medication Vs. Waitlist
- Medication Plus Therapy?
- Medication Compared to Therapy?
- Placebo Response – Long Studies
- Subtyping based on? Cognition, Genetics, Imaging, Etc.

QUESTIONS?

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TAB

3

US Military Veterans and Problem Gambling: State of Clinical Research

Shane W. Kraus, Ph.D.

25th ICRG Conference

October 6, 2024

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3 Year Disclosures and Funding Sources

ICRG INTERNATIONAL CENTER FOR RESPONSIBLE GAMING

SPORTS BETTING ALLIANCE

KR INSTITUTE

UNLV INTERNATIONAL GAMING INSTITUTE

The Nevada Problem Gambling Project

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Gambling Disorder Prevalence in U.S. Adults

- **Up to 90%** of U.S. adults have gambled in lifetime
- **Lifetime problem gambling:**
  - 2-5% of U.S. adults
  - **10% of U.S. veterans (see Etuk et al., 2020 for review)**
- **Lifetime gambling disorder:**
  - 6% college students
  - 1-2% of U.S. adults
  - **3% of U.S. veterans**
- **About 1/3** of problem gamblers experience natural remission (Slutske et al., 2012).

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3

Gambling Disorder among US Military Populations

- Among 401 US veterans seeking treatment for gambling disorder, 41% reported comorbid PTSD, 31.6% substance use, and 21.7% mood disorder; 74.1% of the sample had at least one psychiatric disorder, followed by 23.7% with two disorders, and 9% for 3 disorders (Grubbs et al., 2023).
- 40% of US veteran gamblers seeking treatment reported a **previous suicide attempt** (Kausch, 2003).
- 1.9% of US veterans screened positive for at-risk problem gambling in a primary care study (Kraus et al., 2020) and 4.9% in a national sample of 4069 veterans (Stefanovics et al., 2023).
- 28.6% of veterans with GD reported experiences with chronic homeless (Stefanovics et al., 2023)

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U.S. military-run slot machines earn $100 million a year from service members overseas

July 31, 2022 · 5:00 AM ET

GABBY MEANS

The slot machines, operated by the U.S. Department of Defense, earn the DOD more than $100 million each year in the name of "morale, welfare, and recreation" for service members, according to a report by the Government Accountability Office that was written in response to demands from Congress.

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Present Study

INTERNATIONAL CENTER FOR RESPONSIBLE GAMING

- Data comes from: *Sports wagering in the US: A nationally representative longitudinal study*
- For the first sample, we recruited American adults (*N*=2,806) matched and weighted for U.S. representative norms for age, gender, education, census region, and race/ethnicity as of the 2020 American Community Survey.
- For our second sample, we oversampled sports-wagering adults in the U.S. (*N*=1,557), matched to the demographics of sports wagering individuals from our first sample.

PI: Joshua Grubbs, PhD, Co-I: Shane Kraus, PhD

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Type	Civilians	Military	Total
General Population	2,489	317	2,806
% Row	88.7%	11.3%	100.0%
% Column	65.6%	55.9%	64.3%
Sports Gambler	1,307	250	1,557
% Row	83.9%	16.1%	100.0%
% Column	34.4%	44.1%	35.7%
Total	3,796	567	4,363
% Row	87.0%	13.0%	100.0%
% Column	100.0%	100.0%	100.0%

Note. χ^2 (1) = 20.060, $p < .001$; Cramer's V = .068, $p < .001$.

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Measures

The Problem Gambling Severity Index (PGSI) is the standardized measure of at-risk behavior in problem gambling

- Non-problem gambler - Score: 0
- Low-risk gambler - Score: 1–2
- Moderate-risk gambler - Score: 3–7
- Problem gambler - Score: 8 or above

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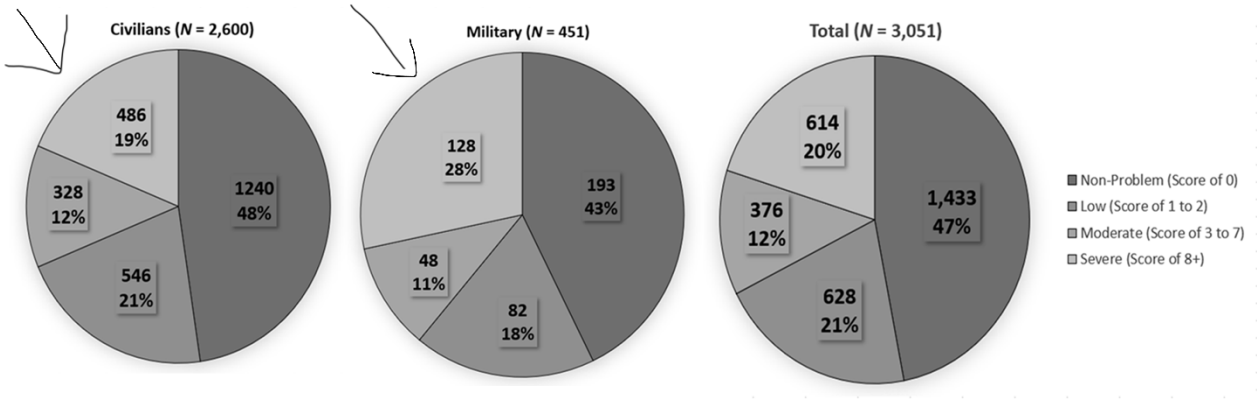
Problem Gambling Severity Index (PGSI) Scores By Group



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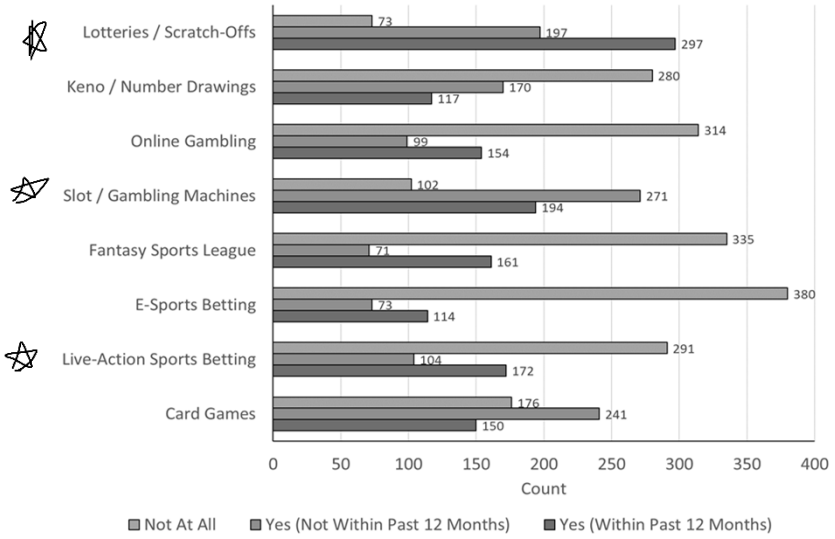
Gambling Type by Military Status (*N* = 567)



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Screening of Composite Scores of Addictive Risks in the Past 3 Months

Activity	Past 3 Months Composite Risk Scores Military *Adj. OR* (95% *CI*)
Alcohol	1.50*** (1.31, 1.71)
Tobacco	1.29* (1.04, 1.60)
Prescription Drugs	2.03***(1.56, 2.65)
Cannabis / Marijuana / THC	2.09***(1.71, 2.54)
Illegal / Illicit Drugs	1.64*** (1.22, 2.19)
Pornography	1.73***(1.49, 2.00)
Gambling	1.53*** (1.33, 1.75)
Video Games	1.66*** (1.44, 1.91)

Note. Adj. OR=Adjusted Odds Ratios; (95% *CI*)=95% Confidence Intervals (Lower Limit, Upper Limit). *p<.05; **p<.01; ***p<.001. Separate binary logistic regression models were performed for each activity with Civilians as the reference group. Odds ratios were adjusted with the following covariates: age, gender, race, education, marital status, employment status, sexual orientation, and income. Standardized composite scores for screening addictive risks in the past three months for each activity were based on the following criteria: strong desire or urge to use, health/social/legal/financial problems due to use, failing to meet responsibilities due to use, expressed concerns by a friend or relative due to use, and failing to stop the activity.

- The NIDA-ASSIST – 3-month symptoms of problematic or addictive engagement with the behavior.
- a) frequency
- b) strong desire/urges to use
- c) lead to health/social/legal consequences
- d) failed to do what is normally expected
- e) someone express concern for you
- f) failed to control/cut down, etc.

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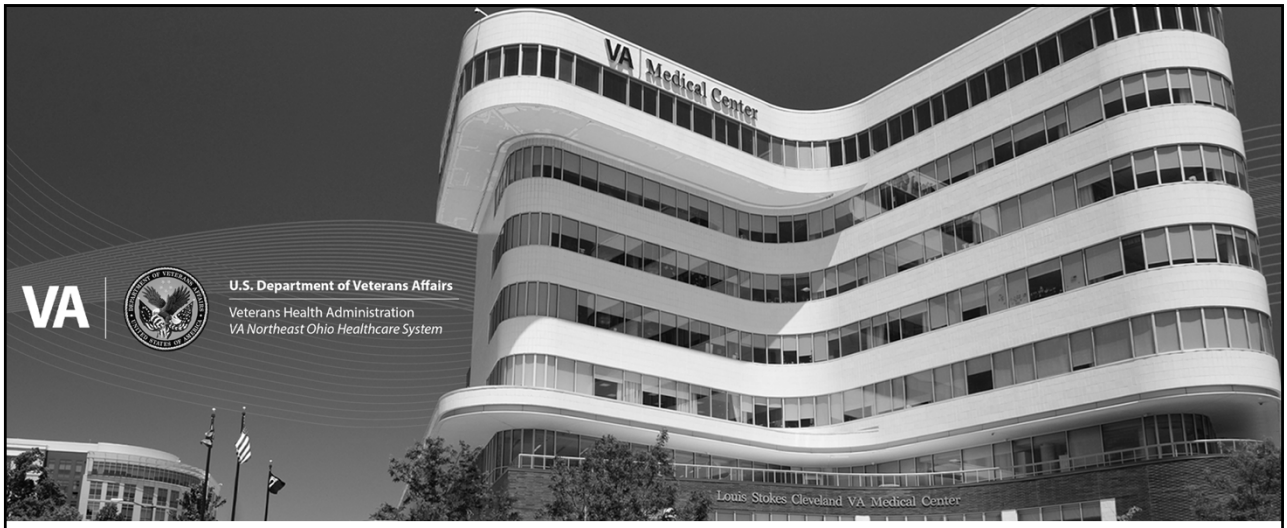

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Gaming Preferences in US Armed Forces Veteran with Problem Gambling

- The present work sought to examine how preferences for strategic (e.g., cards, sports betting, stock market betting, table games) vs. nonstrategic (slots, lottery, keno, roulette) gambling might be related to psychiatric comorbidities among U.S. Armed Forces Veterans receiving inpatient treatment for Gambling Disorder.
- U.S. Armed Forces Veterans (N = 401) receiving residential treatment for GD between the years of 2010–2016 were analyzed.

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Table 2
Multinomial logistic regression predicting gambling preferences among veterans receiving inpatient treatment for gambling disorder.

	Strategic Gambler Odds Ratio (95 % CI)	Mixed/Both Gambler Odds Ratio (95 % CI)
Age	**0.968 [0.946, 0.990]**	1.001 [0.978, 1.023]
Gender	**0.223 [0.106, 0.471]**	**0.413 [0.215, 0.793]**
Substance Use Disorder	1.068 [0.608, 1.876]	1.336 [0.781, 2.286]
Nicotine Use Disorder	**0.470 [0.279, 0.791]**	0.648 [0.391, 1.074]
Mood Disorder	0.835 [0.444, 1.569]	0.869 [0.468, 1.616]
Anxiety Disorder	0.292 [0.073, 1.161]	0.512 [0.153, 1.719]
Post-Traumatic Stress Disorder	**0.539 [0.317, 0.915]**	0.805 [0.488, 1.327]
Psychotic Disorder	1.435 [0.350, 5.873]	1.070 [0.240, 4.770]
Personality Disorder	2.532 [0.681, 9.416]	0.600 [0.114, 3.146]
Gambling Symptom Severity	0.970 [0.912, 1.032]	1.001 [0.978, 1.023]
Cox & Snell R^2	0.119	
Nagelkerke R^2	0.134	

Non-strategic gamblers used as the reference group. Significant odds ratios in bold font.

Veteran gamblers that preferred strategic gambling, as opposed to non-strategic gambling, were more likely to be younger, more likely to be men, less likely to have a nicotine use disorder, and less likely to have PTSD

Such findings suggest that gamblers with PTSD are likely to prefer nonstrategic games and may imply a unique vulnerability to gambling problems related to non-strategic gambling among armed forces veterans (Grubbs, Chapman, Milner, Floyd & Kraus, 2023).

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Substance Use Disorders Among Armed Forces Veterans with Gambling Disorder

- We examined the prevalence, presentation, and clinical associations of substance use disorders in 664 VA patients receiving VA inpatient treatment for gambling disorder.
- A substantial portion of veterans (36.1%) met current criteria for an SUD, with another 16.5% reporting a history of SUD. Alcohol use disorder was the most reported SUD (76.1% of those with a current SUD), with polysubstance use disorders and stimulant use disorders each occurring in at least 25% of those with SUDs.
- SUD status was related to greater levels of impulsivity, but there was no evidence that SUD status was related to gambling symptom severity, gambling preferences, or further psychiatric comorbidities

(Grubbs, Tahk, Chapman, Milner, & Kraus, 2024, Journal of Psychiatry Research)

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Table 2
One way ANOVA results of key variables based on SUD status

	Total Sample	Never SUD	Historical SUD	Current SUD
SOGS Analytic N	667	313	111	243
SOGS Sum Score		F (2, 664) = 1.078, p =0.341, η^2 = .003		
	14.75 (5.14)	14.64 (5.5.2)	15.41 (4.41)	14.60 (5.31)
UPPS-P Analytic N	610	284	222	104
Negative Urgency		F (2, 607) = 2.367, p =0.095, η^2 = .008		
	3.05 (0.54)	3.01 (0.56)	3.02 (0.53)	3.11 (0.53)
Lack of Premeditation		F (2, 607) = 5.837, p =0.003, η^2 = .020		
	2.39 (0.56)	2.31 (0.56)[a]	2.37 (0.52)[ab]	2.48 (0.56)[b]
Lack of Perseverance		F (2, 607) = 4.508, p =0.015, η^2 = .014		
	2.28 (0.56)	2.21 (0.57)[a]	2.26 (0.51)[ab]	2.36 (0.57)[b]
Sensation Seeking		F (2, 607) = 5.037, p =0.007, η^2 = .016		
	2.54 (0.64)	2.48 (0.67)[a]	2.47 (0.55)[ab]	2.65 (0.63)[b]
Positive urgency		F (2, 607) = 3.536, p =0.030, η^2 = .012		
	2.6 (0.64)	2.53 (0.67)	2.67 (0.66)	2.67 (0.58)

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Table 2
One way ANOVA results of key variables based on SUD status

	Total Sample	Never SUD	Historical SUD	Current SUD
WHOQOL Analytic N	526	235	208	83
WHOQOL Physical Quality of Life		F (2, 523) = 3.478, p =0.032, η^2 = .013		
	50.95 (18.4)	50.89 (18.77) [ab]	55.49 (18) [a]	49.21 (17.92) [b]
WHOQOL Psychological Quality of Life		F (2, 523) = 6.83, p =0.001, η^2 = .025		
	40.84 (19.15)	39 (18.92) [a]	47.79 (17.96) [b]	40.15 (19.35) [a]
WHOQOL Social Relations Quality of Life		F (2, 527) = 2.737, p =0.066, η^2 = .010		
	39.97 (23.35)	39.96 (22.95)	45.03 (22.91)	37.96 (23.78)
WHOQOL Environment Quality of Life		F (2, 527) = 1.356, p =0.259, η^2 =.005		
	58.59 (17.3)	58.71 (16.48)	61.12 (18.25)	57.44 (17.78)

SD = Standard Deviation; SUD = substance use disorder; SOGS = South Oaks Gambling Screen; WHOQOL = World Health Organization Quality of Life scale.
[ab] within rows, differing superscripts indicate pairwise comparisons with Bonferroni correction different at $p < .05$ level.

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Conclusions

- Overall, a body of work suggests high levels of psychiatric comorbidity among US veterans with problem gambling/gambling disorder.
- Future research (i.e., prevalence, longitudinal) is need to develop early detection and screening efforts for those with military service history. Specifically, what mental health factors predispose one to develop gambling disorder while in or after military service.
- Greater prevention and treatment efforts are needed for this increasingly for this vulnerable population.

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- The present work sought to examine how preferences for strategic (e.g., cards, sports betting, stock market betting, table games) vs. nonstrategic (slots, lottery, keno, roulette) gambling might be related to psychiatric comorbidities among U.S. Armed Forces Veterans receiving inpatient treatment for Gambling Disorder.
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Brief Biosocial Gambling Screen

A "yes" answer to any of the questions means the person is at risk for developing a gambling problem.

1. During the past 12 months, have you become restless, irritable or anxious when trying to stop/cut down on gambling?	YES ☐	NO ☐
2. During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?	YES ☐	NO ☐
3. During the past 12 months, did you have such financial trouble as a result of your gambling that you had to get help with living expenses from family, friends or welfare?	YES ☐	NO ☐

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www.icrg.org
www.divisiononaddiction.org

Use open ended questions: *Tell me about your gambling behavior*?

- *How do you like to have fun/relax*?
- *Do you have any concerns about your gambling*? Or *Has anyone expressed concerns about your gambling?*
- Avoid phrases like, "*You don't have a concern with gambling, right?*

1.9% of US veterans screened positive for at-risk problem gambling in a primary care study (Kraus et al., 2020).

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Medications

- Opioid antagonists like naltrexone showed promise in the pharmacological treatment of gambling disorder. Oral naltrexone (opioid antagonist) has shown efficacy in controlled trials (Bartely & Bloch, 2013; Kraus et al., 2020).
- Preliminary support for the use of opioid antagonists (naltrexone, nalmefene) and atypical antipsychotics (olanzapine) to produce short-term improvements in gambling symptom severity; however, findings were inconclusive regarding the effects of mood stabilizers (including anticonvulsants) (Thomas et al., 2022)

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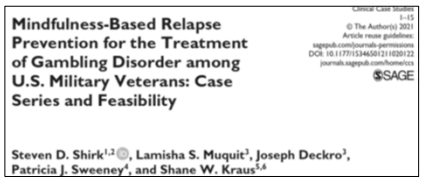
Psychotherapy Treatments for Gambling Disorder

- Gambling disorder responds to similar treatments as substance use disorders.
  - Recovery support services–peer support & 12-step program (Gamblers Anonymous)
  - Brief advice-giving/psychoeducation
  - Cognitive behavioral therapies (Petry, Rash, & Alessi, 2016)
- Mindfulness Based Relapse Prevention has shown preliminary support for the treatment of gambling among US veterans (Shirk, Muquit, Deckro, Sweeney, & Kraus, 2021).



