UNIVERSITÀ DEGLI STUDI DI CATANIA
DIPARTIMENTO DI MEDICINA CLINICA E SPERIMENTALE
AOU " POLICLINICO-VITTORIO EMANUELE " CATANIA"
U.O.P.I. di Psichiatria

GIOCO D' AZZARDO PATOLOGICO E COMORBIDITÀ PSICHIATRICHE

E. AGUGLIA

The DSM 5 chapter *"Addictive Disorders"* includes **gambling disorder** as the sole condition in a new category on behavioral addictions. DSM-IV listed pathological gambling but in a different chapter. This new term and its location in the new manual reflect research findings that gambling disorder is similar to substance-related disorders in clinical expression, brain origin, comorbidity, physiology, and treatment.

Recognition of these commonalities will help people with gambling disorder get the treatment and services they need, and others may better understand the challenges that individuals face in overcoming this disorder.

Hodgins et al. BMC Public Health 2013, 13:10
http://www.biomedcentral.com/1471-2458/13/10

Internet-based interventions for disordered gamblers: study protocol for a randomized controlled trial of online self-directed cognitive-behavioural motivational therapy

David C Hodgins[1*], Gordon H Fick[2], Robert Murray[3] and John A Cunningham[3,4]

BMC Public Health

In addition, rates of **comorbid mental health disorders** are higher than expected.

Guideline for Screening, Assessment and Treatment in Problem Gambling

MONASH University

THE UNIVERSITY OF MELBOURNE

Victoria

Approved citation:
Problem Gambling Research and Treatment Centre (PGRTC) (2011). Guideline for screening, assessment and treatment in problem gambling. Clayton: Monash University.

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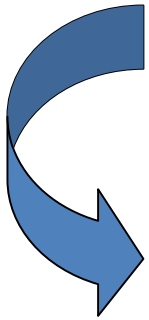
With the elevated comorbidity rates for other mental health problems evidenced in a wide range of studies it is prudent to screen people who present with gambling problems for other mental health problems. There is sound research evidence that problem gambling is associated with elevated risk of:

- *bipolar disorder;*
- *personality disorders;*
- *other impulse control disorders;*
- *alcohol/drug dependence;*
- *anxiety disorders;*
- *depression/suicide;*
- *family violence.*

Problem gambling severity and the incidence of Axis I psychopathology among older adults in the general population

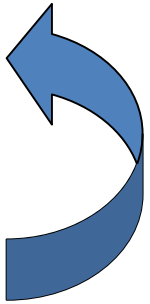
Corey E. Pilver, Ph.D., Daniel J. Libby, Ph.D., Rani A. Hoff, Ph.D., and Marc N. Potenza

J Psychiatr Res. 2013 Apr;47(4):534-41.



Mental illness may contribute to the development of gambling problems

Gambling problems may contribute to the development of mental illness.



In this model, a subset of problem gamblers are "emotionally vulnerable" and have psychological and personality profiles marked by premorbid depression, poor coping skills, and negative life events.

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Furthermore, pathological gamblers reported experiencing a greater number of recent stressful life events and higher levels of anxiety.

