Integrated Treatments for Gambling and Co-Occurring Conditions

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Agenda

1. Provide a definition and overview of co-occurring conditions, and the most common comorbidities with problem gambling
2. Review models of comorbidities
3. Identify risk factors and impact of co-occurring conditions in problem gambling
4. Discuss evidence-based treatments for problem gambling and co-occurring conditions
5. Review a case example

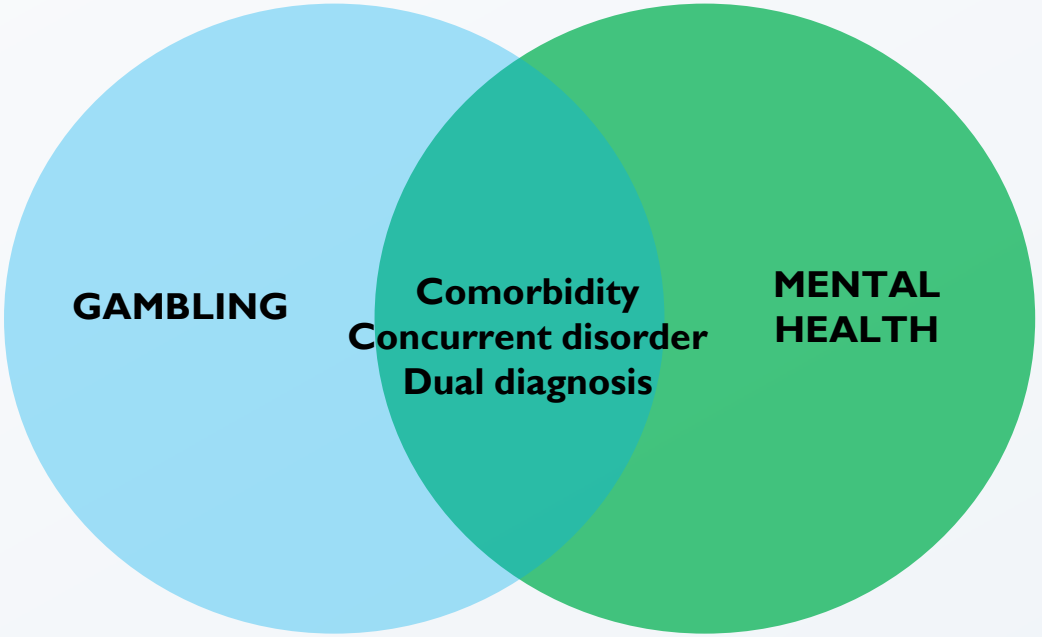
Co-occurring conditions in gambling

Case Example

John Doe is a 26-year-old man who is seeking treatment for his self-described addiction to gambling. John is single and does not have dependents. He works full time in an accounting firm and is studying for his CPA exam. John states he has always struggled with feeling depressed but has never been diagnosed or treated for his depression. John states that his main form of gambling is sports betting and he has multiple accounts with different companies. He has lost $37K in the past year.