Mindfulness-Based Relapse Prevention for the Treatment of Gambling Disorder among U.S. Military Veterans: Case Series and Feasibility

Steven D. Shirk[1,2], Lamisha S. Muquit[3], Joseph Deckro[3], Patricia J. Sweeney[4], and Shane W. Kraus[5,6]

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Questions?

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TAB

4

WHAT'S ON THE HORIZON? KETAMINE, PSYCHEDELICS AND TRANSCRANIAL MAGNETIC STIMULATION FOR GAMBLING DISORDER

ICSR Conference on Gambling and Addiction, 10/6/24
Jon Grant MD, JD, MPH, MA + Lucy Lan MD, MBA

AGENDA

Introduction

Background

Ketamine

Psychedelics

TMS

Virtual Reality

3

JON GRANT MD, JD, MPH, MA

- Education
  - University of Michigan: BA
  - University of Chicago: MA
  - Cornell University: JD
  - Harvard University: MPH
  - Brown University: MD
  - University of Minnesota: Psychiatry Residency

- Disclosures:

Research grants from NIDA, Janssen and Biohaven Pharmaceuticals

4

LUCY LAN MD, MBA

- Education
  - Wake Forest University: BA
  - University of Cambridge: MBA
  - Wake Forest University: MD
  - Boston University/ Boston Medical Center Psychiatry Residency
  - Stanford University Interventional Psychiatry Fellowship
  - Boston Psychoanalytic Society Psychodynamic Psychotherapy Fellowship
  - MAPS MDMA Assisted-Therapy training

Disclosures:

No funding sources for this work, industry funding received in the last 5 years, nor any financial relationships with gambling operators or other gambling-related for-profit entities.

5

LEARNING OBJECTIVES

a. Review current treatment targets for transcranial magnetic stimulation, ketamine, and psychedelics
b. Evaluate the potential of transcranial magnetic stimulation, ketamine, and psychedelics for treating gambling disorder and analyze the current research on these alternative therapies.
c. Discuss future directions for innovative treatments.

6

BACKGROUND

GAMBLING DISORDER

7

Repetitive or compulsive engagement in a behavior despite adverse consequences

Diminished control over the problematic behavior

Appetitive urge or craving state prior to engagement in the problematic behavior

Hedonic quality during the performance of the problematic behavior.

WHY TREAT GAMBLING?

8

Few people with gambling disorder (<10%) receive evidence-based treatments

When untreated, approximately 20-25% of people with gambling disorder report suicide attempts

Gambling disorder associated with spousal and child abuse, lost productivity, ill health, and crime.

9

CURRENT TREATMENTS FOR GAMBLING

Cognitive-Behavioral Therapy (CBT)

Length of treatment unknown; brief interventions have shown benefit;

Multiple versions of CBT have shown benefit

Pharmacotherapy

No medication with regulatory approval for gambling disorder

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QUESTIONS REGARDING TREATMENT FOR GAMBLING

No personalized medicine approach

Large placebo responses

Who should focus on abstinence versus reduction in behavior

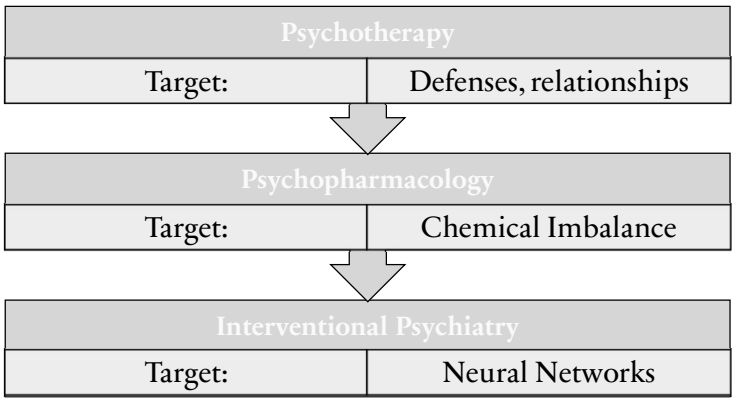
Medical treatments – simultaneous with therapy or sequential

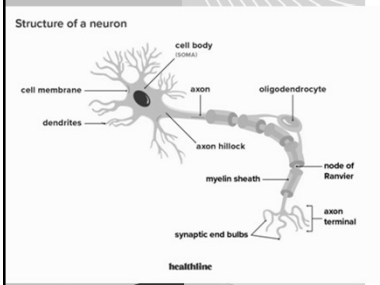
11

INTERVENTIONAL PSYCHIATRY

An emerging subspecialty that utilizes neurotechnologies to identify dysfunctional brain circuitry underlying psychiatric disorders and apply brain stimulation techniques to modulate that circuitry

PARADIGM SHIFT





NEURAL NETWORK

13

- Neuron- nerve cell, building block of the nervous system
- Neural circuit- neurons interconnected by synapses to carry out a specific function when activated
- Neural network- multiple neural circuits interconnect to form large scale brain networks

NEURAL NETWORKS IN GD

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- Prefrontal Cortex: reduced activation, especially in the ventromedial, ventrolateral, and orbitofrontal regions
- Ventral Striatum: reduced functional connectivity between VS and the medial prefrontal cortex
- Amygdala: reduced functional connectivity from amygdala to the ventral medial prefrontal cortex
- Nucleus accumbens: decreased connectivity between the prefrontal cortex and the nucleus accumbens

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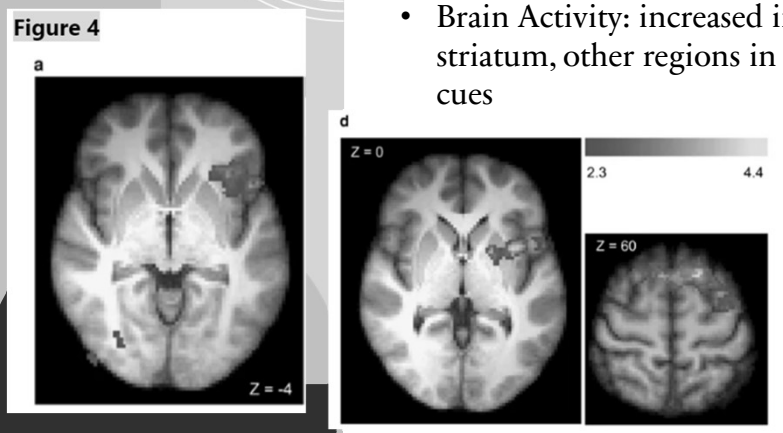
NEURAL NETWORKS IN GD

- Brain Activity: increased in insula, ventral striatum, other regions in response to gambling cues



Neural substrates of cue reactivity and craving in gambling disorder

E H Limbrick-Oldfield, I Mick, R E Cocks, J McGonigle, S P Sharman, A P Goldstone, P R A Stokes, A Waldman, D Erritzoe, H Bowden-Jones, D Nutt, A Lingford-Hughes & L Clark

Translational Psychiatry **7**, e992 (2017) | Cite this article

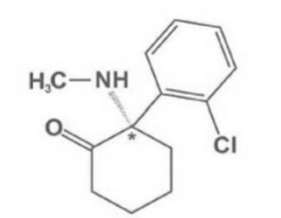
14k Accesses | **85** Citations | **144** Altmetric | Metrics

16

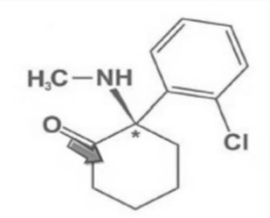
INTERVENTIONAL PSYCHIATRY PROCEDURES

- **ECT**
- **TMS**
- **Ketamine/Esketamine**
- VNS
- DBS
- Psychedelics

TREATMENTS ON THE HORIZON FOR GD: KETAMINE, PSYCHEDELICS, TMS, OTHER



(R)-ketamine HCL



(S)-ketamine HCL

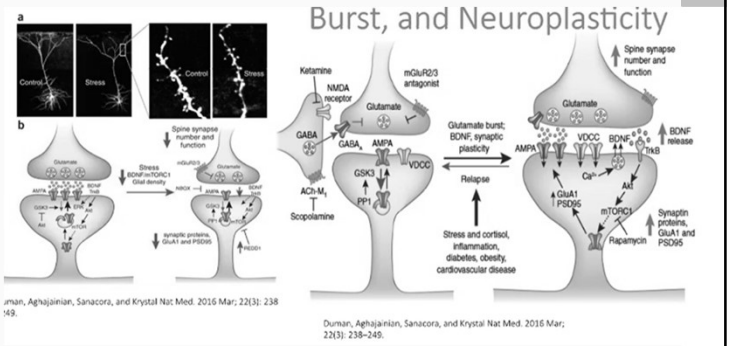
KETAMINE

KETAMINE TREATMENT INDICATIONS

- Moderate to Severe Treatment Resistant Depression
- Acute Suicidality

MECHANISM OF ACTION: NMDA RECEPTOR ANTAGONIST

- Neuroplasticity: Rapidly increases dendritic spine density within hours to a day
- Monoamine release
- Decrease neuroinflammation
- Opioid Systems effects



Duman, Aghajainian, Sanacora, and Krystal Nat Med. 2016 Mar; 22(3): 238–249.

TITLE: The History & Science Behind Ketamine and Eksetamine Treatment for Mental Health Conditions
Gerard Sanacora, MD, PhD
(scroll down for more information)
Date: January 8, 2019

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KETAMINE FOR TRD

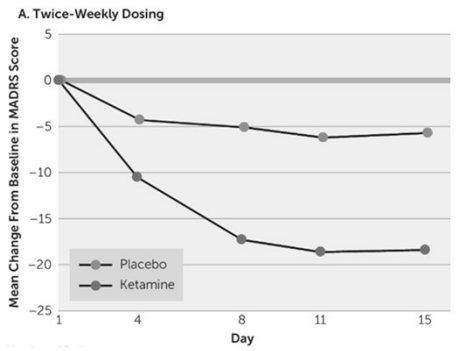
- Dosing:
  - Intranasal 56 or 84 mg
  - IV 0.5 mg/kg
  - IM 0.5 mg/kg
- Side Effects:
  - HTN
  - Increased HR
  - Concern for respiratory depression
  - Transient change in cognition
- Ketamine-Assisted Therapy

22

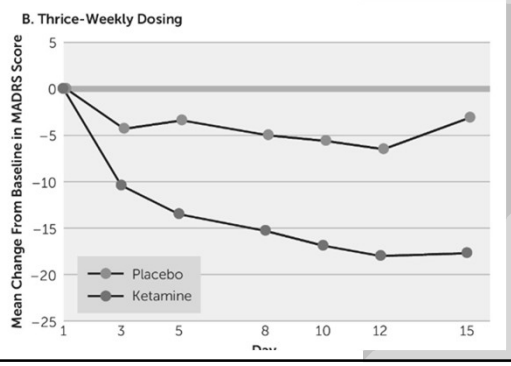
A Double-Blind, Randomized, Placebo-Controlled, Dose-Frequency Study of Intravenous Ketamine in Patients With Treatment-Resistant Depression

Jaskaran B Singh [1], Maggie Fedgchin [1], Ella J Daly [1], Peter De Boer [1], Kimberly Cooper [1], Pilar Lim [1], Christine Pinter [1], James W Murrough [1], Gerard Sanacora [1], Richard C Shelton [1], Benji Kurian [1], Andrew Winokur [1], Maurizio Fava [1], Husseini Manji [1], Wayne C Drevets [1], Luc Van Nueten [1]

Ketamine 69% responder, 38% remitter



Ketamine 55% responder, 23% remitter



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KETAMINE + GD: JON

CASE REPORT

Response of Refractory Gambling Disorder to Intravenous Ketamine

Jon E. Grant, JD, MD, MPH, and Samuel R. Chamberlain, MB/BChir, PhD, MRCPsych

Published: January 16, 2020

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KETAMINE + GAMBLING

6 cases completed

4 responders – i.e. at least 35% reduction in gambling symptoms based on the PG-YBOCS (3 are abstinent)

All 4 have received intravenous ketamine

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KETAMINE + GAMBLING

Question of whether intranasal esketamine will be as effective

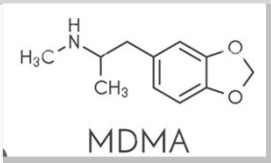
Question regarding the length of treatment of ketamine

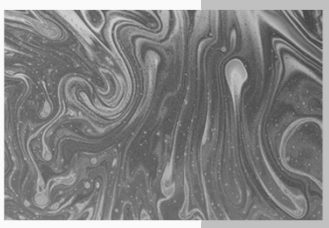
Question of therapy-assisted ketamine treatment

PSYCHEDELICS

PSYCHEDELICS FOR BH TREATMENT

- MDMA
- Psilocybin
- LSD
- 5-MeO-DMT
- Ayahuasca: DMT
- Peyote: Mescaline





PSYCHEDELICS + GAMBLING

Review > J Behav Addict. 2024 Feb 28;13(1):6-11. doi: 10.1556/2006.2024.00004. Print 2024 Mar 26.

Psychedelic-assisted therapy for people with gambling disorder?

Pedro Romero [1], Andrea Czakó [1 2], Wim van den Brink [3], Zsolt Demetrovics [1 2]

Affiliations – collapse

Affiliations

1 1Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar.
2 2Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary.
3 3Amsterdam University Medical Centers, Department of Psychiatry, Amsterdam, The Netherlands.

JLT

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PSYCHEDELICS + GAMBLING

1 case of a man with gambling disorder treated

Questions about how to use with therapy

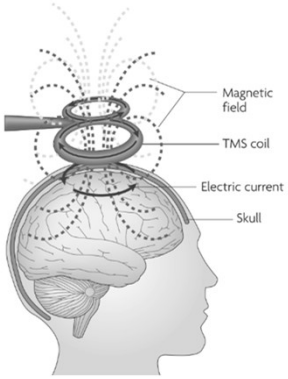
Placebo response

TRANSCRANIAL MAGNETIC STIMULATION

31

TMS HISTORY

- 1985: Barker et al. discovered
- 2008: FDA clearance of Neurostar to treat MDD
- 2018: FDA clearance of Brainsway deep TMS to treat OCD
- 2020: FDA clearance of Brainsway deep TMS to treat smoking cessation
- 2022: FDA clearance to treat anxious depression
- 2023: FDA clearance of Magventure to treat chronic pain



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WHAT DOES TMS TREAT?

FDA Indications
Major depressive disorder 2008
Migraine w/ aura 2013
Obsessive-compulsive disorder 2018
Smoking cessation 2020
Anxious depression 2021

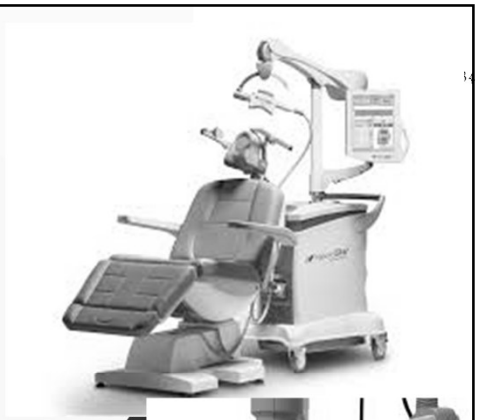
Off-label Experimental Uses
Post-traumatic stress disorder
Autism
Bipolar II depression
Restorative functions s/p TBI, SCI, stroke
Parkinson's Disease

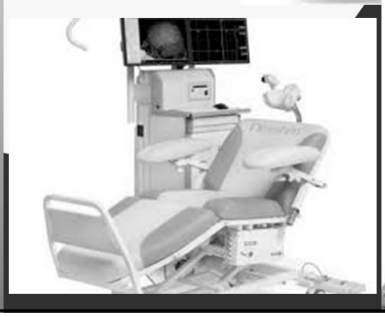
H1-Coil
for Major Depressive Disorder (MDD)

H7-Coil
for Obsessive-Compulsive Disorder (OCD)

H4-Coil
for Smoking Cessation

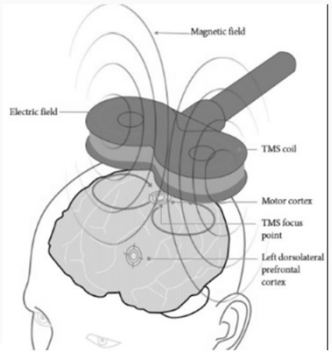
Traditional TMS Coil
for Major Depressive Disorder (MDD)



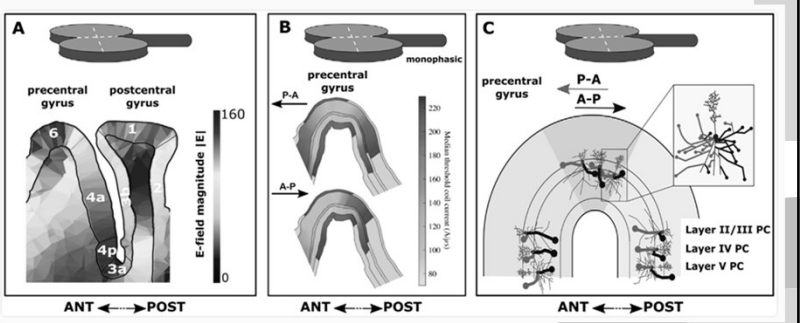


TMS MECHANISM OF ACTION

1. Electromagnetic field induces a secondary electric field in cerebral cortex



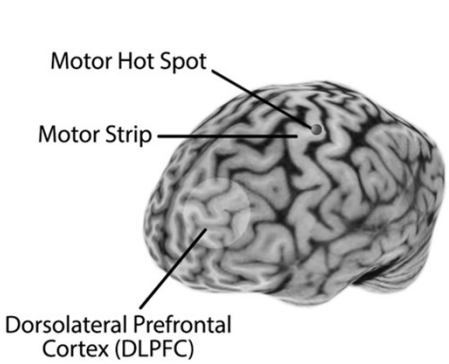
2. E-field depolarizes myelinated axons



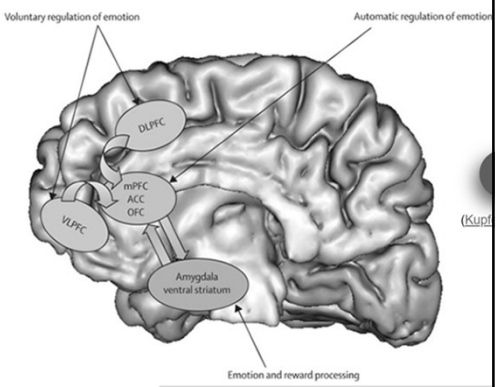
3. TMS-induced neuronal stimulation propagates along axons and synapses