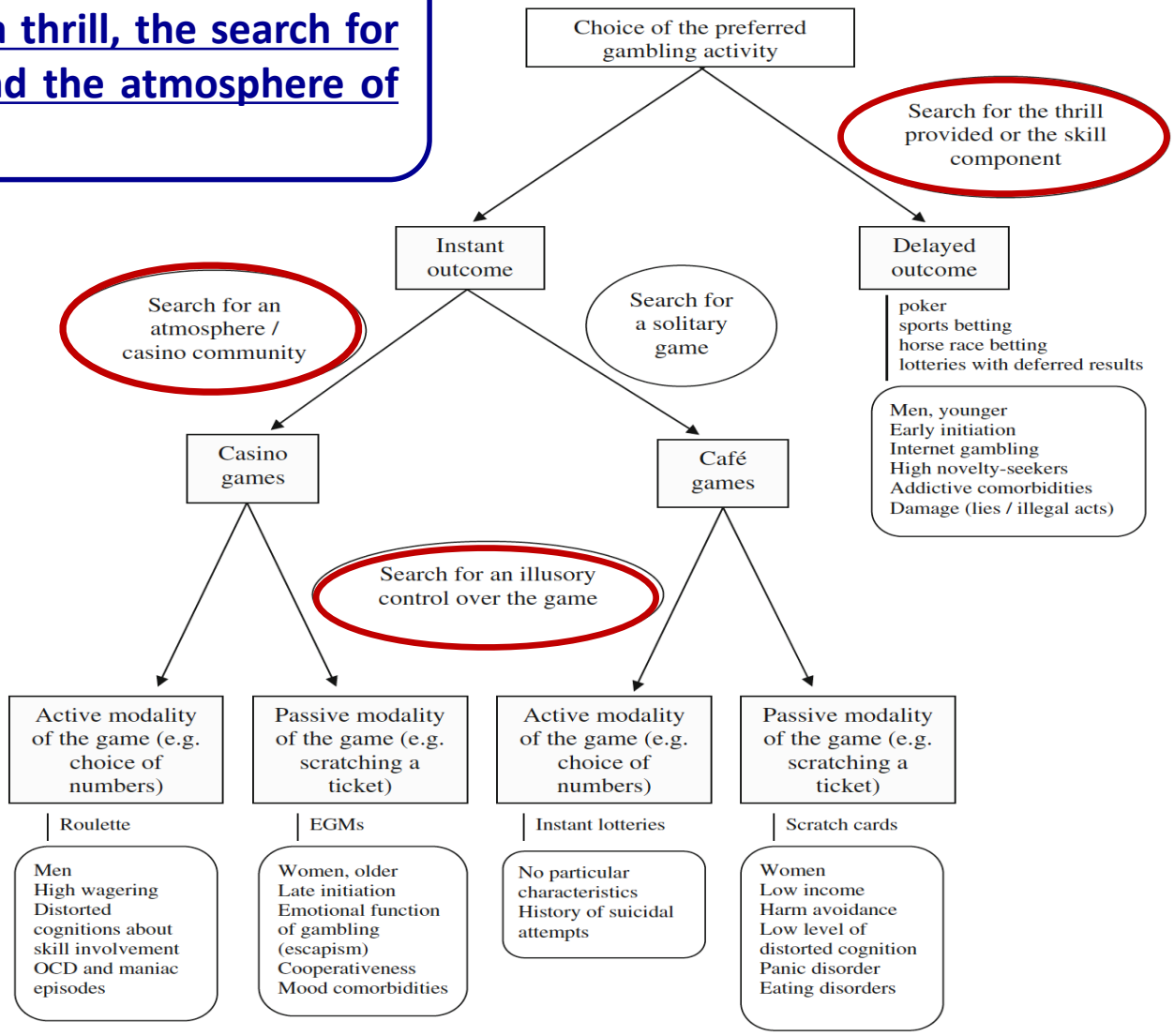
The life events common among this population are:

- *the death of a spouse/partner;*
- *increasing social isolation;*
- *role confusion following retirement;*
- *relocation to assisted living facility or retirement community;*
- *financial strain;*
- *onset of chronic illness.*

This algorithm is an attempt to explain how gamblers could group together in relation to their preferred gambling activity

Three characteristics could explain this grouping: the search for a thrill, the search for control over the game and the atmosphere of the game.

This study highlights the importance of considering the pair gambler-game rather than one or the other separately



ORIGINAL PAPER

A Gamblers Clustering Based on Their Favorite Gambling Activity

Challet-Bouju G. et al/ J Gambl Stud. 2014 Sep 6. [Epub ahead of print]

628 non-problem and problem gamblers were assessed with a structured interview including ''healthy'' and ''pathological'' and psychiatric variables. The obtained classes were described using both ''healthy'' and ''pathological'' variables, by comparing each class to the rest of the sample.

THE PREFERENCE FOR ONE PARTICULAR GAMBLING ACTIVITY MAY CONCERN DIFFERENT PROFILES OF GAMBLERS

CLASS 1 ***(Electronic Gaming Machines gamblers)*** showed high cooperativeness, a lower level of gambling-related cognitions (GRC) about strategy and more **depressive disorders**;

CLASS 2 ***(games with deferred results gamblers)*** were high novelty seekers and showed a higher level of GRC about strategy and more **addictive disorders**;

CLASS 3 ***(roulette gamblers)*** were more often high rollers and showed a higher level of GRC about strategy and more **manic or hypomanic episodes** and more **obsessive–compulsive disorders**;

CLASS 4 ***(instant lottery gamblers)*** showed a lower tendency to **suicide attempts**;

CLASS 5 ***(scratch cards gamblers)*** were high harm avoiders and showed a lower overall level of GRC and more **panic attacks and eating disorders**.