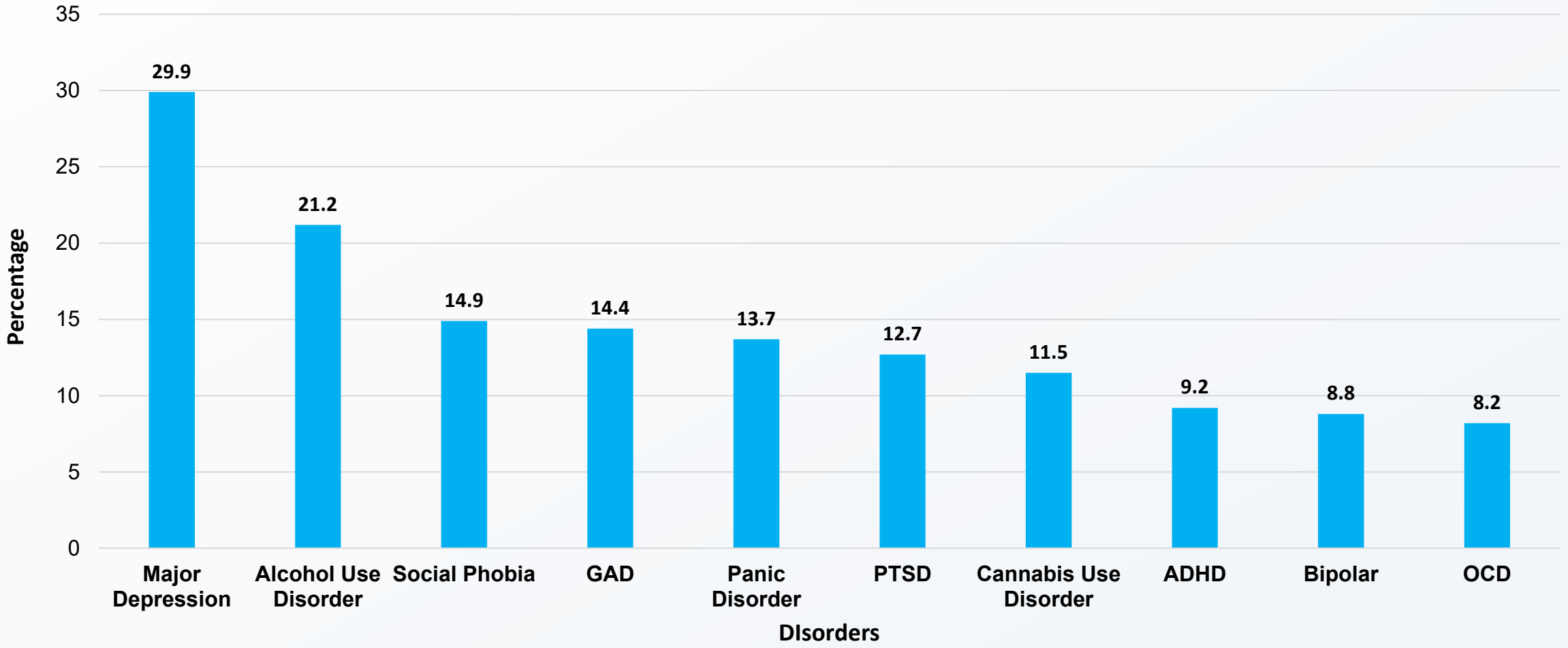
Gambling and Co-occurring conditions

- Also referred to as **comorbidity, dual diagnosis**
- **~75%** of people with gambling disorder will also have a current mental health problem
- **2-10x more likely** to have a psychiatric disorder compared to the general population
- People with gambling disorder are **2-7x more likely** to meet criteria for another addictive disorder (i.e., poly addiction) compared to the general population



(Dowling et al., 2015; Lorains et al., 2011; Yakovenko & Hodgins, 2018; Sharma & Weinstein, 2025)

Prevalence of Mental Health in Gambling Disorder

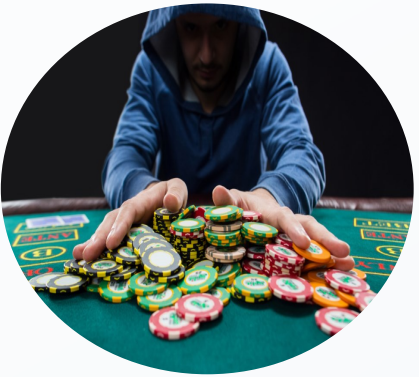


(Lorains et al., 2011)