TMS TARGETS

MDD: Dorsolateral Prefrontal Cortex

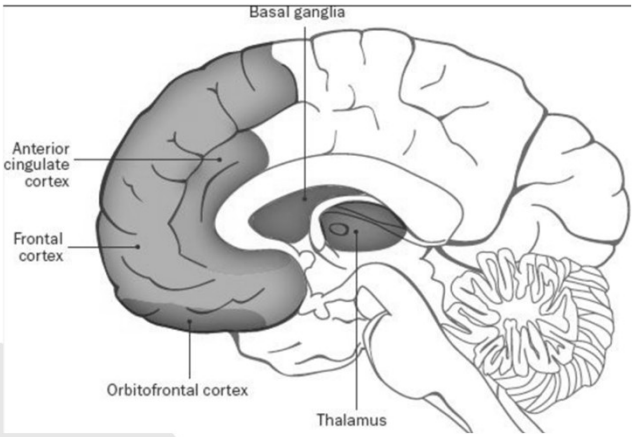


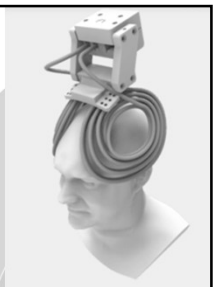
Clinical Target: DLPFC



TMS TARGETS

OCD: Anterior Cingulate Cortex

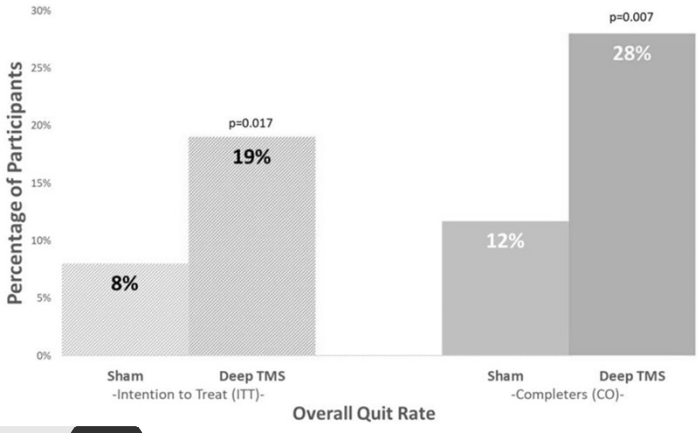


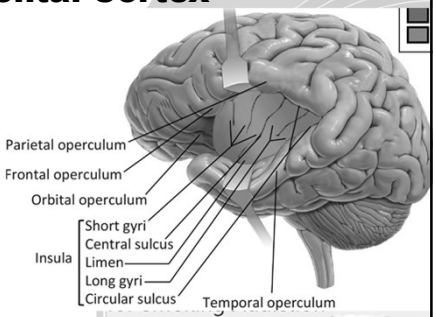


H7-Coil
for Obsessive-Compulsive Disorder (OCD)

TMS TARGETS

Smoking Cessation: Bilateral Insula and Prefrontal Cortex





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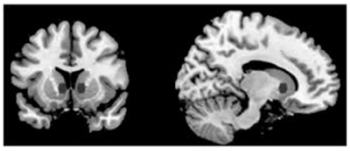
TMS TREATMENT OF ADDICTION?

- Multiple animal + small sample size human studies show rTMS of prefrontal cortex reduces craving and consumption of substances of abuse
  - Most of these studies applied focal rTMS of DLPFC
  - 2 studies used deep TMS to target b/l prefrontal cortex and insular cortex
- TMS increases extracellular dopamine and glutamate in the Nucleus Accumbens, the brain's pleasure and reward center



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TMS FOR GD?

TMS LITERATURE FOR GD

41

› Psychiatry Res. 2013 Mar 30;206(1):111-3. doi: 10.1016/j.psychres.2012.09.045. Epub 2012 Oct 15.

Deep transcranial magnetic stimulation for the treatment of pathological gambling

Oded Rosenberg [1], Limor Dinur Klein, Pinhas N Dannon

- 5 patients with GD received deep TMS to pre=frontal cortex using H1
- Despite initial improvements in rating scales, history from collateral demonstrated **failure to respond**

TMS LITERATURE FOR GD

42

› Eur Psychiatry. 2017 Mar:41:68-74. doi: 10.1016/j.eurpsy.2016.11.001. Epub 2017 Feb 3.

A single session of repetitive transcranial magnetic stimulation of the prefrontal cortex reduces cue-induced craving in patients with gambling disorder

A Gay [1], C Boutet [2], T Sigaud [3], A Kamgoue [4], J Sevos [3], J Brunelin [5], C Massoubre [3]

- Randomized, sham-controlled, cross-over design
- 22 pts with GD received real or sham treatment w/high frequency rTMS over LDLPFC, followed 1 week later by the other type of treatment.
- MagPro X100 stimulation system w/ neuronavigation (Visor2) + structural MRI
- Parameters: frequency 10 Hz; intensity 110% resting MT; 94 trains of 3.2s duration; ITI 10s; session duration 20.5 min; 3008 pulses
- **rTMS significantly decreased cue-craving after just 1 session**

TMS LITERATURE FOR GD

43

J Clin Med. 2019 May 30;8(6):768. doi: 10.3390/jcm8060768.

Clinical Improvements in Comorbid Gambling/Cocaine Use Disorder (GD/CUD) Patients Undergoing Repetitive Transcranial Magnetic Stimulation (rTMS)

Stefano Cardullo [1], Luis Javier Gomez Perez [2], Linda Marconi [3], Alberto Terraneo [4], Luigi Gallimberti [5], Antonello Bonci [6 7 8 9], Graziella Madeo [10 11]

- Case series of 7 patients with CUD and GD
- MagPro R30 targeted LDLPFC using neuronavigation (localite) + MRI
- 2x daily rTMS for 5 consecutive days -> 2x daily rTMS for 1d/wk for 8 wks
- Parameters: frequency 15 Hz; intensity = 100% MT; 60 pulses per stimulation train; ITT15 s; 40 total trains; session duration 13 min.

TMS LITERATURE FOR GD

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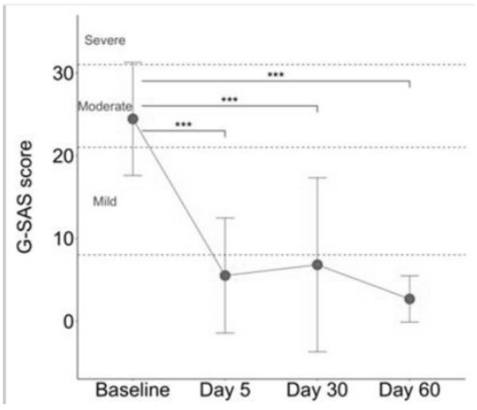
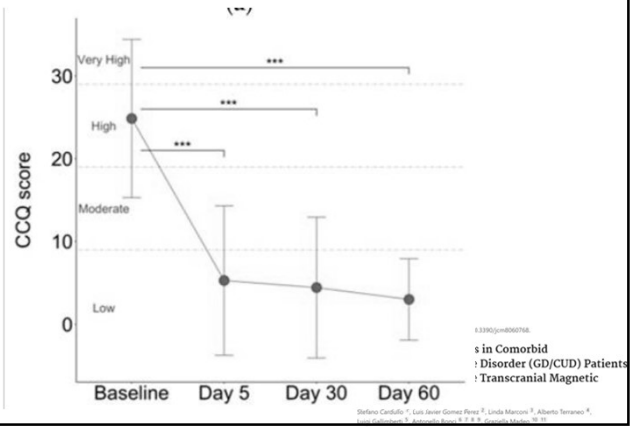
Gambling Symptom Assessment Scale (G-SAS)



Cocaine Craving Questionnaire (CCQ)



TMS LITERATURE FOR GD

45

Clinical Trial > Eur Addict Res. 2020;26(1):52-56. doi: 10.1159/000504169. Epub 2019 Oct 30.

Multiple Sessions of High-Frequency Repetitive Transcranial Magnetic Stimulation as a Potential Treatment for Gambling Addiction: A 3-Month, Feasibility Study

Mauro Pettorruso [1], Giovanni Martinotti [2 3], Chiara Montemitro [2], Luisa De Risio [4], Primavera Alessandra Spagnolo [5], Luigi Gallimberti [6], Fabrizio Fanella [7], Antonello Bonci [8 9], Massimo Di Giannantonio [2]; Brainswitch Study Group

- Case series of 8 patients with GD
- 2x daily rTMS for 5d/wk for 2 wk -> 2x daily rTMS for 1d/wk for 3 mth
- Parameters: frequency 15 Hz; LDLPFC target
- **71.2% Gambling Symptom Assessment Scale mean score reduction after 2 weeks** of rTMS treatment; **the days spent gambling decreased from 19.63** ± 7.96 **to 0.13** ± 0.35 days.

TMS LITERATURE FOR GD

46

> Front Neurosci. 2020 Aug 18:14:729. doi: 10.3389/fnins.2020.00729. eCollection 2020.

Non-invasive Brain Stimulation for Gambling Disorder: A Systematic Review

Chiara Zucchella [1], Elisa Mantovani [2], Angela Federico [2], Fabio Lugoboni [3], Stefano Tamburin [1 2]

- Systematic review searched Pubmed, Web of Science, and Science Direct until 12/19/19 for studies applying TMS or tDCS to pts with GD
- 11 studies analyzed
  - 5 controlled, 6 uncontrolled
  - Varying protocols, stimulation sites, outcomes measures, duration of treatment
  - **Most studies showed a reduction of gambling behavior, craving for gambling, and gambling-related symptoms.**

TMS LITERATURE FOR GD

47

Review > J Clin Med. 2022 Jan 26;11(3):624. doi: 10.3390/jcm11030624.

Repetitive Transcranial Magnetic Stimulation (rTMS) as a Promising Treatment for Craving in Stimulant Drugs and Behavioral Addiction: A Meta-Analysis

Aurélia Gay [1, 2], Julien Cabe [3], Ingrid De Chazeron [3], Céline Lambert [4], Maxime Defour [1], Vikesh Bhoowabul [1], Thomas Charpeaud [5], Aurore Tremey [5], Pierre-Michel Llorca [3], Bruno Pereira [4], Georges Brousse [3]

- Meta-analysis assessed rTMS efficacy on craving for depressants (etoh, cannabis, opiate) vs stimulants (nicotine, cocaine, meth) vs behavioral addiction (GD, eating disorder)
- Searched PubMed, Embase, PsycINFO, and Cochrane databases until 4/20/20
- 26 studies analyzed
- **a persistent small effect** only for stimulant and behavioral groups
- **a significant correlation between number of sessions and craving reduction**

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FUTURE DIRECTIONS FOR TMS + GD

- Investigate impact of laterality on efficacy
- Investigate connectivity changes:
  - Can we strengthen the connection between the NAC and the frontal lobe via TMS?
- Target insula + nucleus accumbens via deep TMS stimulation?

OTHER POTENTIAL TREATMENTS FOR GD

ELECTROCONVULSIVE THERAPY

- Discovered in 1938
- History of stigma, controversy, poor accessibility
- MOA: electrical stimulation -> therapeutic seizure
- Indications: Severe MDD, mania, catatonia, psychosis, status epilepticus
- History of stigma, controversy, poor accessibility
- **Most effective treatment** in Psychiatry and Medicine: 60-90% success rate in severe MDD
- **Very safe:** mortality 1/70,000
- SE: nausea, HA, fatigue, cognitive effects

ELECTROCONVULSIVE THERAPY + GD

-No articles on Pubmed

-Research Question: could ECT treat refractory GD via targeting deeper structures like the NAC?

VIRTUAL REALITY

-A simulated 3D, immersive environment

-Indications:
- -PTSD
- -Anxiety and Phobias
- -Psychosis
- -Social Skills
- -Mindfulness

VIRTUAL REALITY + GD

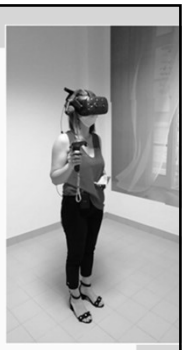
› Front Psychiatry. 2017 Feb 24:8:27. doi: 10.3389/fpsyt.2017.00027. eCollection 2017.

Using Virtual Reality in the Treatment of Gambling Disorder: The Development of a New Tool for Cognitive Behavior Therapy

Stéphane Bouchard [1], Geneviève Robillard [2], Isabelle Giroux [3], Christian Jacques [3], Claudie Loranger [4], Manon St-Pierre [4], Maxime Chrétien [3], Annie Goulet [3]

VIRTUAL REALITY + GD STUDY DESIGN

- Created a video game that combines CBT with immersive VR cue exposure therapy
- Will recruit 60 patients aged 18-65 with GD, from patients in the Addiction Medicine Unit of Verona (Rossi Hospital)
- Patients will be randomly assigned to the CBT group (16 CBT sessions) or the CBT + VR group (8 CBT sessions + 8 VR cue-exposure therapy sessions).
- Measures:
  - The MCMI-III, the BIS-11, and the SOGS will be used to evaluate inclusion and exclusion criteria
  - *Gambling Related Cognitions Scale* and the *Multidimensional Gambling Self-Efficacy Scale* will be used to verify changes as a function of the treatment.
  - Craving will be evaluated through VAS, and psychophysiological variables will be assessed through biofeedback.



› Front Psychiatry. 2022 Apr 1:13:854088. doi: 10.3389/fpsyt.2022.854088. eCollection 2022.

Alter Game: A Study Protocol on a Virtual "Serious Game" for Relapse Prevention in Patients With Gambling Disorder

Rosaria Giordano [1 2], Maria Anna Donati [3], Lorenzo Zamboni [1 2], Francesca Fusina [4 5], Caterina Primi [3], Fabio Lugoboni [1]

THE STAKES ARE PRETTY GOOD

THANK YOU

Jgrant4@bsd.uchicago.edu
Lucy.lan2@va.gov

TAB

5

Disparities for Gambling Treatment Service Use in the Latinx Community

CALIFORNIA OFFICE OF PROBLEM GAMBLING
DEPARTMENT OF PUBLIC HEALTH

Project Partners

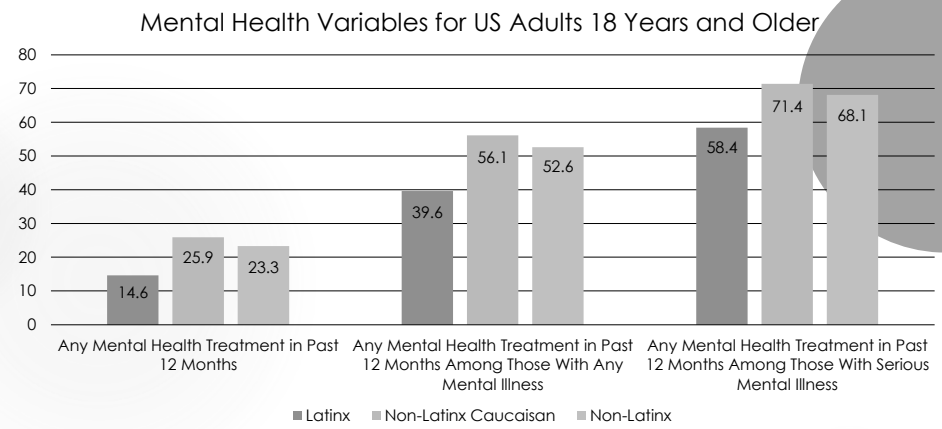
- California Office of Problem Gambling (OPG)
  - Part of the California Department of Public Health
  - Provides funding and oversight for the California Gambling Education and Treatment Services (CalGETS) program
- UCLA Gambling Studies Program (UGSP)
  - Part of the Semel Institute for Neuroscience and Human Behavior
  - Administrative/clinical oversight and reporting on CalGETS program data
- Visión y Compromiso (VyC)
  - VyC is the lead agency in California providing promotoras with core skills training, peer support, capacity building, advocacy, leadership, and workforce development

Service Use Disparities

National Survey on Drug Use and Health (2019)

- Disparities in mental health service utilization exist for Latinx persons in the United States.
- For example, despite similar rates of psychological distress, Latinx individuals aged 18 or older were about half as likely to have received mental health services in the past year (SAMHSA, 2020. Results from the 2019 National Survey on Drug Use and Health: Mental Health Detailed Tables. Table 8.17B https://www.samhsa.gov/data/report/2019-nsduh-detailed-tables).
- Also, for those with a past year major depressive episode, fewer Latinx persons than non-Latinx Caucasians received treatment for depression (58% vs. 70%)(SAMHSA, 2020. Results from the 2019 National Survey on Drug Use and Health: Mental Health Detailed Tables. Table 8.39B https://www.samhsa.gov/data/report/2019-nsduh-detailed-tables).

National Survey on Drug Use and Health (2022)



Source: Tables B.29B, B.30B, and B.31B; SAMHSA, Center for Health Statistics and Quality

Problem Statement

- The percentage of Latinx clients in CalGETS has been approximately 17%, which is lower than their representation in the adult California population (~36%).
- The prevalence of problem gambling among Latinx persons (~1%) is at least equal to that seen for non-Latinx Caucasians (~1.4%) (Alegria et al, 2009).
- There is a need to implement program changes to better engage Latinx persons in treatment for problem gambling to reduce the burden of gambling harms in this community.

Action Plan

- Train promotoras about gambling problems, including how to identify those who may benefit from CalGETS services
- Develop information and resources on gambling problems and CalGETS for the Latinx community
- Implement a plan for promotoras' activities in Los Angeles, San Diego Counties, and the Central Valley
- Assess the project impact by tracking promotora outreach activities, calls to the CalGETS Helpline (1-800-GAMBLER), and CalGETS utilization rates

Background Work

CalGETS Provider Surveys

- We surveyed Spanish-speaking CalGETS providers (N=20) and did key informant interviews with a subset of them (N=5) to better understand reasons for Latinx persons' underutilization of CalGETS services.

- Key concerns about seeking treatment in the Latinx community included:
  - the privacy and confidentiality of services,
  - fears of deportation if they participate in treatment,
  - stigma related to seeking services,
  - lack of trust in government programs, and
  - questions about the nature/process of psychotherapy since many were in it for the first time.

Conference Posters

- Addiction Health Services Research (New York, NY, 2023)
  - Language proficiency and education differed significantly by ethnicity. There is a need for Spanish-language services. Implications for psychoeducation and discussing legal aspects, as well as the process of therapy.

- American Psychological Association (Washington, D.C., 2023)
  - Gambling is common in the Latinx community in casinos and in unregulated settings. The consequences of problem gambling are similar across ethnic groups, but Latinx persons do not perceive gambling as a problem until it becomes severe. Many discussed the impacts of these consequences in the context of the family; they destabilize the family.