Table 6 Comparison of the 5 classes based on "pathological" variables

	Class 1 N = 155 26 %	Class 2 N = 328 55 %	Class 3 N = 24 4 %	Class 4 N = 18 3 %	Class 5 N = 75 13 %	Whole sample N = 600[a]
Number of positive criteria on DSM-IV PG section	3.8 (3.0)	3.9 (3.0)	4.3 (3.0)	4.6 (3.8)	**2.5 (2.9)*****	3.8 (3.0)
% of positive criteria (DSM-IV PG section)						
Preoccupation with gambling	42.6 %	49.7 %	58.3 %	50.0 %	**34.7 %***	46.3 %
Increasing amounts of bets	38.7 %	41.2 %	50.0 %	38.9 %	**18.7 %*****	38.0 %
Unsuccessful efforts to control	50.3 %	45.4 %	62.5 %	55.6 %	**34.7 %***	46.3 %
Withdrawal symptoms	32.3 %	30.8 %	50.0 %	44.4 %	26.7 %	31.8 %
Gambling for escapism	**58.7 %*****	43.9 %	**20.8 %***	50.0 %	36.0 %	46.0 %
Chasing	52.3 %	56.1 %	62.5 %	66.7 %	36.0 %**	53.2 %
Lies to conceal gambling involvement	48.4 %	**53.7 %***	45.8 %	61.1 %	29.3 %***	49.2 %
Illegal acts to finance gambling	9.7 %	**15.9 %***	8.3 %	22.2 %	6.7 %	13.0 %
Jeopardization of job or relationship	25.8 %	28.7 %	33.3 %	33.3 %	**10.7 %****	26.0 %
Borrowing money to finance gambling	25.8 %	25.9 %	37.5 %	33.3 %	18.7 %	25.7 %
GABS—23	43.1 (17.3)	43.6 (18.8)	**52.2 (21.6)***	44.6 (20.8)	**39.0 (19.5)***	43.3 (18.8)
Strategy	**36.7 (24.2)****	**43.6 (25.0)***	**62.2 (32.6)*****	41.6 (20.9)	**35.6 (25.1)***	41.5 (25.6)
Luck	39.6 (23.6)	38.1 (25.4)	44.1 (29.0)	39.4 (25.6)	37.1 (22.2)	38.7 (24.7)
Attitude	56.7 (22.6)	56.8 (23.4)	65.6 (26.7)	58.8 (24.7)	**50.6 (21.6)***	56.4 (23.3)
Chasing	40.6 (26.8)	40.6 (25.1)	46.3 (25.4)	44.8 (34.3)	37.2 (25.0)	40.6 (25.8)
Emotions	42.2 (24.9)	38.7 (24.9)	43.0 (25.3)	38.1 (26.2)	34.5 (26.6)	39.2 (25.2)
COMORBIDITIES (10)						
Depressive disorders	**49.0 %***	39.6 %	33.3 %	44.4 %	41.3 %	42.2 %
Manic or hypomanic disorders	9.0 %	12.2 %	**25.0 %***	11.1 %	12.0 %	11.8 %
Panic disorder	23.9 %	**16.8 %***	16.7 %	16.7 %	**29.3 %***	20.2 %
Social phobia	14.8 %	**8.5 %***	12.5 %	16.7 %	13.3 %	11.2 %
OCD	1.3 %	3.4 %	**12.5 %***	0.0 %	2.7 %	3.0 %
PTSD	10.3 %	6.1 %	4.2 %	11.1 %	8.0 %	7.5 %
Substances/alcohol-related disorders	**24.5 %****	**39.0 %*****	25.0 %	33.3 %	28.0 %	33.2 %
Psychotic syndrome	10.3 %	6.4 %	12.5 %	22.2 %	5.3 %	8.0 %
Eating disorders	2.6 %	2.1 %	0.0 %	5.6 %	**9.3 %****	3.2 %
Generalized anxiety disorder	14.2 %	14.0 %	12.5 %	16.7 %	18.7 %	14.7 %
Antisocial personality disorder	1.9 %	4.6 %	8.3 %	0.0 %	4.0 %	3.8 %
Suicide attempts antecedents	18.7 %	**11.9 %***	12.5 %	**38.9 %****	18.7 %	15.3 %