Models of Comorbidities

Secondary Psychiatric Illness Model

Gambling



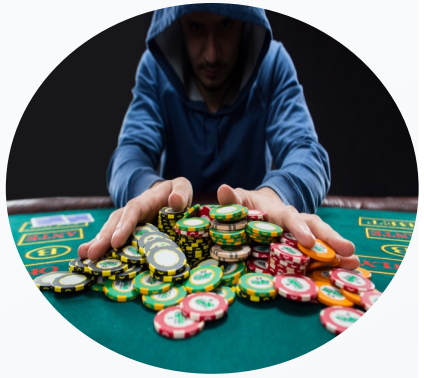
Mental Health

- Gambling → **triggers/maintains** psychiatric disorders (e.g., depression, anxiety).
- **Example:** Gambling harms include psychological impacts and burden beyond disorder status (Browne & Rockloff, 2018)

Secondary Addiction Model

Mental Health

Gambling



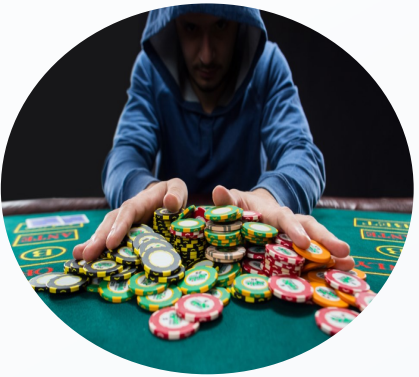
- Psychiatric disorder → **increases vulnerability** to gambling disorder**.**
- **Self-medication hypothesis:** gambling is used to cope with or escape psychiatric distress
- **Example:** Depression/anxiety → robust risk for problem gambling (Horak et al., 2020; Allami et al., 2021)

Common Factors Model

- **Shared vulnerabilities** (e.g., trauma, impulsivity, emotion dysregulation) underlie both gambling and comorbidity.
- **Example**: Impulsivity, emotion dysregulation, maladaptive motives, and cognitive distortions are shared by psychiatric disorders and are linked to heightened gambling risk (Richard & King, 2022; Leonard & Williams, 2016; Allami et al., 2021)

Bi-Directional Model

Gambling



Mental Health

- Gambling and comorbid disorders **influence each other over time.**
- **Example:** Psychological harms from gambling can aggravate mental health, promoting further gambling to cope

Profiles of Comorbidity in Problem Gambling

- **Greater severity:** More gambling symptoms and worse clinical outcomes.
- **Broad comorbidity:** High rates of other addictions (substance, behavioural) and psychiatric disorders (depression, anxiety, psychosis, eating disorders).
- **Higher impulsivity and cognitive distortions:** Shared traits across comorbid groups.
- **Clinical vulnerability:** More suicidality, psychopathology, and treatment challenges.

(Tang et al., Kim et al., 2018; Cowie et al., 2019; Cassetta et al., 2018)

Risk factors

Individuals with concurrent mental health or substance use disorders who gamble are at **elevated risk of severe harms**.

They tend to experience **faster progression to gambling problems, greater functional impairment, and poorer treatment** outcomes compared to those with gambling problems alone.

(Lorains et al., 2011; Dowling et al., 2015; Yakovenko & Hodgins, 2018; Sharma & Weinstein, 2025)

Gaps in Knowledge

- Few studies track **temporal sequencing** of gambling and comorbidities.
- Findings suggest **bidirectional effects**: Co-morbid disorders exacerbate gambling symptoms and gambling worsens co-occurring mental health problems.
- Clear need for **prospective studies** to guide integrated treatment.

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A scoping review of co-morbidity in individuals with disordered gambling

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ABSTRACT

Individuals with disordered gambling often report at least one other lifetime psychiatric diagnosis. Although prevalence rates vary, there is substantial evidence for co-morbidity being the rule rather than the exception. Despite this known association, there has not been a recent comprehensive review of co-morbidity in disordered gambling other than prevalence surveys. The goal of this study was to broadly summarize and review the current literature on the extent, range and nature of disordered gambling co-morbidity. Following an initial search and screening of 6 databases, 251 articles were included in the final synthesis and evaluation. The main findings showed that few studies examine the mechanisms of co-morbidity in gambling beyond prevalence rates; few studies report on temporal sequencing of gambling and co-morbid disorders; there is a lack of treatment evaluation studies designed specifically for dual-diagnosis individuals; there is a need for system-level initiatives to address co-morbidity at the policy level; and the substance use literature may act as a useful model for guiding future gambling research on co-morbidity. The results suggest that despite a reasonable amount of published research on co-morbidity in disordered gambling, most study conclusions relegate to acknowledgements of high co-occurrence between disorders without follow-up.