Promotoras Training

Summary of Training Program

- The goal was to provide promotoras with in-language information for CalGETS outreach.
- Content included a brief history of gambling in the US, gambling behavior, criteria for gambling disorder, screening, and CalGETS services.
- Conducted on September 6-7 in Los Angeles and September 13-14 in San Ysidro.
- A total of 28 promotoras attended training (17 in LA, 11 in San Diego); they were predominantly female (96%).
- Most promotoras had a current or previous relationship with VyC and volunteered to participate in the training.

Results of the Evaluation of Training

- The majority of promotoras were unfamiliar (43%) or somewhat familiar (36%) with problem gambling issues prior to the training.
- Most (96%) felt they learned a lot from the training.
- Nearly all participating in training rated the curriculum and speakers as outstanding.
- Quiz scores for knowledge gained from trainings were 99% in both Los Angeles and San Diego Counties.

"Gambling Addiction: How It Impacts the Latino Community"

Hugo Ramirez
Director of Programs

Damages and impacts of gambling

Mental Health

Gambling problems create anxiety, depression, and stress for gamblers and their loved ones.

Physical Health Gambling

Problems affect physical health due to stress, anxiety, depression, and issues such as alcohol and substance use.

Financial Health Gambling

Problems cause economic instability, including housing problems, job loss, asset loss, debt defaults, and family responsibilities.

CalGETS 1(800) GAMBLER

Main reasons why people gamble:

Escape: Some people gamble to escape life's problems, loneliness, or family issues they find difficult to deal with.

Money/Debt: Some see gambling as a quick way to make money or get out of debt.

Positive Emotions: Gambling can provide a sense of positive emotions for some individuals.

CalGETS 1(800) GAMBLER

Our work in Collaboration with UCLA

Integration of the Community Health Promotoras (CHW's) Model

WHO ARE PROMOTORES?

PROMOTORAS ARE EFFECTIVE CATALYSTS FOR COMMUNITY CHANGE & SUPPORT

- Promotoras are **community members** who act as natural helpers and liaisons to their neighbors and local neighborhoods; they are characterized by ***servicio de corazón***– service from the heart.
- Promotoras are powerful advocates for individual and community transformation. They **share information** with community residents about local resources and have the capacity to **influence policies** related to critical issues facing their communities.
- The role of the promotor extends far beyond the disease-related functions (Bio-medical Model) of community health to a passion for **human rights and social justice** (Socio-ecological Model).

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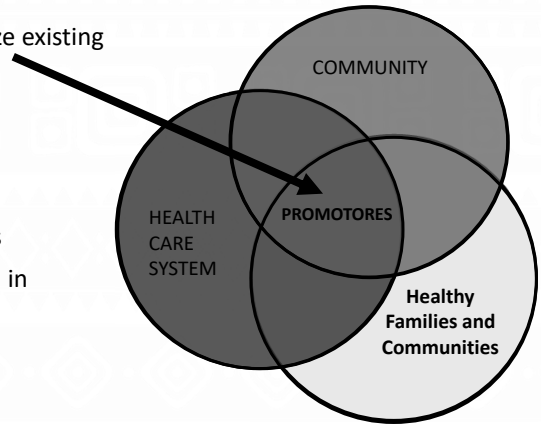
REDUCING DISPARITIES & PROMOTING HEALTH EQUITY

PROMOTORES

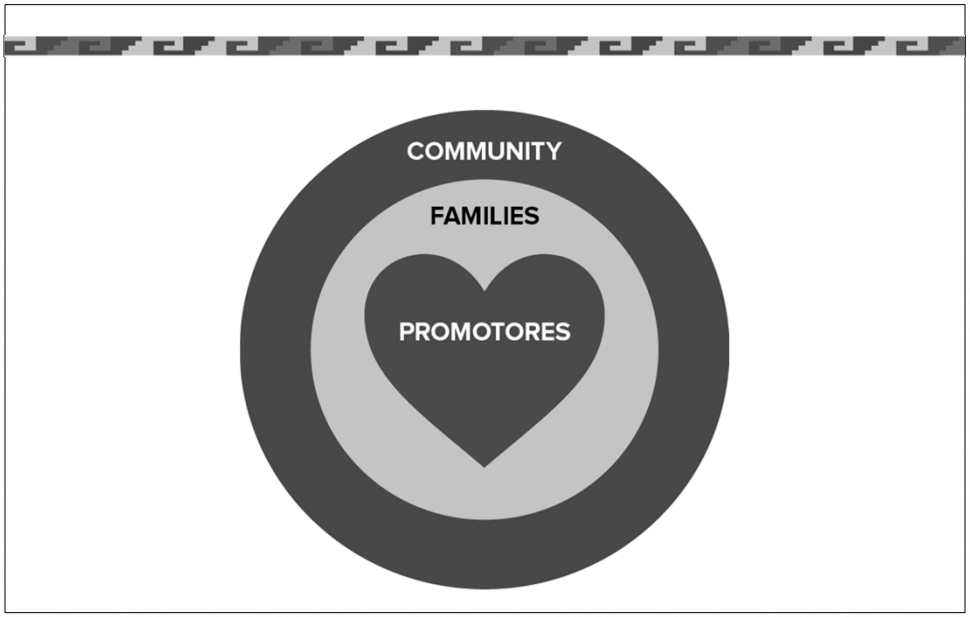
- Naturally connect with and maximize existing social networks
- Increase trustworthiness
- Local workforce development
- Provide cost-effective services
- Reinforce cultural values and norms
- Encourage community participation in improving health



As liaisons, they help:

- Keep appointments
- Increase access to prevention, scope of services and follow up care
- Decrease effect of cultural and linguistic barriers for organizations

PROMOTOR MODEL



THE COMMUNITY TRANSFORMATIONAL MODEL

If the promotor model is allowed to function according to the theory of change, promotores will:

"Many of us are leaders in our community. We are compassionate and have this desire to serve. We don't just work at an office from 9 to 6. We live in the community, and we have to be able to go and talk to people who are in need late at night or during the day—whenever they need it. This is the work and we give it with our hearts."

- Outreach and Educational efforts conducted in Los Angeles, San Diego and Tulare County
- 6 promotores across the three counties (2 promotores per county)
- Outreach efforts primarily done in Spanish
- Often provide in-person and online workshops
- Referral information is confidential to assure community feels comfortable

- Outreach is done at libraries, city-sponsored events, community centers, farmers markets, and government spaces
- By utilizing public spaces, promotores engage the community in their space, where members feel comfortable
- They provide education about problem gambling, its affects and resources

Testimonies

Maria Guadalupe and her son started going to the casino, they started playing with $30 dollars and then they played with more and more money and sometimes they won, other times they lost. But they got addicted to the game over time. At first, they went twice a week, then three times a week, until they were going to the casino every day, and they no longer had time to spend with their family, because for them it was more important to go to the casino. They spent the whole night playing. That was their happiness, to play and play. After speaking with us they they became aware and decided to limit their visits to the casino, because they saw that they were leaving all the money at the casino, fter they start attending our support group – Visalia, CA

Rosa talked to us about her husband who started going to the Casino to play and had gambled little money and won. The next day he decided to go play again, and again he won. So, he continued going to the Casino, but he no longer won like the first times. The more he played, the more he lost until it was the point where he became more and more addicted to the game every day. That was when he started to get angry with his wife, and was in a bad mood with his children, he yelled at them and got angry at everything. Later all the money he earned was not enough for him, every day he wanted more and it was never enough for him. Until one day he had a stroke due to so much stress over getting money. His wife, Rosa, called the ambulance, they took him to the hospital and to this day he is still in the hospital. - Poplar, CA

OUR CHALLENGE.
OUR OPPORTUNITY

Organizations who truly understand promotoras/es and how Promotoras/es use popular education methodology appropriate for the community transformational model are very successful.

Program Impacts

Data Sources

- CalGETS Helpline (1-800-GAMBLER)
  - Many people did not report demographics when calling the helpline.
  - Staffing of Spanish-speaking counselors at the Helpline was limited; some individuals reported that they waited upwards of 20 minutes to connect with one.
  - These issues made analyses of helpline problematic.
- CalGETS Admissions Data
  - At intake, all clients complete a standard interview that includes demographics, gambling behavior, substance use, mental/physical health variables, DSM gambling disorder criteria, and current quality of life among other things.
  - This data set has zip codes so we were able to isolate those counties where promotoras were active.

Analysis

- Stepwise Logistic regression predicting Latinx ethnicity for affected individual admissions
- Used data from 26 months: 13 months before promotoras and 13 months after promotoras began work
- Limited analysis to counties where promotoras were trained
- Included demographics as control variables before entering a dichotomous predictor for pre-post promotora outreach
- N for the analysis was 324; No cases were excluded due to missing model variables
- Odds ratios represent independent contributions of each variable to predicting Latinx ethnicity for admissions

Pre-Post Demographics: AIs

	Pre-Promotora	Post-Promotora	Chi-Square (df = 1)	p-Value
Age	45 (15.7)	42 (15.0)	1.29	0.099
Gender				
Male	31 (20%)	41 (25%)	1.34	0.247
Female	128 (81%)	124 (75%)		
Education			0.48	0.786
HS or Less	50 (31%)	57 (35%)		
Some College	85 (54%)	82 (50%)		
College Grad or More	24 (15%)	26 (16%)		
Income				
Less than 46K	104 (65%)	101 (61%)	0.61	0.433
46K or More	55 (46%)	64 (39%)		
English Proficiency	142 (89%)	160 (97%)	7.51	0.006
Latino Ethnicity	36 (23%)	53 (32%)	3.65	0.037

Logistic Regression – Step One

Variable	Reference Group	Odds Ratio	95% C.I.	df	p-Value
Age		0.965	0.946 – 0.985	1	0.001
Gender		1.247	0.655 – 2.373	1	0.502
Education	HS or Less				
Some College		0.420	0.222 – 0.794	1	0.008
College Grad or More		0.519	0.201 – 1.338	1	0.175
Median Income (46K)		1.623	0.839 – 3.140	1	0.151
English Proficiency		0.058	0.017 – 0.196	1	0.001

Model Chi-Square [df=6] = 53.31(p = 0.001); Nagelkerke R Square = 0.219; Hosmer and Lemeshow Chi-Square [df=8]= 5.67 (p=0.684)

Logistic Regression – Step Two

Variable	Reference Group	Odds Ratio	95% C.I.	df	p-Value
Age		0.965	0.945 – 0.985	1	0.001
Gender		1.187	0.620 – 2.270	1	0.605
Education	HS or Less				
Some College		0.447	0.234 – 0.852	1	0.014
College Grad or More		0.553	0.214 – 1.435	1	0.224
Median Income (46K)		1.560	0.803 – 3.032	1	0.189
English Proficiency		0.042	0.012 – 0.148	1	0.001
Promotora Outreach		2.165	1.221 – 3.838	1	0.008

Model Chi-Square [df=7] = 60.61(p = 0.001); Nagelkerke R Square = 0.247; Hosmer and Lemeshow Chi-Square [df=8]= 4.89 (p=0.770)

Questions

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CALIFORNIA OFFICE OF
PROBLEM GAMBLING
DEPARTMENT OF PUBLIC HEALTH

TAB

6

Why People with Gambling Disorder Don't Seek Treatment

Jennifer Grant Weinandy, Ph.D.
The Institute to Advance Health Equity
Ohio University

James P. Whelan, Ph.D.
Tennessee Institute for Gambling Education & Research
The University of Memphis

Funding Support/Disclosures

Agenda

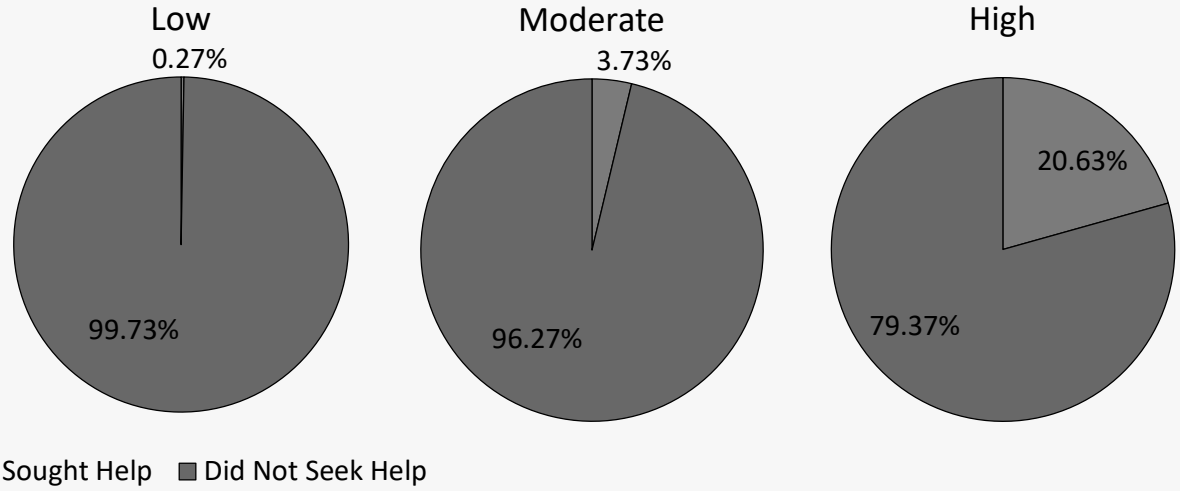
- Incidence of help-seeking in gamblers
- Barriers to help-seeking
  - Awareness
  - Stigma
- Latest research on help-seeking in gamblers
- Strategies for help-seeking

Help-Seeking

Any intentional action to change gambling behaviors with some assistance

Can include one or more of the following:
- Self help books or programs
- Engagement with responsible gambling initiatives such as self-exclusion tools
- Gamblers Anonymous/Self-help groups
- Support from family or friends
- Calling the gambling helpline
- Professional Support (therapy or medication)

How many gamblers with problems seek help?



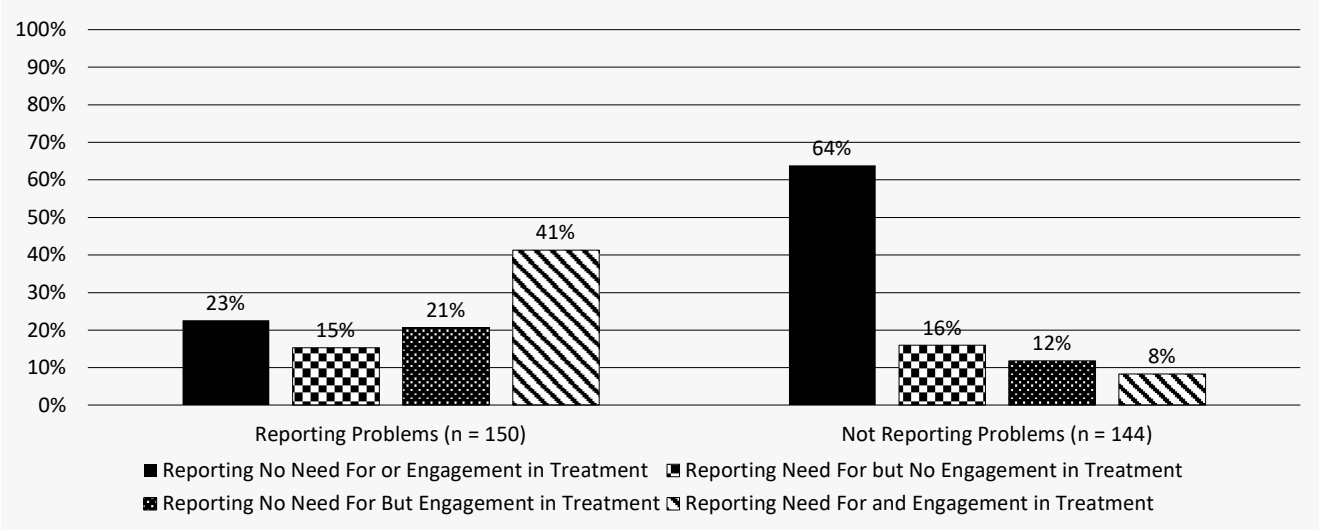
Bijker, R., Booth, N., Merkouris, S. S., Dowling, N. A., & Rodda, S. N. (2022). Global prevalence of help-seeking for problem gambling: A systematic review and meta-analysis. *Addiction, 117*(12), 2972–2985. https://doi.org/10.1111/add.15952

Barriers to Help Seeking

- **Structural**
  - Difficulty accessing resources (lack of transport, internet access, etc.)
  - *Lack of service availability/gambling specific treatment/culturally informed treatment*
    - *Financial*
  - Other responsibilities (work, childcare, etc.)
- **Social**
  - *Stigma*
  - Lack of perceived support from others
- **Psychological/Individual**
  - *Awareness/Recognition of problems or denial*
  - Awareness of resources
  - Reluctance of giving up the positive experiences of gambling
  - *Feelings of shame and fear*
  - Wanting to be able to "do it alone"

Christensen et al., 2022; Dąbrowska, Moskalewicz, & Wieczorek, 2017; Evans & Delfabbro, 2005; Gainsbury et al., 2014, 2020; Leslie & McGrath, 2023; Lischer et al., 2023; Jindani et al, 2021; Suurvali, 2009, 2012

Awareness of Problems and Treatment Seeking in a National Sample of Gamblers Who Were Categorized as High Risk on the PGSI

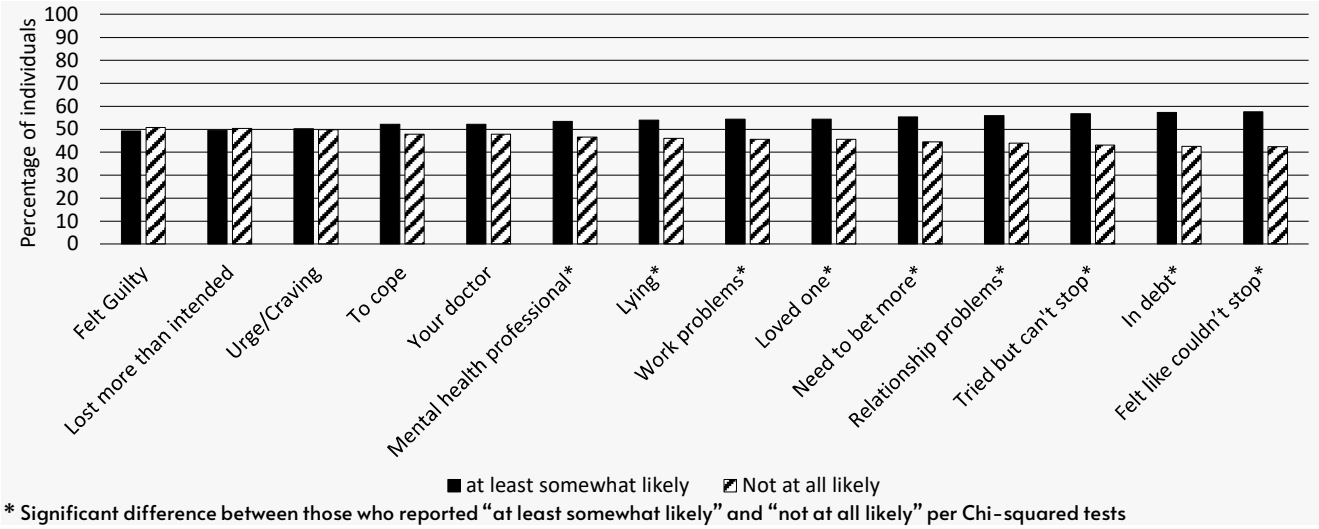


Demographics

- *N* = 1,791
- Mean age = 51 (SD = 15)
- Men = 58.5%, Women = 39.6%, Non-binary = 1.2%, Other = .7%
- Modal income = $60,000 - $69,999 (range = less than $10,000 - $500,000 or more)
- Mean Gambling Disapproval = 2.49 (SD = 1.65, range = 1-7)
- Mean Gambling Frequency = 2.92 (SD = 1.21, range = 1-6)
- Mean PGSI = 0.30 (SD = 0.54)
  - High (8+) = 13.4%
  - Moderate (3-7) = 5.9%
  - Low (1-2) = 29.8%
  - None (0) = 50.7%

Grant Weinandy, J. T., et al. (2024). Anticipated Motives for Gambling Treatment in Adults from the U.S. *Journal of Gambling Studies*. https://doi.org/10.1007/s10899-024-10287-6

Anticipated Motives to Seek Treatment in the Future in a National Sample of Gamblers who Perceive Themselves as Not Having Problems With Gambling (*N* = 1,791)



* Significant difference between those who reported "at least somewhat likely" and "not at all likely" per Chi-squared tests

Grant Weinandy, J. T., et al. (2024). Anticipated Motives for Gambling Treatment in Adults from the U.S. *Journal of Gambling Studies.* https://doi.org/10.1007/s10899-024-10287-6

Regression Results

Higher income predicted consideration of almost all the anticipated motives for treatment, except losing more money than intended.