Journal of Affective Disorders 167 (2014) 285–298

Bipolar disorder and gambling disorder comorbidity: Current evidence and implications for pharmacological treatment

Marco Di Nicola [a,b,*], Luisa De Risio [a], Mauro Pettorruso [a], Giulio Caselli [a], Franco De Crescenzo [a,c], Kevin Swierkosz-Lenart [d], Giovanni Martinotti [e], Giovanni Camardese [a], Massimo Di Giannantonio [e], Luigi Janiri [a,b]

The co-occurrence of other psychiatric disorders in bipolar patients is associated with several indices of illness severity, a low probability of recovery as well as an unfavorable course and outcome.

BD patients frequently report co-occurring substance use disorders (SUDs) and behavioral addictions, including **gambling disorder (GD)**.

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Marco Di Nicola [a,b,*], Luisa De Risio [a], Mauro Pettorruso [a], Giulio Caselli [a], Franco De Crescenzo [a,c], Kevin Swierkosz-Lenart [d], Giovanni Martinotti [e], Giovanni Camardese [a], Massimo Di Giannantonio [e], Luigi Janiri [a,b]

BD AND GD OFTEN CO-OCCUR, AND THIS HAS IMPORTANT CLINICAL IMPLICATIONS

BD–GD patients experience *a more severe course of illness and poorer treatment outcome,* due to a range of clinical and psychosocial factors that collectively impede remission and recovery.

This frequent comorbidity is not surprising if one focuses on some of the psychopathological **core features of GD: impulsivity, urges, anxiety and affective instability, pleasure seeking, and decreased judgment.**

Personality Disorders, Impulsiveness, and Novelty Seeking in Persons with DSM-IV Pathological Gambling and Their First-Degree Relatives

Donald W. Black · William H. Coryell · Raymond R. Crowe · Martha Shaw · Brett McCormick · Jeff Allen

J Gambl Stud. 2014 Nov 26. [Epub ahead of print]

Research has shown that PG is associated with a high prevalence of co-occurring **personality disorders.**

The **Cluster B** ("dramatic") disorders are the most frequent, particularly the **antisocial and borderline personality disorders.**

The presence of a personality disorder has been associated with more severe gambling symptoms and a **greater frequency of co-occurring psychiatric disorders.**

Antisocial personality disorder is thought to have a special relationship with PG perhaps because of their mutual connection with **crime and irresponsible behavior.**

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J Gambl Stud. 2014 Nov 26. [Epub ahead of print]

Among dimensionally measured personality traits, people with PG are reported to have **elevated levels of impulsivity** (or impulsiveness) that could indicate impaired executive functioning.

Interestingly, **impulsivity increases as gambling behavior worsens;** high levels in normal gamblers have been correlated with the subsequent development of PG.

While relatively few PG researchers have examined the **personality dimensions** described by *Cloninger et al.,* those who have report high scores for **novelty seeking.**

Cloninger et al. describe persons with high levels of novelty seeking *as impulsive, extravagant, and disorderly, and have* ***linked this trait to low basal dopamine activity.***

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J Gambl Stud. 2014 Nov 26. [Epub ahead of print]