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Gambling; problem gambling; pathological gambling; co-morbidity; review

Introduction

Within the field of disordered gambling, much attention is devoted to the study of negative consequences of gambling with the goal of applying findings to improve screening, assessment and treatment of disordered gambling. An understudied area of this research is co-morbidity. Extensive research over the last two decades has demonstrated that gambling problems are associated with a number of other mental health disorders including anxiety and mood disorders, substance use and personality disorders, as well as psychotic spectrum disorders (Lorains, Cowlishaw, & Thomas, 2011). For example, a recent systematic review of treatment-seeking problem gamblers estimated that 75% of this population met criteria for a current co-morbid Axis I disorder (Dowling et al., 2015). In Canada, Pelletier, Ladouceur, and Rheaume (2008) reported that 64% of disordered gamblers in their sample met criteria

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Why it matters

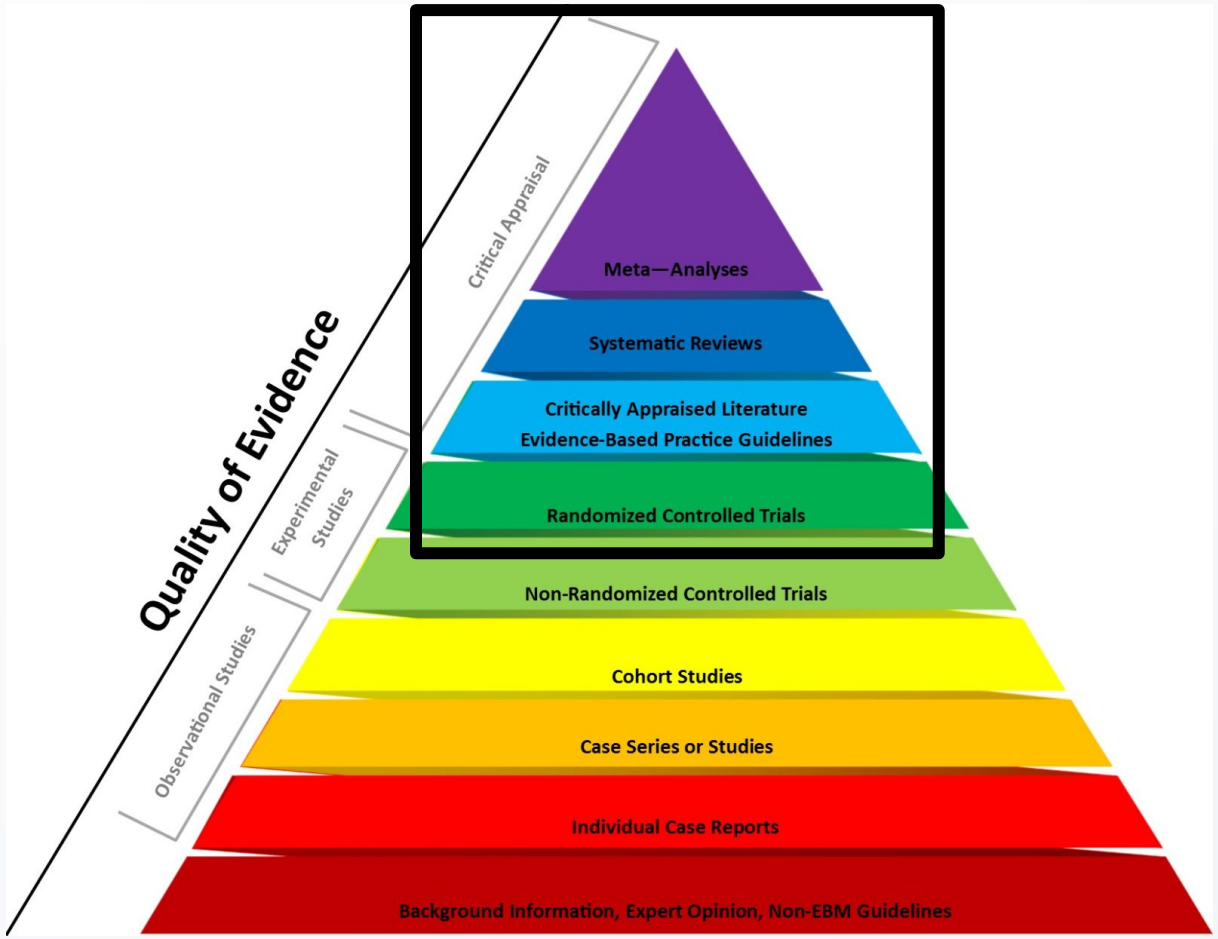
- Comorbidity: **the norm, not the exception**
- Linked to greater gambling severity, poorer outcomes, and relapse
- Treatment outcomes: comorbid depression, anxiety, or substance use → **slower improvement, lower abstinence, higher dropout**
- Shared vulnerabilities: **impulsivity, trauma, emotion dysregulation, maladaptive coping**
- Ignoring comorbidity → underestimates harms & treatment needs