Identifying as male predicted consideration of all anticipated motives, except Loved One Voiced Concern, Lost More Money Than Intended, In Debt to Gamble, and Relationship Problems.

Gamblers who identified as male, had higher income, gambled more frequently, and had a lower disapproval of gambling suggested higher amounts of money that they were willing to lose before considering treatment.

Grant Weinandy, J. T., et al. (2024). Anticipated Motives for Gambling Treatment in Adults from the U.S. *Journal of Gambling Studies.* https://doi.org/10.1007/s10899-024-10287-6

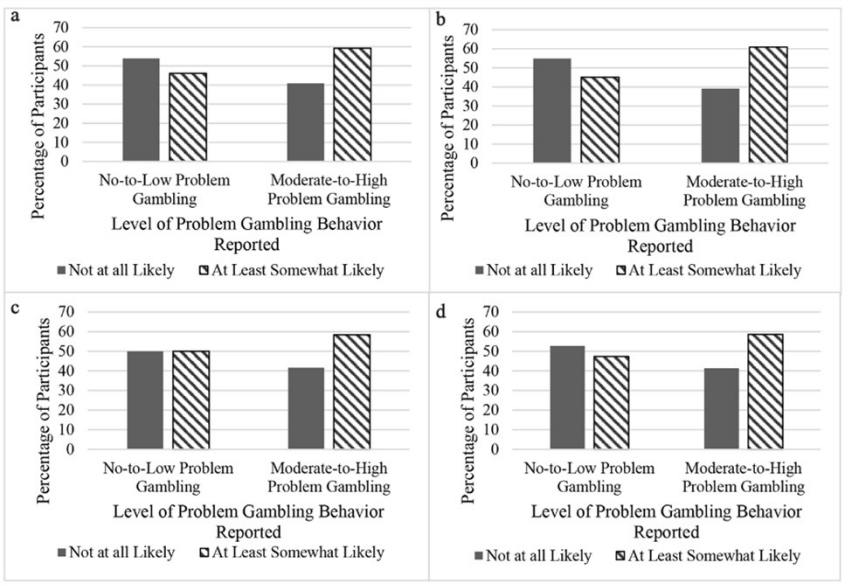


Fig. 2 Percentage of participants engaging in no to low problem gambling behavior and moderate to high problem gambling behavior who endorsed lost more money than intended, felt guilty, gambling to cope, and experienced an urge or cravings as anticipated motives. **a.** Lost More Money Than Intended. **b.** Felt Guilty. **c.** Gambling to Cope. **d.** Experienced an Urge or Cravings

Differences Between Gamblers with High- and Low-Level Problem Gambling

Grant Weinandy, J. T., et al. (2024). Anticipated Motives for Gambling Treatment in Adults from the U.S. *Journal of Gambling Studies*. https://doi.org/10.1007/s10899-024-10287-6

Stigma

Treatment Related Stigma

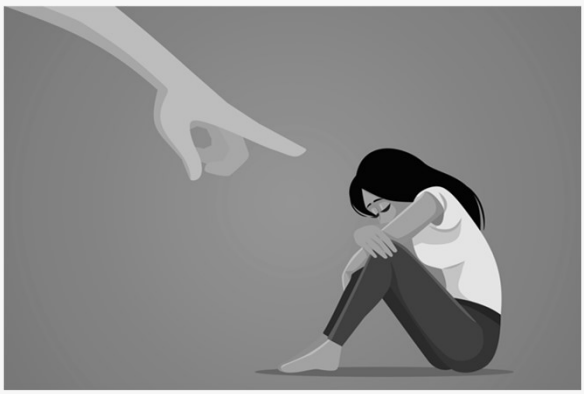
True of all/most help-seeking

Gambling Related Stigma

Help-seeking predicted by:

- Experiencing gambling-related stigma
- Perceiving less ostracism-related gambling stigma from others
- Less use of secrecy to cope with stigma

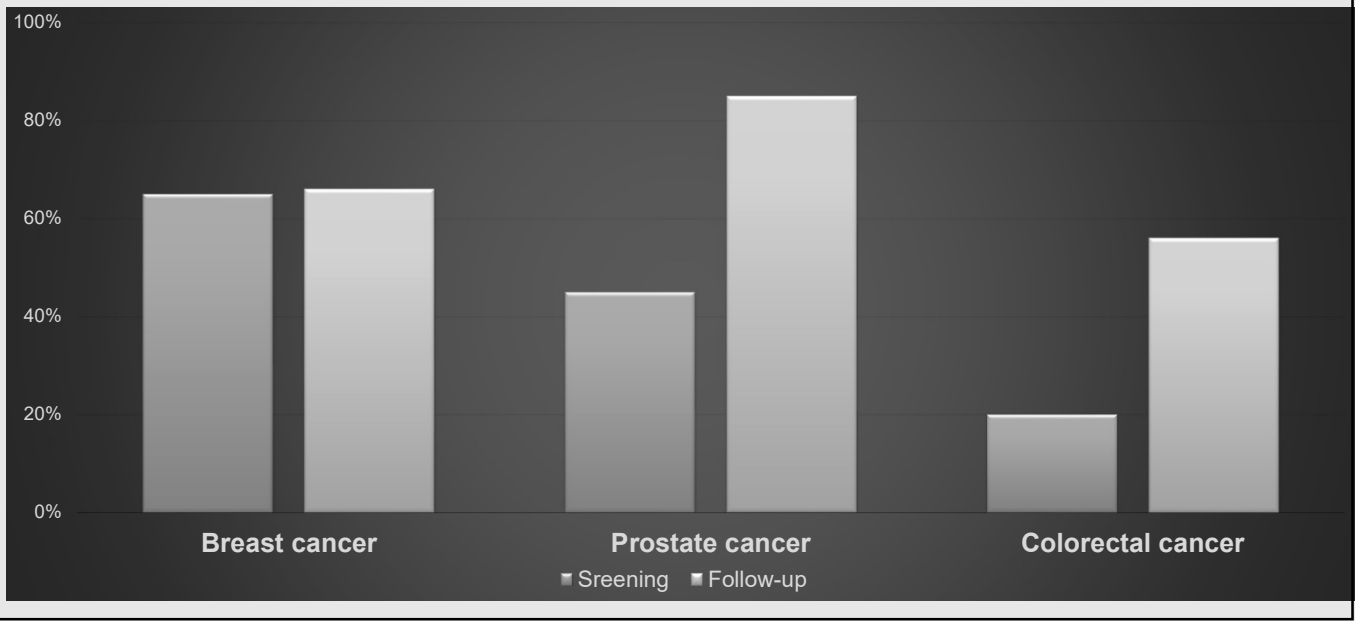
Leslie & McGrath, 2023



What have we learned about getting those with a gambling problem to seek help?

- ✓Not much about gambling
- ✓Do people with health problems seek treatment?
- ✓What can we learn from the alcohol literature?

What percentage screen & follow-up for common health problems?



What about engagement in alcohol treatment?

Table 1.

Summary of AUD and treatment seeking prevalence rates from national epidemiologic surveys.

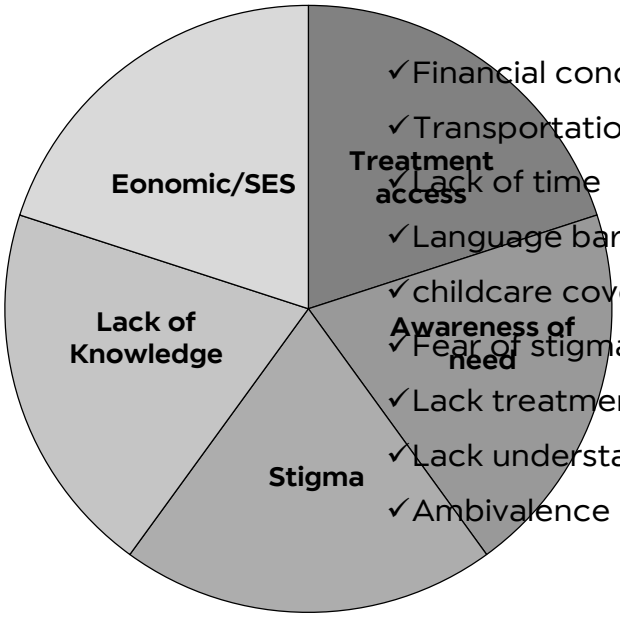
Venegas et al.

National Survey	Year(s) Surveyed	Diagnostic Criteria Used	Current (Past-Year) AUD Prevalence	Current (Past-Year) Treatment Seeking Prevalence	Lifetime AUD Prevalence	Lifetime Treatment Seeking Prevalence
Alcohol Supplement of the National Household Interview Survey (NHIS)[a]	1988	DSM-III-R	Abuse: 2.38% Dependence: 6.25% Total: 8.63%	*Not measured*	*Not measured*	*Not measured*
National Comorbidity Survey (NCS)	1990–1992	DSM-III-R	Abuse: 2.5% Dependence: 7.2%	Abuse: 11.6% Dependence: 24.4%	Abuse: 9.4% Dependence: 14.1%	8.0%[d]
National Longitudinal Alcohol Epidemiological Survey (NLAES)	1991–1992	DSM-IV	Abuse: 3.03% Dependence: 4.38% Total: 7.41%	Abuse: 4.4% Dependence: 13.8%	Abuse: 4.88% Dependence: 13.29% Total: 18.17%	Abuse: 9.2% Dependence: 23.5%
National Epidemiological Survey on Alcohol and Related Conditions (NESARC-I)	2001–2002	DSM-IV	Abuse: 4.7% Dependence: 3.8% AUD: 8.5%	Abuse: 3.1% Dependence: 12.1%	Abuse: 17.8% Dependence: 12.5% AUD: 30.3%	Abuse: 7.0% Dependence: 24.1% Total: 14.6%
NCS Replication (NCS-R)	2001–2003	DSM-IV	Abuse: 10.7%[c] Dependence: 6.3%[c]	Abuse: 37.2% Dependence: 38.4%	Abuse: 13.2% Dependence: 5.4%	Abuse: 12.4% Dependence: 20.7%
NESARC-II[b]	2004–2005	DSM-IV	Abuse: 5.23% Dependence: 3.28%	Abuse: 3.1% Dependence: 12.1%	*Not measured*	*Not measured*
NESARC-III	2012–2013	DSM-5	13.9%	7.7%	29.1%	19.8%

Venegas et al., (2021) Understanding low treatment seeking rates for alcohol use disorder: a narrative review of the literature and opportunities for improvement. The American Journal of Drug and Alcohol Abuse, 47(6), 664-679.

Treatment Seeking Barriers for AUD

Sales



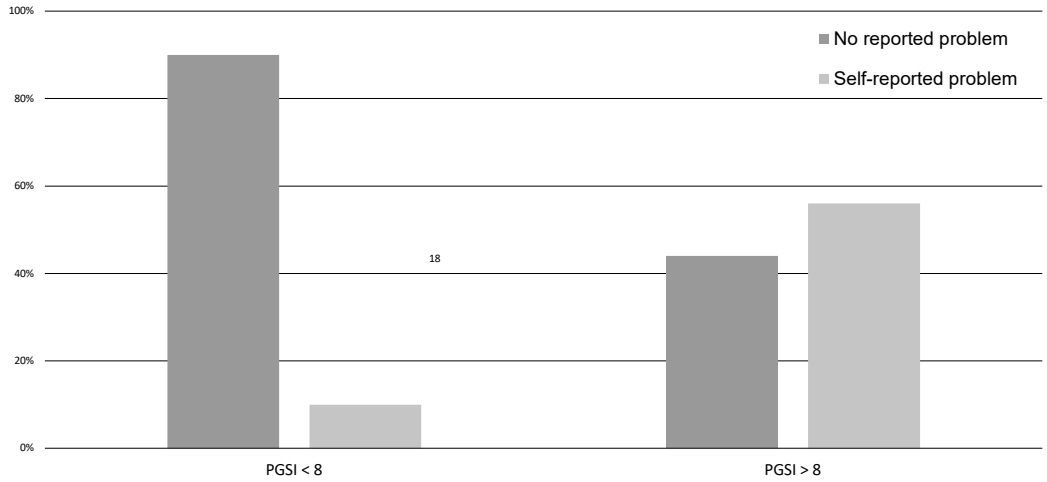
- ✓Financial concerns
- ✓Transportation issues
- ✓Lack of time
- ✓Language barrier
- ✓childcare coverage
- ✓Fear of stigma
- ✓Lack treatment access
- ✓Lack understanding of treatment
- ✓Ambivalence

What evidence do we have for increasing treatment engagement in treatment for gambling problems?

- Increase awareness
- Screen
- Increase treatment engagement

Problem Awareness

During the last year did you think your gambling was a problem?



Perhaps it is how we screen

- ✓ Successful screenings tend to be convincing biological tests with definitive outcomes.
- ✓ These outcomes are connected to treatment consultations

Very different from how we screen…

Brief Biosocial Gambling Screen

1) During the past 12 months, have you become restless, irritable or anxious when trying to stop/cut down on gambling?
2) During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?
3) During the past 12 months did you have such financial trouble as a result of your gambling that you had to get help with living expenses from family, friends or welfare?

Problem Gambling Severity Index

1) Have you bet more than you could really afford to lose?
2) Have you needed to gamble with larger amounts of money to get the same feeling of excitement?
3) When you gambled, did you go back another day to try to win back the money you lost?
4) Have you borrowed money or sold anything to get money to gamble?
5) Have you felt that you might have a problem with gambling?
6) Has gambling caused you any health problems, including stress or anxiety?
7) Have people criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true?
8) Has your gambling caused any financial problems for you or your household?
9) Have you felt guilty about the way you gamble or what happens when you gamble?

Peter, C.S.*, Whelan, J.P., & Pfund, R.A. (2022). Text comprehension analyses to improve assessment Accuracy demonstration using gambling disorder screening. Journal of Gambling Studies 38(4), 1269-1287. doi: 10.1007/s10899-022-10110-0

Perhaps screening should include…

✓**Reasons for *seeking* treatment**

- ✓ Financial distress
- ✓ Conflict with others
- ✓ Negative Emotions
- ✓ Work or Legal problems
- ✓ Health & Well-being

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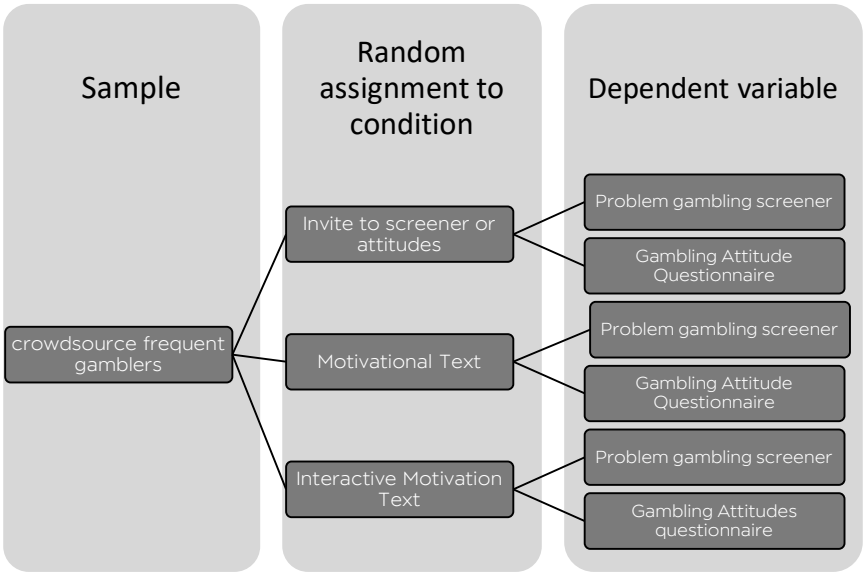
✓ **And not reasons *not related* to seeking treatment**

- ✓ Lifestyle change
- ✓ New understanding about gambling
- ✓ Loss of interest in gambling

Screening Process matters



Peter, S. C., Whelan, J. P., Pfund, R. A., & Meyers, A. W. (2021). Can motivational messages engage individuals at-risk for gambling disorder in an online assessment? Psychology of Addictive Behaviors, 35(1), 124–131

Screening Process matters

Noninteractive motivational message.

About 77% of US adults gamble every year. You may wonder why that is. Most people gamble for entertainment and social purposes. Perhaps you gamble for similar reasons. Weekly gambling increases the likelihood that someone will experience problems related to their gambling. Some common problems that people experience are stress, relationship problems, and financial difficulties. Gambling might have caused problems like this in your life.