Personality disorder	Proband group		χ^2, df	*P* value	OR (95 % CI)
	PG (N = 93)	Control (N = 91)			
Schizotypal, no. (%)[a]	1 (1 %)	0 (0 %)	FET	0.497	
Schizoid, no. (%)[a]	1 (1 %)	1 (0 %)	FET	1.000	
Paranoid, no. (%)[a]	6 (7 %)	0 (0 %)	FET	0.014	
Any Cluster A disorder, no. (%)[a]	7 (8 %)	1 (1 %)	FET	0.034	
Antisocial, no. (%)	14 (15 %)	1 (1 %)	12.0, 1	<.001	
Borderline, no. (%)	18 (19 %)	2 (2 %)	14.0, 1	<.001	9.9 (2.2, 44.8)
Histrionic, no. (%)[a]	2 (2 %)	0 (0 %)	FET	0.246	
Narcissistic, no. (%)[a]	5 (6 %)	1 (1 %)	FET	0.118	
Any Cluster B disorder, no. (%)	29 (31 %)	2 (2 %)	27.6, 1	<.001	17.2 (3.9, 75.8)
Avoidant, no. (%)[a]	5 (6 %)	1 (1 %)	FET	0.118	
Dependent, no. (%)[a]	5 (6 %)	0 (0 %)	FET	0.029	
Obsessive–compulsive, no. (%)[a]	9 (10 %)	3 (3 %)	3.3, 1	0.070	6.0 (0.7, 53.2)
Any Cluster C disorder, no. (%)[a]	14 (16 %)	4 (4 %)	6.3, 1	0.012	4.1 (1.3, 13.4)
Any personality disorder, no. (%)	38 (41 %)	6 (7 %)	29.7, 1	<.001	9.0 (3.5, 23.2)

Four personality disorders emerged as significantly more prevalent among PG probands: the **antisocial, borderline, avoidant, and paranoid types.**

- PG probands had a significantly greater prevalence of personality disorders, and this finding extended to the **three personality disorder clusters,** with Cluster B disorders having the greatest odds ratio (OR = 17.2, P<0.001).

- The presence of a personality disorder appears to be a marker for greater gambling severity, and is **associated with** *higher levels of gambling symptoms, a greater likelihood of prior suicide attempts, and greater psychiatric comorbidity.*

Personality Disorders, Impulsiveness, and Novelty Seeking in Persons with DSM-IV Pathological Gambling and Their First-Degree Relatives

Donald W. Black · William H. Coryell · Raymond R. Crowe · Martha Shaw · Brett McCormick · Jeff Allen

J Gambl Stud. 2014 Nov 26. [Epub ahead of print]

THE FIRST-DEGREE RELATIVES OF PG AND CONTROL PROBANDS ALSO DIFFERED WITH RESPECT TO THE PREVALENCE OF PERSONALITY DISORDER AND IMPULSIVENESS

The relatives had a much greater prevalence of personality disorders overall and for each of the three clusters, **particularly Cluster C** which achieved an odds ratio of nearly twenty.

PG relatives also scored significantly higher on impulsiveness, but not novelty seeking.

Personality disorders and trait impulsiveness may also share a common familial etiology with PG and serve as an alternate expression of the same underlying vulnerability that could be genetic, ***but non-genetic causes cannot be excluded.***

Addictive Behaviors 39 (2014) 566–572

Psychiatric co-morbidity in problem and pathological gamblers: Investigating the confounding influence of alcohol use disorder

Reza Abdollahnejad, Paul Delfabbro *, Linley Denson

Like PG, **substance use disorder** (and in particular, excessive alcohol use) **is recognised as a significant predictor of a range of co-morbid psychiatric conditions significantly overlapping with those identified for PG.**

Consequently, given that substance use disorders are prevalent among pathological gamblers, the question arises as to whether it is PG, substance abuse or a combination of these conditions (dual diagnosis) that is most strongly associated with the range of psychiatric conditions documented in studies of pathological gamblers.

The **co-incidence of PG and alcohol problems** has been reported **from 10–15% to 9-33%.**

Addictive Behaviors 39 (2014) 566–572

Psychiatric co-morbidity in problem and pathological gamblers: Investigating the confounding influence of alcohol use disorder

Reza Abdollahnejad, Paul Delfabbro *, Linley Denson

There are at least three possible ways to explain the correlation between PG and AUD:

1) **Alcohol problems may contribute to PG**: when gambling under the influence of alcohol people are generally less inhibited, and display greater risk-taking and persistence; drinking may increase the risk of the likelihood of people spending more than they intended.

2) **PG causes alcohol problems:** gambling exposes people to environments where alcohol is readily available, and that stress associated with gambling-related losses might encourage excessive drinking as a coping mechanism.