Treatment

Systems of Treatment for Concurrent Disorders

- **Sequential:** treat one, then the other
- **Parallel:** Treat both, separately
- **Integrated:** Treat both, together

Psychological Treatments



(Murad et al., 2016)

Integrated Treatments vs Waitlist

- 2 studies – both online CBT for depression and gambling disorder
- Change over time**? Both showed significantly reduced gambling and depression**
- Change compared to control condition? **Rolvien found significantly more change in outcomes compared to waitlist at posttreatment**, but no differences in either outcome compared to waitlist for Bücker

(Bücker et al., 2021; Rolvien et al., 2024)

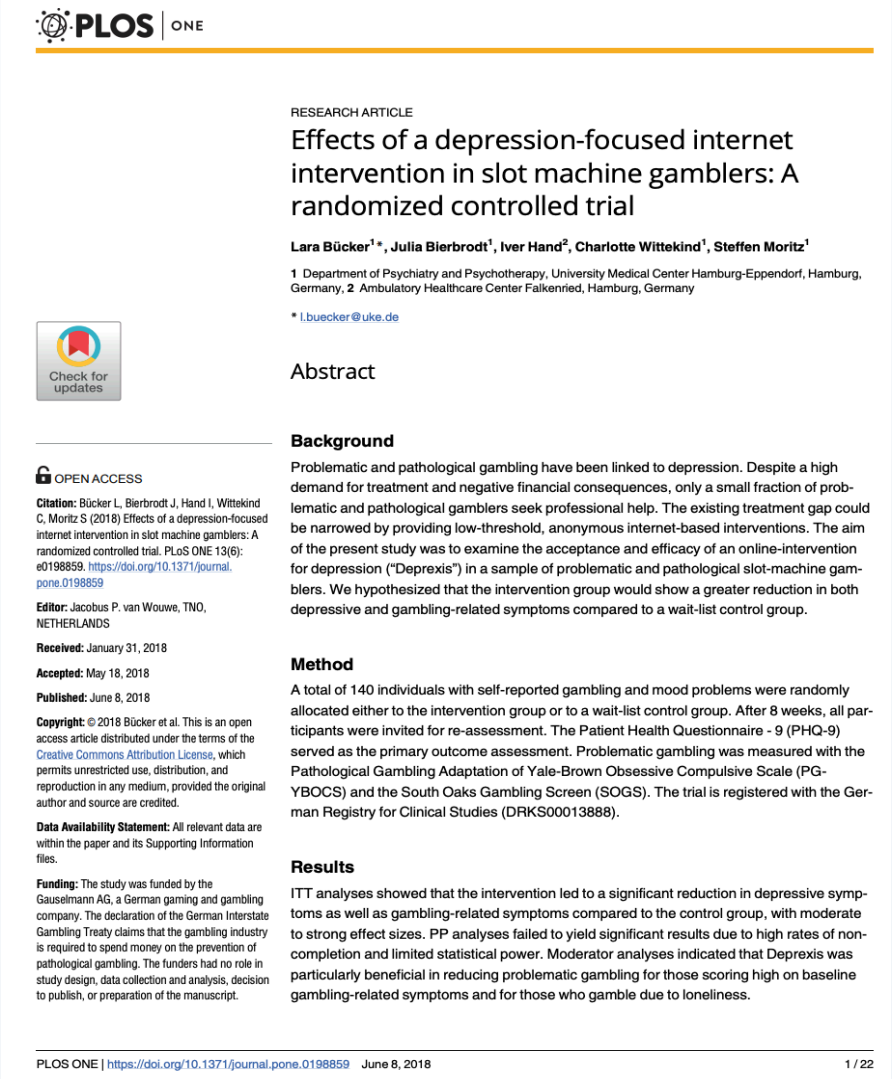
Integrated Treatments vs Nonintegrated Treatments

- 5 studies
  - Anger, substance use, and gambling disorder
  - Co-occurring mental health conditions broadly and problem gambling
  - Alcohol use and problem gambling
  - Tobacco use disorder and gambling disorder
  - PTSD and gambling disorder
- Change over time? **All had reduced gambling and co-occurring symptoms at post**
- Change compared to control condition? **Only 1 had better outcomes at posttreatment** compared to nonintegrated treatment

(Bui et al., 2023; Cunningham et al., 2019; Cunningham et al., 2020; Korman et al., 2008; Najavits et al., 2023)

Nonintegrated Treatment vs Waitlist

- 1 study – online CBT targeting depression
- Change over time**? Significantly reduced depression and gambling at posttreatment**
- Change compared to control condition? **Significantly greater reductions in depression and gambling disorder** at posttreatment compared waitlist



PLOS ONE

RESEARCH ARTICLE

Effects of a depression-focused internet intervention in slot machine gamblers: A randomized controlled trial

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Abstract