If you are interested, we'd like to help you check in on your gambling by having you complete a brief questionnaire about gambling problems. This short questionnaire will ask you about how gambling might have affected your social, financial, and emotional well- being over the past year. There are probably some reasons why you would like to take this questionnaire, and reasons why you might not.

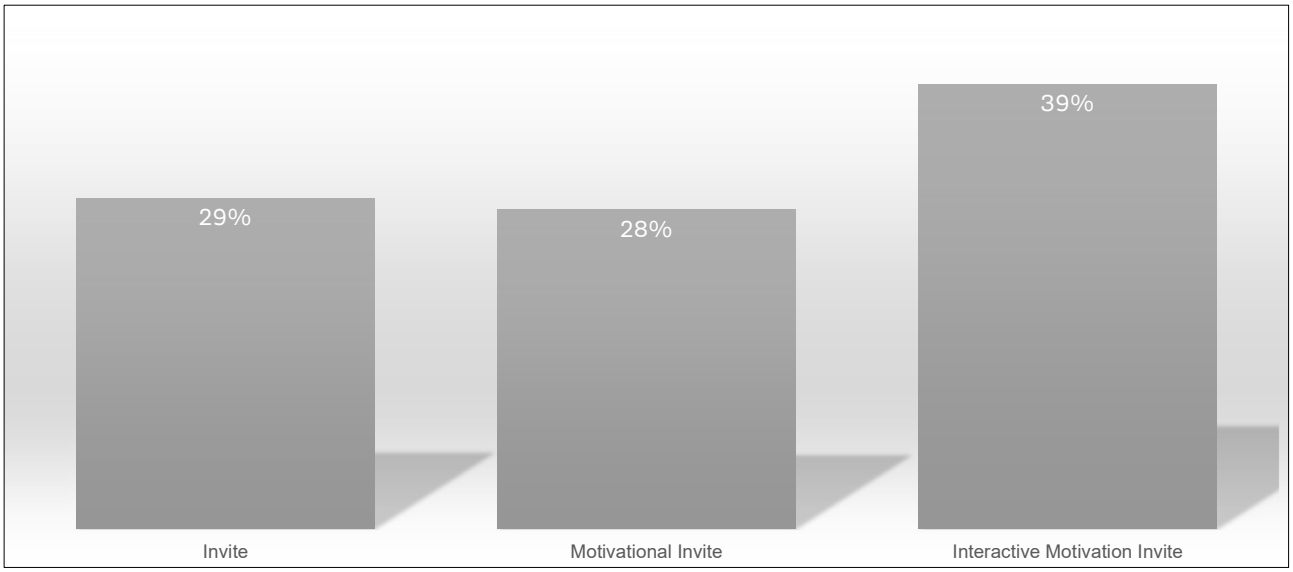
If you complete this questionnaire, we can use your answers to tell you how much you gamble in relation to other people. You may find that information valuable. Completing this questionnaire may help ensure that you are not experiencing gambling-related harm, or help you decide if there are any changes related to your gambling that you would like to make.

Screening Process matters

Table 1 Content of interactional motivational message

Item	Response options
1. About 77% of US adults gamble every year. Why do you think that is?	Open-ended
2. Most people gamble for entertainment and social purposes. Is that why you gamble?	Yes/no/somewhat
3. Weekly gambling increases the odds that someone will experience gambling problems. Some common problems that people experience are stress, relationship problems, and financial difficulties. Have you ever considered whether gambling has caused you any problems?	Yes/no
4. If you are interested, we'd like to help you check in on your gambling by having you complete a brief questionnaire about gambling problems. This short questionnaire will ask you how gambling might have affected your social, financial, and emotional well-being over the past year. What are some reasons why you might be interested in taking this questionnaire?	Open-ended
5. What are some reasons why you might not want to take this problem gambling screener?	Open-ended
6. If you complete this screener, we can also use your answers to tell you how much you gamble in comparison to other people. Is that information something that would interest you?	Yes/no/somewhat
7. Completing this screen may help ensure that you are not experiencing gambling-related harms, or help you decide if there are any changes related to your gambling that you would like to make	No response requested

Screening Process matters



Of those who screen 79% screen positive

Screening Process matters

Table 4 Identified themes in response to question, "What are some reasons why you might not want to take this problem gambling screener?"

Theme	Frequency (%)	Example response
Believing one does not have a problem	19	I do not feel I have a problem. It's fun and I am not going into debt over it or missing out on family stuff, etc I don't think I have a real problem just yet Because I know I don't have a problem
Concerned about privacy	8	It's my business I don't want anyone to find out that I have a gambling problem so I would like to keep it private I don't want to reveal too much personal information
Experiential avoidance	32	I don't like bad news It might hurt to see the results I don't want to hear that I have a gambling problem It will point out my problems and I am scared to face it I feel ashamed to reveal how much I gamble
A lack of perceived helpfulness	3	Because I do not think that it is going to help me It would be a waste of time It may not be trustworthy

Peter, S. C., Horn, T. L., McPhail, A., Meyers, A., & Whelan, J. P. (2021). Frequent gamblers' reasons for and against completing a problem gambling screener. Journal of Gambling Studies, 37(4), 1335-1346.

Addressing Stigma

- **Use person first language**
  - A person who struggles due to gambling
- **Avoid pathology jargon**
  - Describe behavior and harms
- **Reveal harms & possible change** [27]
  - Hurting your friends who could be valuable supports

Addressing Hesitancy

"The Letter Project"

- 50% do not show for 1st appointments
- Solution – Address hesitancy with mailed personal letter
  - Use motivational elements
  - Inform treatment expectations

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We are glad you called. Calling for an appointment can be hard to do. It means you are thinking about how gambling has caused you problems. It might help to think about how your recent gambling may conflict with the way you want to live your life and you may be unsure about what to do. We want work with you to explore the costs and benefits of what you have been doing. Doing this often helps people to decide if they want to make changes. While you need to decide about your gambling, we look forward to learning more about you. We are here to help and support you in any changes you might want to make.

29

partnership acceptance compassion evocation

We are glad you called. Calling for an appointment can be hard to do. It means you are thinking about how gambling has caused you problems. It might help to think about how your recent gambling may conflict with the way you want to live your life and you may be unsure about what to do. We want work with you to explore the costs and benefits of what you have been doing. Doing this often helps people to decide if they want to make changes. While you need to decide about your gambling, we look forward to learning more about you. We are here to help and support you in any changes you might want to make.

30

partnership acceptance compassion evocation

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31

partnership acceptance compassion evocation

In advance of your appointment, we would like to tell you about us. The Gambling Clinic started in 1999. We had learned that many struggle due to their gambling. Since opening the clinic, we have worked with over 1,000 individuals. We also have done a great deal of research on how to help people make changes. As a result of our work, we have become known as a national leader in helping people with their gambling.

Some people wonder about how our treatment works. There are several likely causes of your gambling problems. We know that understanding a person's gambling history is essential. Together we find skills that can create new ways of thinking and behaving. Once a person starts to change, it is important to be in control of your gambling and get on a path of better financial health. We believe that change happens if we work together to find different choices. We have learned that most people can create and maintain change in less than 10 one-on-one meetings with a member of our staff.

32

- Credibility
- Treatment rationale
- Treatment experience

Addressing Hesitancy

"The Letter Project" results

	Typical reminders	motivational letter
% attending	**51%**	**76%**

Addressing Hesitancy

"caretaker" "navigator"

	Telehealth	In-Person
Telehealth	**82%**	**88%**

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Thank you!

TAB

7

Healing the Spirit of Addiction
October 2024

Addressing Historical Trauma and Indigenous Cultural Perspectives of Addiction Treatment

Dr. Tonya Elliott Ph.D. LMFT

Introductions/Ackowledgements

- Land Acknowledgment-Wado- Giving thanks for this gathering and the Stewards of this land-Nuwuvi, Southern Paiute, people and the Las Vegas Paiute Tribe.
- Giving thanks to ICRG and the people that make this conference possible.

Agenda

- Introductions-Osiyo Hello/Welcome
- Situating Gambling Addiction in Native Culture
- Defining Historical Trauma
- Understanding our responsibility to cultural competency and trauma informed practices as mental health counselors

Answering the questions:

- Why do dominant culture theories fall short for helping Native people heal from addiction?
- What brings resiliency and wellness to Native people?
- How do we implement the strategies that work to help heal addiction related to historical trauma?
- Questions/Discussion

Problem Gambling in NA people and co-occuring disorders

Different terms have been used to attempt to define gambling addiction.

These include: "problem", "pathological", "disordered", "compulsive", "excessive", and "at risk" (Griffiths, 2014).

The essential features of "pathological gambling" are seen as (a) a continuous or periodic loss of control over gambling; (b) a progression, in gambling frequency and amounts wagered, in the preoccupation with gambling and in obtaining monies with which to gamble; and (c) a continuation of gambling involvement despite adverse consequences (Rosenthal & Lesieur, 2007)

Conceptualizing Gambling Addiction from within a Cultural Framework

- When training therapists we understand that conceptualization must come before treatment planning.
- We conceptualize from within a theoretical framework
- These are most often
- based in dominant culture theories

- -**addiction is a symptom of developmental and relational failures** (Mooney, Roberts, Bayston, & Bowden, 2019). For Native American people those developmental and relational failures have roots in current and historical trauma. This creates an importance for following a relational model of treatment.

Comparing GONA with Erikson's Psychosocial Stages of Development (Cultural Identity and Wellness)

GONA -	Erikson's Psychosocial Stages:
Belonging-	Trust vs. Mistrust Autonomy vs Doubt and Shame
Mastery-	Initiative vs. Guilt Industry vs Inferiority
Interdependence-	Identity vs Role Confusion Intimacy vs Isolation
Generosity-	Generativity vs Stagnation Integrity vs Despair

Defining HT

- Historical trauma is defined as the accumulation of emotional, psychological, and spiritual devastation that is a result of intergenerational collective community trauma (Brave Heart-Yellow Horse & DeBruyn, 1998; Duran, 2019; Brave Heart-Yellow Horse et al., 2016a; Grayshield et al., 2015).

Historical Trauma Response

Brave Heart-Yellow Horse and colleagues (2016a) asserted that typical emotional responses to historical trauma include:

- Feelings of persistent grief and loss
- Complicated and unresolved bereavement
- Sadness
- Anger
- Hopelessness.
- Difficulty with attachment to caregivers
- Historical trauma response explains the profound mental health disparities and difficulty in access to and follow through in mental health treatment for Native people (Grayshield et al., 2015; Guenzel & Struwe, 2019; Nelson-Barber & Johnson, 2016; Reagan, 2012; Whitbeck et al 2004).

The GAP in science….

- Researchers have identified connections between historical trauma and treatment resistance regarding Westernized dominant culture-based counseling with Native clients (BraveHeart-Yellow Horse et al., 2016b; Campbell, 2014; Gone, 2014; Nelson-Barber & Johnson, 2016; Nutton & Fast, 2015; Robbins et al., 2016).

Why doesn't medical model counseling always work for Native People?

The Problem with Dominant Culture Theories

- We are trying to understand a collective phenomenon from within an individualistic perspective
- Perpetuates oppression- both internalized and externalized
- Pathologizes trauma-creates more shame triggers and can actually, cause harm.
- Perpetuates medical model approaches that are ineffective at ameliorating the mental health condition for Native people
- **Symptoms of historical trauma cannot be effectively treated by current psychotherapies that do not include some form of cultural adaptation** (Brave Heart, Chase, Elkins, Altschul, 2011; Gone, 2013; Griner, & Smith, 2006; Johnson, 2006).

Causes of Mental Health Disparities in Native people

- The leading causes of depression, anxiety, substance abuse, addiction, violence, and even suicidal behavior in Native communities have foundations in historical trauma (Gone, 2014, 2019; Treat, 2016).
- The research suggests that reconnecting Native people to their cultural roots, including values, traditions, language, songs, spirituality, and community, helps to restore cultural identity and mental wellness (Brave Heart-Yellow Horse et al., 2016a; Gone, 2014, 2019a; Marsh, Coholic, Cote-Meek, & Najavits, 2015a; Nelson-Barber & Johnson, 2016; Robbins et al., 2016).

What is our responsibility as counselors?

- What is our level of responsibility to providing culturally competent care?
- What are the guidelines for culturally competent mental health care in general?
- Many agencies talk the talk…….
- How do we walk the walk?

ACA Multicultural and Social Justice Counseling Competencies

4 Developmental Domains-
Attitudes/ Beliefs, Knowledge, Skills and Awareness

- **Counselor self-awareness**
- **Client world-view**
- **Counseling relationship**
- **Counseling and advocacy interventions**
- https://www.counseling.org/docs/default-source/competencies/multicultural-and-social-justice-counseling-competencies.pdf?sfvrsn=20

My Dissertation Research

Understanding Historical Trauma and Cultural Restoration for Native American Women (Elliott, 2020)

- Interviewed 12 Native Women who had all reported experiencing HT and had "healed".
- All reported ceremonial life as being a major part of their healing.
- All reported experiences of spiritual awakening as a result of restoring culture.
- All called for more cultural competency in mental health delivery for Native people.

Counselor Healer Bringing Medicine,

- We all have our own personal medicine
- Counselors do not need to be medicine people to help folks heal from HT
- Our job is to create a safe container in which the client can gain access to their own innate healing ability-their inner healer or the Spirit of Healing
- Safe container = non-judgement, cultural competence, clinical competence, facilitating the emergence of the true Self

2 Well Researched Methods of Culturally Competent and Trauma Informed Healing for Native people

- Healing the Soul Wound (Duran, 2019)-Practices recognizing old ceremonies, creating new ceremonies, naming ceremonies, dream work
- Somatic Archeaology (Gibson, 2008)- Excavating the trauma stories as well as the healing path from our DNA
- Ceremony Assisted Treatment -

What do these methods have in common?

- All recognize that healing addiction/HT begins with a ceremonial recognition of the spirit of the concern aka the Spirit of Addiction/ the Spirit of Trauma
- Facing and allowing the presence of the Spirit of Addiction long enough to correct the relationship to one of respect.
- Emphasize **accessing The Spirit of Healing** -a part of One's Self that is already spiritually aligned and capable of self-healing
- Learning to trust that part of Self and inviting it to be in charge again
- Views on diagnosis as naming ceremonies

What do these methods have in common? Ceremony.

- Life is sacred.
- Life is viewed as a ceremony.
- Relationship is viewed as a ceremony.
- We are in relationship with everything (land, water, food, animals each other).
- Everything is a ceremony.
- Even bad habits and diseases can be viewed as ceremony (albeit unconscious ones).
- Healing is ceremony.
- We require a new ceremony to undo an old ceremony or one that is no longer functional.
- One of those new ceremonies needs to be a naming ceremony.

Soul Wounding

- When the Soul is wounded it goes back into the "black world" (Duran, 2019). The unconscious. Psychological regression…creates a "huge spiritual gap" in the person who has been wounded.
- Natural law dictates that soul or spirit seeks itself- that person begins to "seek spirit" albeit from an ego (wound) based perspective.
- Spiritual Emptiness= vulnerability to addiction in Native people.
- The addiction "takes possession" of the person (if not attended to).

Healing Soul Wounding

- Historical trauma leaves a gaping void in the soul/psyche of the person (Duran, 2019)
- In some traditions, there is an exchange between the spirit of addiction and the persons soul (balance of give and take).

Healing the Soul Wound

Psycho-therapist= Soul healer (Duran, 2019)

- Counseling/Psychotherapy is a Ceremony
- Addiction is a Spiritual Matter-
- All mental health symptoms are a result of spiritual imbalance
- All imbalance is created through ceremony
- All healing (restoration of balance) happens through creating a new ceremony (making an offering to the spirit of….(name the addiction)

Somatic Excavation

Somatic Storykeeping

- The body is the "custodian of stories" (Gibson, 2008)
- Somatic storytelling is a "sacred job".
- Looking at patterns over the timeline and prepare the psyche for excavation of those stories
- Similar to Buddhist and Hindu philosophies of Karma and Dharma, Native American spiritual perspectives of spiritual rebirth and how and why and when healing happens are part of our Earthwalk (Gibson, 2008).
- By facing whatever there is to face karmically in the stories, energy is then freed up to energize one's divine path, or Dharma.

Do not to be afraid of your story

- We begin with the breath- helps access these innate healing energies.
- One main goal-to be present
- Breathe-Connect with our bodies
- Ground-Connect with the earth's body
- Settle deeper into the body
- Invite the ancestors/spirit team

5 steps of Somatic Archeology

According to Dr. Ruby Gibson in her book My Body My Earth(2008), there are somatic based ancestral healing practices that can be easily employed to begin the healing process(Freedomlodge.org).

- I Notice-observing the body inside and out
- I Sense-intuitively sensing an entry point
- I Feel-becoming present with the feeling experience physically and emotionally
- I Interpret- understanding and changing the narrative
- I Reconcile- Who am I now?

Healing the Spirit of Addiction

- Simple but powerful process.
- Offering medicine (tobacco or cornmeal)-The access medicine-Story of how humans got tobacco
- Begins with a new ceremony-offer the tobacco, cornmeal, song
- Continues with excavating the trauma from the body and soul- sometimes this requires breaking karmic contracts and/or creating new ones
- Completes with a new naming ceremony and asking the question who am I now with this new name and purpose?

(Duran, 2019, Gibson,2008)

Activity

- Think of something you have been wanting to heal in yourself.
- Maybe something you've been avoiding or procrastinating.
- Maybe something you felt like you had no control over.
- Imagine making an offering to the spirit of that something. Use a metaphor if that is helpful (In Narrative and Solution Focused theory we call this externalizing the problem).
- Ask to heal the relationship. Be careful not to try and get rid of it. Allow it to be there. Recognize what it has taught you. Offer respect.
- Then make a second offering to the spirit of healing.
- Ask the spirit of healing to help mediate the relationship with the spirit of (name the concern-addiction)…..

Activity-Pause

Review- 5 steps of Somatic Archeology:

- I Notice-observing the body inside and out
- I Sense-intuitively sensing an entry point
- I Feel-becoming present with the feeling experience physically and emotionally
- I Interpret- understanding and changing the narrative
- I Reconcile- Who am I now?

Check in – Story/ Song /Getting Present

- Checking in
- How are we right now?
- Body Scan
- Breathe

- Gvdugi- Everybody working together

Questions/Reflections

- What are your take-aways from today?