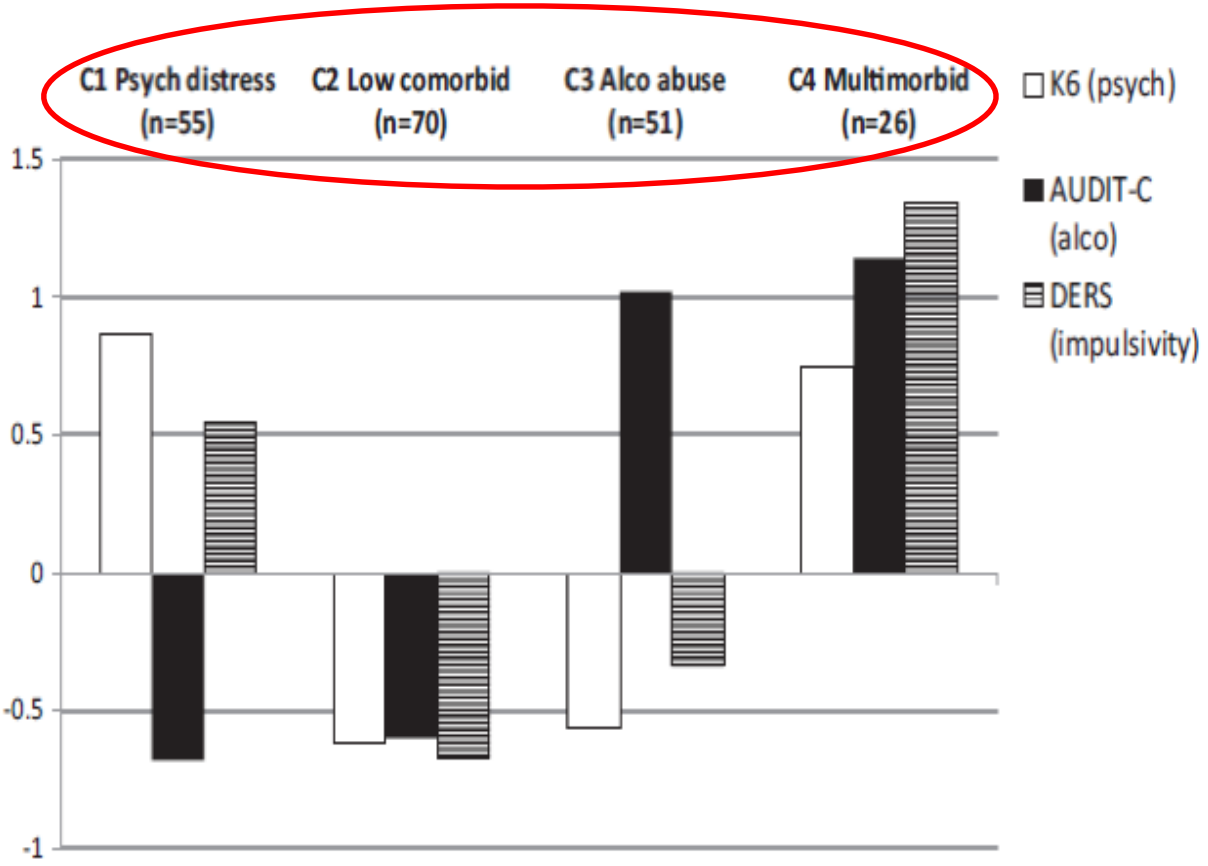
3) There are some **underlying factors (or "third variables")** that explain why some people are more likely to display both disorders: current neurological, genetic and other psychiatric evidence in the literature provide the most conceptual support for the third argument.

Addictive Behaviors 39 (2014) 1741–1745

Problem gambling subtypes based on psychological distress, alcohol abuse and impulsivity

Aino Suomi [a,b,*], Nicki A. Dowling [c,b,d], Alun C. Jackson [b]

THE AIM OF OUR STUDY WAS TO IDENTIFY SUBTYPES OF GAMBLERS CURRENTLY IN TREATMENT



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Aino Suomi [a,b,*], Nicki A. Dowling [c,b,d], Alun C. Jackson [b]

Group 1 (psychological distress) - higher scores of psychological distress and lower scores on alcohol abuse:

1) *Older age, female gender;*
2) Retirement or sick/disability pensions;
3) Family member mental health issues and drug problems;
4) ***Gambling on electronic gaming machines*** *(EGMs);*
5) Using gambling as a means to cope with ***negative emotions.***