Background

Problematic and pathological gambling have been linked to depression. Despite a high demand for treatment and negative financial consequences, only a small fraction of problematic and pathological gamblers seek professional help. The existing treatment gap could be narrowed by providing low-threshold, anonymous internet-based interventions. The aim of the present study was to examine the acceptance and efficacy of an online-intervention for depression ("Deprexis") in a sample of problematic and pathological slot-machine gamblers. We hypothesized that the intervention group would show a greater reduction in both depressive and gambling-related symptoms compared to a wait-list control group.

Method

A total of 140 individuals with self-reported gambling and mood problems were randomly allocated either to the intervention group or to a wait-list control group. After 8 weeks, all participants were invited for re-assessment. The Patient Health Questionnaire - 9 (PHQ-9) served as the primary outcome assessment. Problematic gambling was measured with the Pathological Gambling Adaptation of Yale-Brown Obsessive Compulsive Scale (PG-YBOCS) and the South Oaks Gambling Screen (SOGS). The trial is registered with the German Registry for Clinical Studies (DRKS00013888).

Results

ITT analyses showed that the intervention led to a significant reduction in depressive symptoms as well as gambling-related symptoms compared to the control group, with moderate to strong effect sizes. PP analyses failed to yield significant results due to high rates of non-completion and limited statistical power. Moderator analyses indicated that Deprexis was particularly beneficial in reducing problematic gambling for those scoring high on baseline gambling-related symptoms and for those who gamble due to loneliness.