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Bringingmedicine.org

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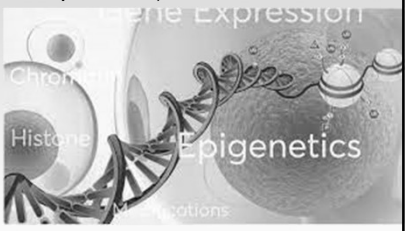
Epigenetics

- Epigenetics is the study of how your behaviors and environment can cause changes that affect the way your genes work.
- Unlike genetic changes, epigenetic changes are reversible and do not change your DNA sequence, but they can change how your body reads a DNA sequence(POWs who survived starvation-descendants more prone to diabetes).
- Explains how events in someone's lifetime can change the way their DNA is expressed, and how that change can be passed on to the next generation.
- Tiny chemical tags are added to or removed from our DNA in response to changes in the environment in which we are living. These tags turn genes on or off, offering a way of adapting to changing conditions without inflicting a more permanent shift in our genomes.
- These tags can be passed down genetically (Mice and cherry blossoms)

Can the legacy of trauma be passed down the generations?
https://www.bbc.com/future/article/20190326-what-is-epigenetics
Epigenetic Mechanisms of Integrative Medicine
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5339524/



My cultural mentors and our community:

- **Dr. April Lea Go Forth (Cherokee-Lakota)**
- **Dr. Shirley Rowland (Eastern Cherokee)**

- **Barbara Warren (Western Cherokee)**
- **Maggie Steele (Chiricahua-Apache**

Sonia & Barbara

Sonia Keller-Lapoint 'Birdwoman': Seneca Onondaga Beaver Clan

Barbara Warren: Cherokee Nation

TAB

8

CHA Division on Addiction
Cambridge Health Alliance

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Who's Responsible for Responsible Gambling?

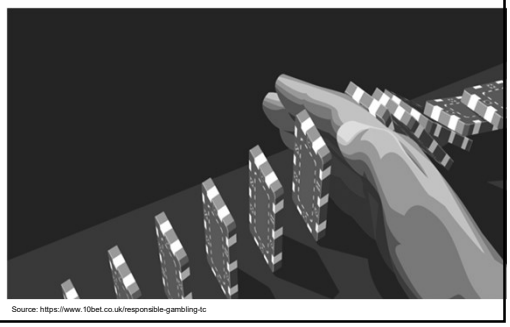
Eric R. Louderback, Ph.D.

Research & Evaluation Scientist, Cambridge Health Alliance
Instructor, Harvard Medical School

Source: https://medium.com/@jan.linkbuilder/responsible-gambling-setting-limits-and-recognizing-addiction-efd62318b02f

October 7, 2024

1:30 p.m. – 2:30 p.m.


Source: https://www.10bet.co.uk/responsible-gambling-tc

Disclosure and Funding Statements

- My research Division receives funding from a variety of government, foundation, and private research funding sources, including from the gambling industry.
- **A full listing of current and past funders is available on our website at:** https://www.divisiononaddiction.org/meet-us/our-funders/
- Some of the published research presented today was funded by MGM Resorts International.
- We are committed to researcher independence and funders did not have any input on the research studies discussed today before publication.

2

Today's Agenda

- Learning objectives (2 min.)
- Key stakeholders and who should be responsible? (5 min.)
- Multiple definitions of responsible gambling from different parties (10 min.)
- Global perspectives about who is responsible (5 min.)
- Key court cases and decisions about responsibility (5 min.)
- What does the science say? (15 min.)
- The Shared Responsibility Model (5 min.)
- Key takeaways (3 min.)
- Question and answer session (10 to 15 min.)

3

Learning Objectives

- **After today's session, you will be able to…**

1. Understand players' perspectives on responsible gambling initiatives and views about responsibility for reducing gambling-related harm.
2. Assess the effectiveness of current responsible gambling programs from the players' viewpoint.
3. Develop player-centered strategies to enhance responsible gambling efforts.

Source: https://www.rawpixel.com/image/10095758/image-person-light-logo

4

Introduction and Background

- Gambling is a popular activity that is legal in many countries across the world
- Recent U.S. estimates show that $66.5 billion was wagered in 2023 alone (Parry, 2024)
- Many people gamble without problems, but some experience harm or meet clinical criteria for Gambling Disorder
- Given this potential for harm, many stakeholders have been identified as responsible for reducing this risk
- **Which leads to two key questions:**
    - **Who *should* be responsible for:**
        1. **promoting responsible gambling?**
        2. **reducing the potential for problem gambling?**

5

Five key stakeholders in gambling

01	**Individual gamblers**	People who gamble at online or land-based casinos.
02	**Scientists**	Those who research gambling and problem gambling.
03	**Clinicians and treatment providers**	Professionals who care for and treat people experiencing problem gambling.
04	**Gambling operators and their employees**	Companies and employees who work for and run gambling businesses.
05	**Government regulators and public health agencies**	Commissions that regulate gambling operators and agencies that seek to promote healthier gambling.

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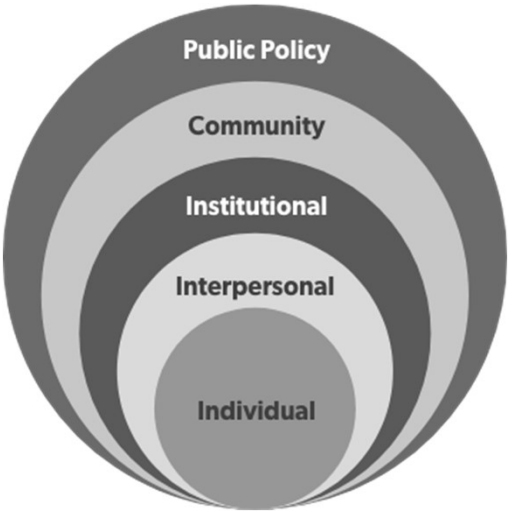
Who should be responsible?

- Many perspectives exist on responsibility for reducing potential risks associated with gambling
- Within the **socio-ecological model**, there are multiple sources that can impact a person's gambling experiences
- Gambling occurs on a continuum, with different programs and interventions at each level
- Let's take a look at a public health framework of the **spectrum of gambling behaviors**, and where stakeholder responsibility fits in



Source: https://mcoepgp.org/about-the-problem/

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Who should be responsible? A public health framework

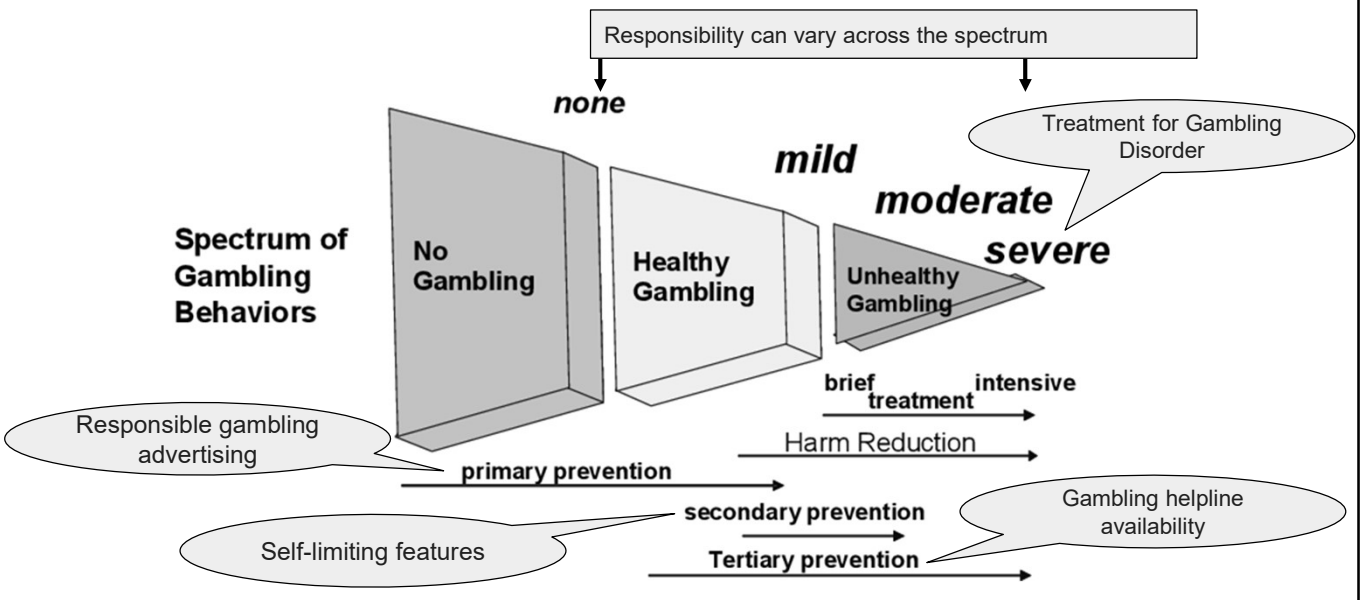

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Figure from Korn & Shaffer (2004)

Specific initiatives and responsibilities across the spectrum

Part of Spectrum	Program or Intervention	Responsible Party
No Gambling	Responsible gambling advertising	Public health agencies Operators
Recreational Gambling	Responsible gambling advertising In-game features (e.g., voluntary self-limiting for amount spent and time) Use of safer gambling strategies Research and evaluation	Public health agencies Operators Regulators Individual gamblers Researchers
Mild Gambling Problems	Responsible gambling advertising Clinical resources Problem gambling helpline	Public health agencies Clinical practitioners Regulators
Moderate to Severe Gambling Problems	Treatment resources Problem gambling helpline Self-exclusion programs Research and evaluation	Public health agencies Clinical practitioners Regulators Researchers

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Multiple definitions from industry, government, science, and individuals

- Another important related question is:
  - **How should we define "responsible gambling" or "responsible gaming"?**
- Many definitions exist both within and across the industry, among regulators, in academic research, and for individual gamblers
- How you define **responsible gambling** has important implications for understanding…
  - *who is responsible*
  - *who should be responsible*
- …for reducing potential gambling-related harm

10

But first, a question for everyone:

How do <u>you</u> define
“responsible gambling”
or
“responsible gaming”?

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Industry-based definitions of responsible gambling

AGA Definition

“AGA will work with stakeholders to assist in the distribution of information and raise awareness regarding the industry commitment to responsible gaming.”

Operator Definitions

“The company will work to offer games that are joyful and safe and do not encourage excess.”

“It’s a responsibility at all levels. […] Of course, the player has a major responsibility. The gaming companies have a responsibility to prevent, and the state to regulate.”

- Forsström, D., & Cisneros Örnberg, J. (2019). Responsible gambling in practice: A case study of views and practices of Swedish oriented gambling companies. N*ordic Studies on Alcohol and Drugs, 36*(2), 91-107.

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Source: https://www.americangaming.org/member-code-of-conduct

Regulator-based definitions of responsible gambling

Massachusetts Gaming Commission

"...a requirement that casino operators provide complimentary on-site space for an independent substance abuse, compulsive gambling and mental health counseling service and establish a program to train gaming employees in the identification of and intervention with customers exhibiting problem gaming behavior."

Nevada Gaming Commission

"...responsible gaming framework includes credit restrictions, a requirement for wager and time limits for interactive gaming, as well as treatment and research provisions."

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Source: https://www.americangaming.org/resources/responsible-gaming-regulations-and-statutes-guide/

Science-based definitions of responsible gambling

Blaszczynski et al. (2011)

"These programs intend to minimize negative consequences of excessive gambling, but vary considerably in their aims, focus, and content."

Hing et al. (2018)

"Exercising control and informed choice to ensure that gambling is kept within affordable limits of money and time, is enjoyable, in balance with other activities and responsibilities, and avoids gambling-related harm."

Blaszczynski et al. (2022)

"Responsible gambling exists when individuals gamble within personally affordable limits."

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Definitions of responsible gambling from individual gamblers

Individual Gambler Definition 1

"If you cannot afford it don't do it…"

Individual Gambler Definition 2

"People can gamble responsibly as long as they stick to the few rules you set."

Individual Gambler Definition 3

"Machines register each player with a card and all patrons have a daily limit on gambling, all venues would have to be connected for this to work."

- Marko, S., Thomas, S. L., Robinson, K., & Daube, M. (2022). Gamblers' perceptions of responsibility for gambling harm: a critical qualitative inquiry. *BMC public health, 22*(1), 725.

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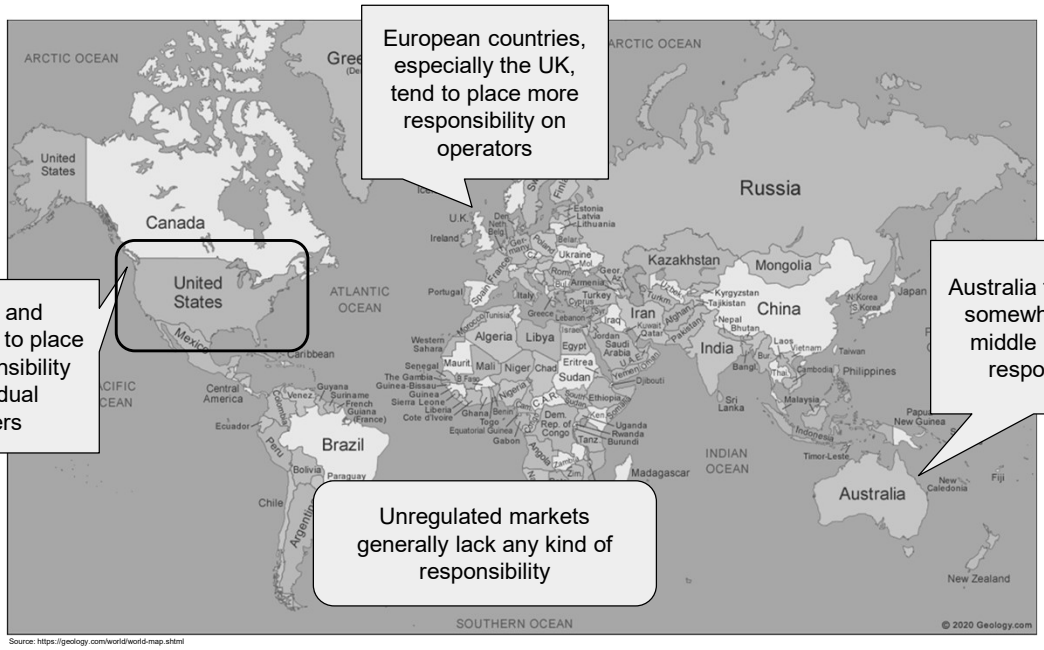
Global perspectives on RG and who is responsible



Source: https://geology.com/world/world-map.shtml

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Key U.S. court cases and decisions about responsibility

- A few notable court cases have ruled on issues related to responsibility for gambling behavior

	Case	Operator responsible	Gambler responsible	Key Points and Considerations
1	Watanabe vs. Harrah's (2009)		✓	• Incurred $14.7 million in gambling debts at multiple Las Vegas casinos • Claimed that casino kept him intoxicated on multiple substances to keep him gambling • Lawsuit was dismissed
2	Johnson vs. Downtown Grand Las Vegas Hotel & Casino (2014)		✓	• Lost $500,000 gambling on blackjack and pai gow • Said he was too intoxicated to remember gambling • Judge ruled in favor of casino
3	Antar vs. MGM Resorts (2023)		✓	• Sued the Borgata and BetMGM for losing over $30 million in wagers • Judge dismissed lawsuit, stating it was the defendant's fault for spending the money

Sources: https://www.cnn.com/2014/03/06/us/california-drunken-gambler-las-vegas-casino/index.html https://lasvegassun.com/news/2009/may/18/gambler-who-lost-millions-claims-he-was-plied-alco/ https://www.playnj.com/news/lawsuit-claims-betmgm-nj-online-casino-exploited-gambling-addiction/70939/

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What does the science say?

- Alongside my colleagues, I've studied questions related to responsibility for reducing the potential for gambling-related harm

Heather M. Gray, Ph.D.

Debi A. LaPlante, Ph.D.

Brett Abarbanel, Ph.D.

Bo J. Bernhard, Ph.D.

Shane W. Kraus, Ph.D.

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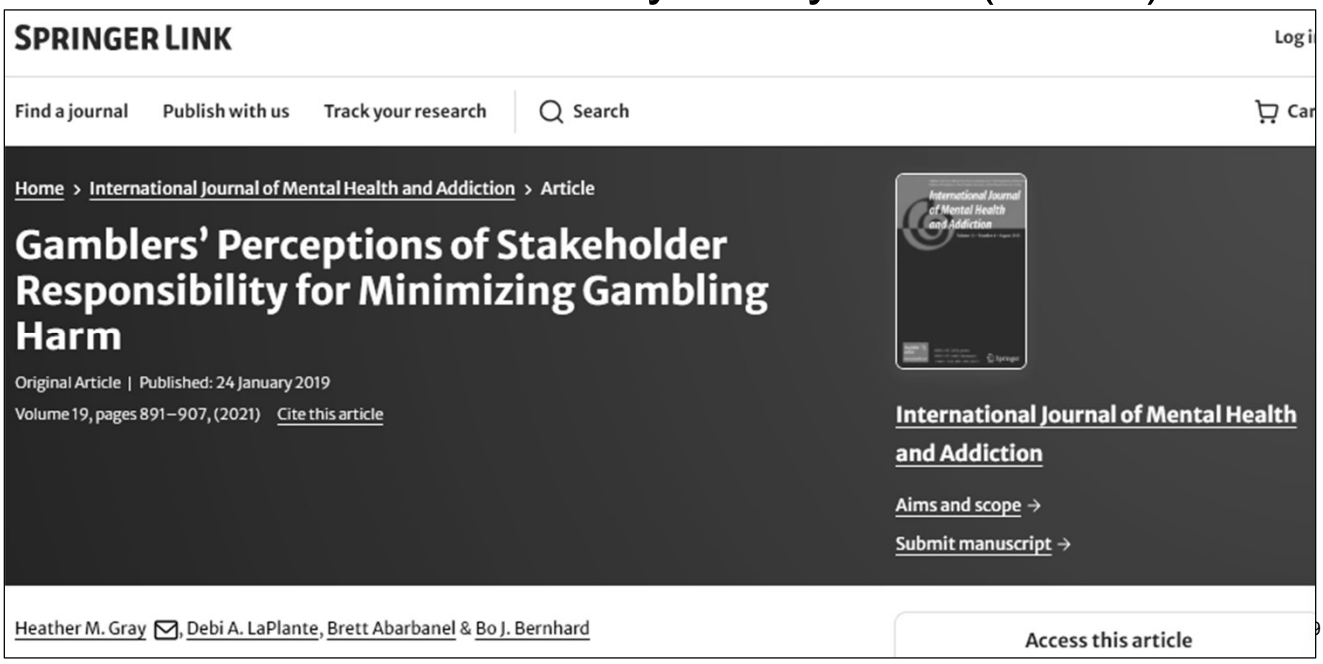
What does the science say? Gray et al. (2021a)



What does the science say? Gray et al. (2021a)

- Surveyed 3,748 MGM loyalty club members in 2017 and asked: *Minimizing the harm that can come from gambling is the responsibility of…*

Stakeholder group	**%**
Individual gamblers	74.6
Scientists/clinicians	4.0
MGM Resorts employees	9.3
Government regulators	10.0
Public health officials	7.7
Casino industry lobbyists	9.0
Public safety officials	5.9

- Gray, H. M., LaPlante, D. A., Abarbanel, B., & Bernhard, B. J. (2021). Gamblers' perceptions of stakeholder responsibility for minimizing gambling harm. *International Journal of Mental Health and Addiction, 19*(4), 891-907.

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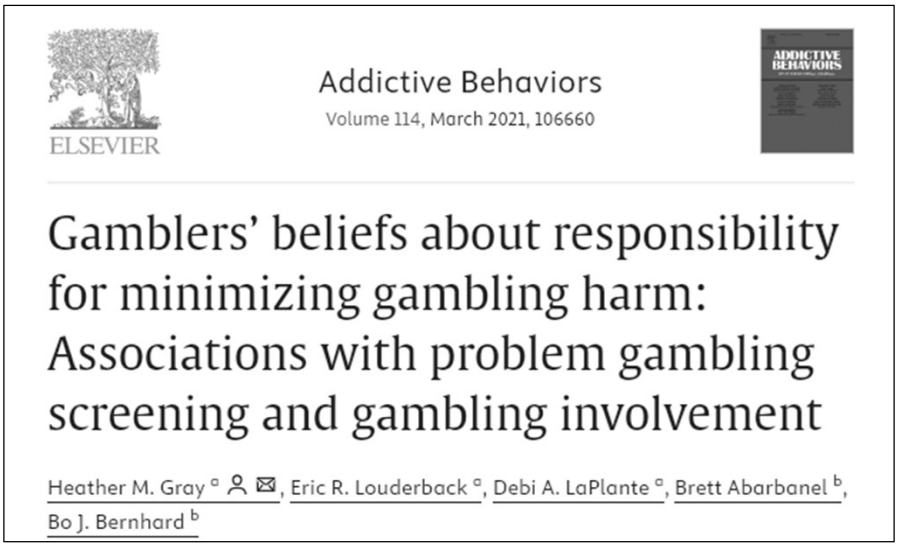
What does the science say? Gray et al. (2021b)



Addictive Behaviors
Volume 114, March 2021, 106660

Gamblers' beliefs about responsibility for minimizing gambling harm: Associations with problem gambling screening and gambling involvement

Heather M. Gray [a], Eric R. Louderback [a], Debi A. LaPlante [a], Brett Abarbanel [b], Bo J. Bernhard [b]

21

What does the science say? Gray et al. (2021b)

- Surveyed 4,795 MGM loyalty club members in 2019 and asked:
  Who is responsible for helping to minimize the harm that can come from gambling?

Stakeholder group	**%**
Individual gamblers	94.6
Scientists	23.4
Clinicians	29.7
MGM Resorts employees	35.1
Government regulators	37.3
Public health officials	34.3
Casino industry lobbyists	40.2
Public safety officials	33.3

- Gray, H. M., Louderback, E. R., LaPlante, D. A., Abarbanel, B., & Bernhard, B. J. (2021). Gamblers' beliefs about responsibility for minimizing gambling harm: Associations with problem gambling screening and gambling involvement. *Addictive Behaviors, 114*, 106660.

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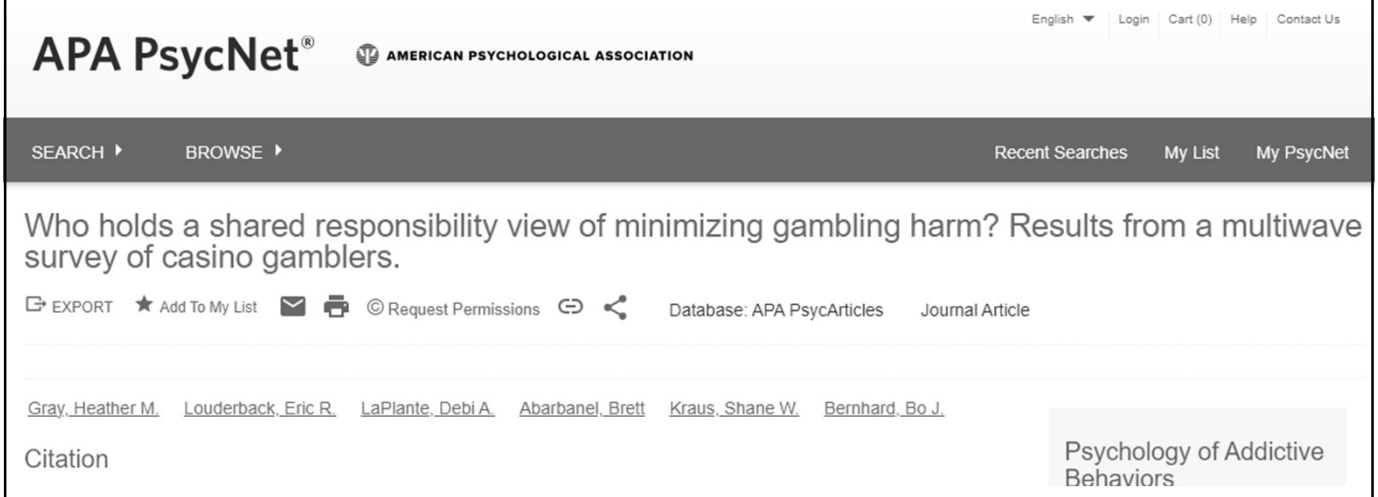
What does the science say? Gray et al. (2022)



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What does the science say? Gray et al. (2022)

- Collected data from 4,336 MGM loyalty club members in 2020

Stakeholder group	BBGS positive	BBGS negative
Individual gamblers	90.0	93.7
Scientists are responsible	13.3	8.7
Clinicians are responsible	17.4	13.7
MGM Resorts employees	19.7	13.5
Government regulators	30.7	20.4
Public health officials	21.6	15.5
Casino industry lobbyists	29.3	18.7
Public safety officials	24.5	14.5

Note: All differences were statistically significant ($p < 0.05$).

- Gray, H. M., Louderback, E. R., LaPlante, D. A., Abarbanel, B., Kraus, S. W., & Bernhard, B. J. (2022). Who holds a shared responsibility view of minimizing gambling harm? Results from a multiwave survey of casino gamblers. *Psychology of Addictive Behaviors, 36*(4), 347–357.

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What does the science say? Marko et al. (2022)

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Gamblers' perceptions of responsibility for gambling harm: a critical qualitative inquiry

Research | Open access | Published: 12 April 2022

Volume 22, article number 725, (2022) Cite this article

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BMC Public Health

Aims and scope →

Submit manuscript →

Sarah Marko, Samantha L. Thomas, Kim Robinson & Mike Daube

Sections Figures

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What does the science say? Marko et al. (2022)

- Taking a qualitative approach with 363 gamblers from Australia, the authors identified six key themes related to gambling and responsibility

1. Gambling in moderation
2. Personal responsibility for rational behaviour
3. Character flaws
4. Personal responsibility to seek help
5. More education is needed
6. Governments are responsible for action - but motivation and efficacy are questioned

- Marko, S., Thomas, S. L., Robinson, K., & Daube, M. (2022). Gamblers' perceptions of responsibility for gambling harm: a critical qualitative inquiry. *BMC public health*, *22*(1), 725.

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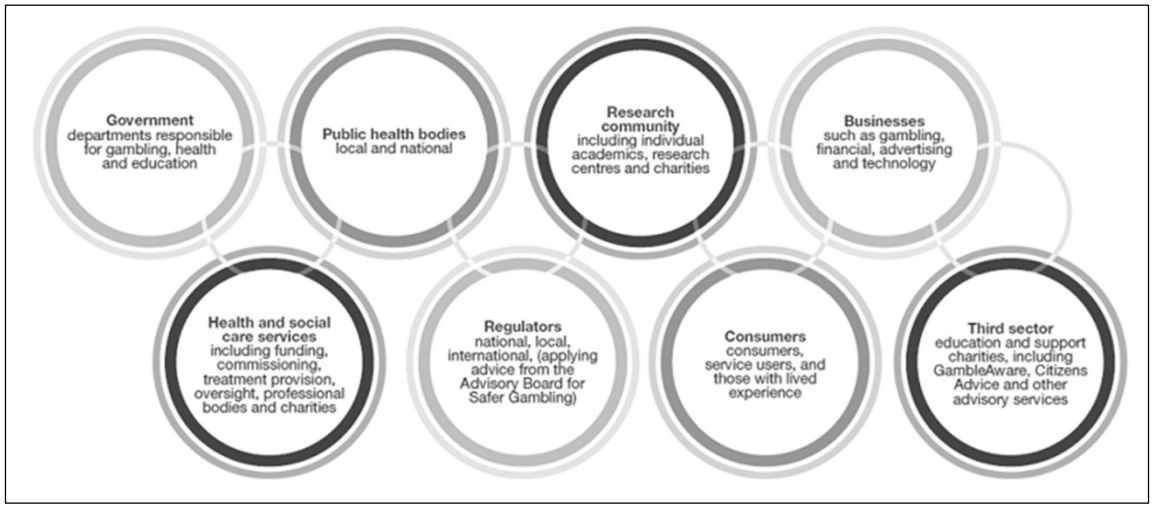
The Shared Responsibility Model



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Source: https://www.gamblingcommission.gov.uk/print/national-strategy-to-reduce-gambling-harms

Key Takeaways

- Views about **responsibility for gambling harm** and how to define **responsible gambling** vary across samples and locations
- **Research has found that:**
  - People tend to hold a variety of different stakeholders responsible
    - Individual gamblers are most often seen as responsible
  - Other groups, including industry, regulators and clinicians are also seen as responsible
  - People experiencing gambling problems are more likely to view multiple external stakeholders as responsible
- A **shared responsibility perspective** can help to understand and better direct responsible gambling and help resources via diverse stakeholder groups

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Thank you!

- Eric R. Louderback, Ph.D.
- Research & Evaluation Scientist, Cambridge Health Alliance
- Instructor, Harvard Medical School
- elouderback@cha.harvard.edu

Source: https://hms.harvard.edu/news/hms-withdraws-us-news-world-report-rankings

CHA Division on Addiction
Cambridge Health Alliance

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

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TAB

9

Celebrating 25 Years of ICRG: Reflecting on Past Achievements and Envisioning the Future of Gambling Research

Presenters

Travis Sztainert, PhD, ICRG

Gloria M. Miele, PhD, UCLA Integrated Substance Abuse Programs (ISAP)

Panelists

Sarah E. Nelson, PhD, Cambridge Health Alliance

Rep Aaron Kaufer, Pennsylvania House of Representatives

Alan Feldman, PhD, ICRG and University of Nevada, Las Vegas

A BRIEF HISTORY OF ICRG

FOUNDING OF THE ICRG (1996)

- In 1996, members of the American Gaming Association (AGA) established the National Center for Responsible Gaming (NCRG).
- It was the first organization devoted exclusively to funding independent, peer-reviewed research on pathological and youth gambling.
- The goal was to educate the public about problem gambling and ensure that gambling research had no industry interference.

EARLY ACHIEVEMENTS (1997-1999)

- **1997**: NCRG awarded its first research grant to Dr. Howard Shaffer at Harvard University. His meta-analysis provided the first reliable statistic on the rate of gambling disorders in the U.S. and Canada, which estimated that between 1.14% and 1.6% of the population were pathological gamblers.
- **1998**: NCRG representatives testified at hearings conducted by the National Gambling Impact Study Commission (NGISC). Researchers presented NCRG-funded findings to a National Research Council panel.
- **1999**: NCRG hosted its first Conference on Gambling and Addiction, and JCM-AGA Golf Classic was established, raising nearly $3 million for NCRG.

EXPANSION AND INNOVATION (2000-2005)

- **2000**: NCRG awarded $2.4 million to Harvard Medical School's Division on Addictions to establish the Institute for Research on Pathological Gambling and Related Disorders. This marked the start of large-scale, organized research efforts into gambling disorders.
- **2002**: NCRG introduced the annual 'Scientific Achievement Awards' to honor exceptional contributions to gambling research. The first recipients were Dr. Robert Custer (Career Achievement) and Dr. Nancy Petry (Young Investigator).
- **2004**: The 'Reno Model,' a science-based framework for responsible gaming practices, was published, guiding stakeholders on how to minimize gambling harms.

ICRG'S GLOBAL IMPACT (2006-2010)

- **2006**: NCRG developed 'EMERGE,' an interactive web-based training program aimed at educating casino employees about responsible gaming. It was customizable for different employee levels.
- **2008**: NCRG presented its first international programming at G2E Asia in Macau, helping to spread awareness of gambling disorders globally.
- **2009**: NCRG expanded its research impact by creating the Centers of Excellence, which provided multi-year grants to support sustained research on gambling disorders. These Centers were tasked with promoting collaborative research at multiple institutions.

REBRANDING AND DIGITAL INITIATIVES (2011-2020)

- **2011**: NCRG rebranded itself with a new logo and expanded its digital presence, launching CollegeGambling.org, a website dedicated to educating students, parents, and administrators about gambling issues among youth.
- **2016**: NCRG held a 'State of the Science' meeting that led to the Public Health Initiative, providing critical insights for policymakers on gambling as a public health issue.
- **2020**: NCRG was renamed the International Center for Responsible Gaming (ICRG), reflecting its growing global footprint and influence in gambling research.

RECENT DEVELOPMENTS AND FUTURE GOALS (2021-2024)

- **2021**: ICRG awarded a $402,500 grant to Dr. Joshua Grubbs at Bowling Green State University to conduct the first-ever national survey on sports betting in the U.S., examining its impact.
- **2023**: The ICRG doubles the number of corporate sponsors for the annual Conference on Gambling and Addiction.
- **2024**: ICRG celebrates 25 years of its annual Conference on Gambling and Addiction, with sponsorship from the San Manuel Band of Mission Indians, and doubles its grant funding for responsible gambling research.

A BRIEF HISTORY OF FUNDED RESEARCH

For 25 years, the ICRG has funded cutting-edge research aimed at understanding and mitigating the harms caused by gambling. Through innovative approaches, we have helped shape policies, interventions, and industry practices globally.

EARLY YEARS AND FOUNDATIONAL RESEARCH (1998-2005)

In its early years, the ICRG focused on establishing foundational knowledge of gambling behaviors and their societal impacts. This period set the stage for more targeted interventions by examining the prevalence and genetic factors of gambling addiction.

Examples:

1. Pathological Gambling Rate in the U.S.: A National Survey
2. Twin Studies in Gambling Addiction: Uncovering Genetic Components
3. Assessing Socioeconomic Impact of Gambling in Various U.S. Communities

GROUNDBREAKING STUDIES (2006-2010)

During this period, research funded by the ICRG delved into the neurobiology of gambling, using tools like fMRI to understand how the brain responds to gambling stimuli. These studies were crucial in identifying brain regions involved in addiction and paved the way for therapeutic approaches.

Examples:

1. Functional MRI of Neural Responses to Gambling Gains and Losses
2. Gender Differences in Gambling Addiction and Treatment Outcomes
3. Development of Gambling Severity Index for Early Detection

TECHNOLOGICAL ADVANCES (2011-2015)

The growing use of technology in both gambling and research spurred innovative studies funded by the ICRG. Researchers explored how virtual reality, smartphones, and artificial intelligence could both exacerbate and prevent gambling problems.

Examples:

1. Using Virtual Reality to Treat Gambling Addiction in Clinical Settings
2. Smartphone Apps to Monitor and Control Gambling Behaviors
3. Exploring the Role of Artificial Intelligence in Predicting Gambling Risks

FOCUS ON YOUTH AND VULNERABLE POPULATIONS (2016-2020)

Recognizing that youth and vulnerable populations are particularly susceptible to gambling harms, ICRG-funded research during these years focused on how early gambling behaviors develop and persist into adulthood. The socioeconomic and ethnic disparities in gambling were also explored in depth.

Examples:

1. Adolescent Gambling Behavior in Transition to Adulthood
2. Problem Gambling Among Minority Communities: A Comparative Study
3. Gambling and Financial Hardship in Low-Income Families

RECENT INNOVATIONS (2021-2024)

As online gambling continues to grow, recent ICRG-funded studies have examined the new challenges posed by online platforms, cryptocurrencies, and virtual reality. These projects aim to understand how these technologies affect gambling behavior and addiction.

Examples:

1. Multidimensional Loss Chasing in Online Gambling: A Behavioral Study
2. The Role of Cryptocurrencies in Emerging Gambling Platforms
3. Exploring VR Casinos and Their Impact on Gambling Disorders

RESPONSIBLE GAMBLING TOOLS AND INTERVENTIONS (ONGOING)

One of ICRG's long-standing goals is to develop and refine responsible gambling tools. These interventions are designed to help players gamble more safely, from personalized tools to industry-wide self-exclusion programs.

Examples:

1. Player-tailored Online Responsible Gambling Promotion Framework
2. Evaluation of Self-exclusion Programs: What Works?
3. Financial Literacy as a Tool for Responsible Gambling Practices

COLLABORATION WITH INDUSTRY (ONGOING)

ICRG has worked (and will continue to work) closely with the gambling industry to promote responsible gambling while maintaining research independence. Collaborative studies have provided insights into advertising practices and corporate responsibility.

Examples:

1. Responsible Gambling Advertising Practices: What We've Learned
2. Industry-Funded Research: Maintaining Objectivity and Independence
3. Enhancing Corporate Social Responsibility in the Gambling Industry

FUTURE DIRECTIONS AND CONCLUSION

- Looking forward, the ICRG is committed to supporting innovative, technology-driven solutions for responsible gambling. New research priorities include using AI for early detection and fostering closer collaboration between academia and industry.
- Continued focus will be placed on the evolving landscape of digital and mobile gambling.

- None of this research would be possible without the expert guidance of our Scientific Advisory Board (SAB).

REFLECTIONS FROM THE SCIENTIFIC ADVISORY BOARD

SCIENTIFIC ADVISORY BOARD MEMBERS

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  Associate Dean for Research and Planning
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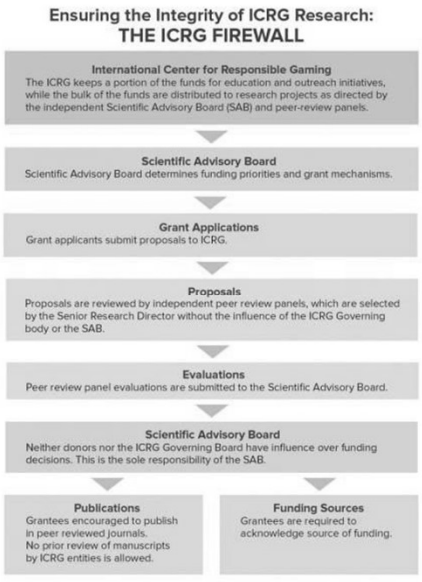

ENVISIONING THE FUTURE OF GAMBLING RESEARCH

Over to the panelists…