(Bücker et al., 2018)

Nonintegrated Treatments vs Waitlist (dominant model)

- About 30 studies of treatments targeting gambling
- Do not exclude participants with co-occurring conditions
- Two meta-analyses

Posttreatment		
Outcome	# of studies	% better off with treatment than no treatment
Gambling disorder symptom severity	20	87%
Gambling frequency	18	71%
Gambling expenditure	14	63%

(Pfund et al., 2023a; Pfund et al., 2023b)

Nonintegrated Treatments vs Waitlist (dominant model)

- About 30 studies of treatments targeting gambling
- Do not exclude participants with co-occurring conditions
- Two meta-analyses

Posttreatment		
Outcome	# of studies	% better off with treatment than no treatment
Anxiety symptoms	7	67%
Depression symptoms	7	64%
Substance use (alcohol)	2	66%
Quality of life	4	67%

(Pfund et al., 2023a; Pfund et al., 2023b)

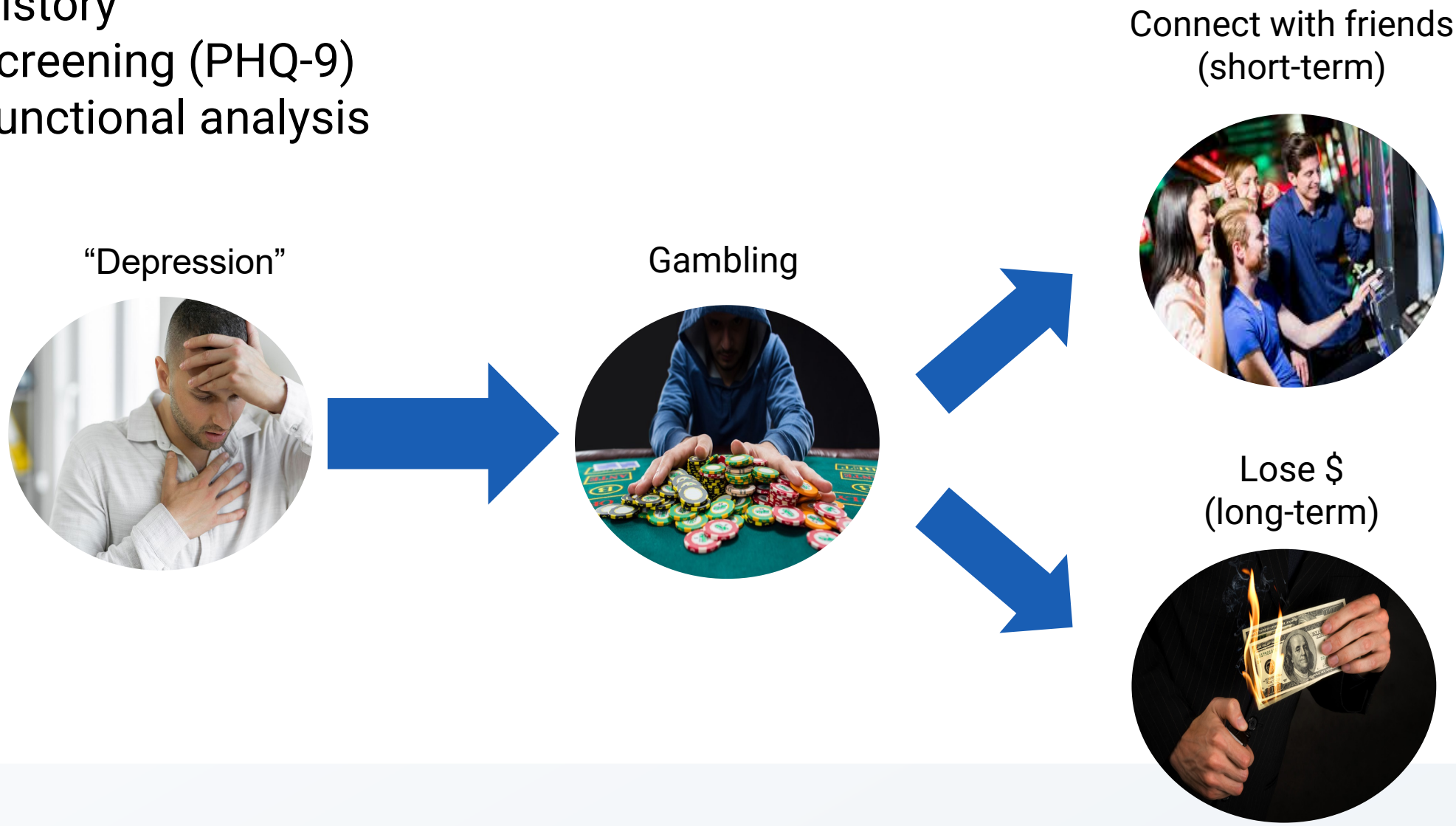
Case Example

The Case of John

- 26-year-old single man
- Working full-time at accounting firm, studying for CPA exam
- Gambles on sports via various smartphone applications
- Lost $37k to gambling in past year

Assessment

- History
- Screening (PHQ-9)
- Functional analysis



John – Decisional Balance

Pros of Not Changing

- Connect with friends
- Makes sports more exciting
- Sometimes make “easy” money
- Helps with mood

Cons of Not Changing

- Financial problems
- Staying up late and feeling tired
- Chance to fail CPA exam again
- Risk damage to career
- Disappoint parents

John – Values

- Career success
- Financial stability, independence
- Friendship, family approval, social connection

John – Antecedents and Consequences

Antecedents

- Friends post odds or discuss game
- Loneliness, negative mood
- Inducement email

Consequences

- Feel connected to friends, excitement
- Relief, distraction
- Possibility to lose and use own money

John – Healthy Alternatives to Gambling

Antecedents

- Friends post odds or discuss game

Alternatives

- Mute or leave group chat
- Reply with non gambling messages
- Create a parallel chat with one or two friends that does not involve gambling
- Tell friends he is focused on studying and taking a break from gambling
- Tell friends he has a problem with gambling

John – Healthy Alternatives to Gambling

Antecedents

- Loneliness, negative mood

Alternatives

- Call or video chat a friend
- Join CPA study group and meet new people
- Attend alumni events
- Find pick up basketball league

John – Healthy Alternatives to Gambling

Antecedents

- Inducement email

Alternatives

- Move app off home screen
- Turn off push notifications
- Uninstall the app
- Using blocking app (e.g., Gamban)
- Install habit tracking app to record study time

John – CBT for Depression

Evidence-Based CBT for Depression

- Identify triggers –functional assessment (mood log), including gambling as a consequence
- Cognitive strategies: identify and modify unhelpful thoughts (i.e., though records)
- Behavioural strategies: behavioral activation (e.g., valued activities), alternative activities, in particular one that replaces gambling

Call to Action

- Screening for comorbid conditions
- Consider alternative empirically support treatments
- Future Research
  - Purposeful identification of inclusion and exclusion criteria
  - Clinical trials on integrated treatments
  - Clinical trials on sequential treatments

Summary

1. Co-occurring conditions, in problem gambling is the norm and not the exception
2. Comorbidity is associated with clinical complexity and worse treatment outcome
3. Integrated treatment are theoretically the gold-standard treatment for co-occurring conditions, however, more research is needed in the context of problem gambling
4. More research is needed to examine temporal sequencing, and studies comparing integrated treatments to standards of care (i.e, sequential)
5. It is important to screen for co-occurring conditions in problem gambling treatment

Thank You!

Questions?