Group 2 (low comorbidity) - lower scores on all three co-morbidities (psychological distress; alcohol abuse; impulsivity):

1) ***Better general health, better quality of life,*** *lower endorsement of having family members with mental health issues,* ***lower gambling severity,*** *higher rates of current gambling abstinence, a lower likelihood of gambling to cope with negative emotions, and* ***lower levels of hostility and aggressiveness.***

Addictive Behaviors 39 (2014) 1741–1745

Problem gambling subtypes based on psychological distress, alcohol abuse and impulsivity

Aino Suomi [a,b,*], Nicki A. Dowling [c,b,d], Alun C. Jackson [b]

Group 3 (alcohol abuse) - higher scores on alcohol abuse, lower scores on psychological distress and impulsivity:

*1) **Younger age, male gender, working full-time,** reporting better quality of life, lower levels of aggression and hostility, higher likelihood of being in a gaming venue self-exclusion programme but higher levels of stimulant drug use.*

Group 4 (multimorbidity) - high levels of each comorbidity *(psychological distress, alcohol abuse and impulsivity):*

*1) **Male gender and a higher likelihood of reporting problems related to multiple life domains:** general health, quality of life, cannabis use, gambling severity, hostility, and aggressiveness;*

- *Their **most common** form of gambling was **horse/dog racing** and they were least likely to report **current gambling abstinence.***

Pathological gambling severity and co-occurring psychiatric disorders in individuals with and without anxiety disorders in a nationally representative sample

Justine Lauren Giddens[a], Elina Stefanovics[b], Corey Elizabeth Pilver[c], Rani Desai[b,c,d], and Marc Nicholas Potenza[a,b,e,*]

Psychiatry Res. 2012 August 30; 199(1): 58–64

Problem gambling and **PG frequently co-occurs with** other psychiatric conditions including **anxiety disorders (ADs).**

Approximately **40% of outpatients with PG may experience co-occurring ADs** In the National Co-morbidity Survey Replication, it was found that **PG is often** temporally **preceded by panic disorder (PD), generalized anxiety disorder (GAD), and phobias;** furthermore, **52%** of participants with lifetime PG experienced **phobias, 21.9%** experienced **PD,** and **16.6%** experienced **GAD.**

Pathological gambling severity and co-occurring psychiatric disorders in individuals with and without anxiety disorders in a nationally representative sample

Justine Lauren Giddens[a], Elina Stefanovics[b], Corey Elizabeth Pilver[c], Rani Desai[b,c,d], and Marc Nicholas Potenza[a,b,e,*]

Psychiatry Res. 2012 August 30; 199(1): 58–64

Both **PG and ADs co-occur with** other psychopathologies, including **externalizing disorders** (e.g., alcohol dependence and antisocial personality disorder) and **internalizing disorders** (e.g., depression and dysthymia).

In the modeling of **date from large samples of twins,** PG has been found to **share genetic contributions** with *both externalizing disorders and internalizing disorders.*

Externalizing disorders (e.g., alcohol abuse/dependence) have been found to **influence the relationships between PG and** a broad range of **internalizing and externalizing disorders.**

ORIGINAL PAPER

A Longitudinal Examination of Depression Among Gambling Inpatients

Jacquelene F. Moghaddam · Michael D. Campos · Cynthia Myo · Rory C. Reid · Timothy W. Fong

J Gambl Stud. 2014 Dec 27. [Epub ahead of print]

Problem and pathological gamblers have **high rates of depression** in comparison to the general population, with as many as **75% of compulsive gamblers endorsing major depressive symptoms.**

Reasons for high rates of depressive symptoms among those with gambling disorders may include a shared **genetic predisposition** for both a gambling disorder and major depression, **dysfunctional coping styles** involving avoidance/escapism, impulsiveness, and **reactive negative emotional states** which are depleting and the associated impact of negative consequences commonly linked to problem gambling.

Clinically, the co-occurrence of major depression is relevant in that it negatively impacts treatment outcomes including **higher rates of attrition and diminished response to therapeutic interventions.**

ORIGINAL PAPER

A Longitudinal Examination of Depression Among Gambling Inpatients

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J Gambl Stud. 2014 Dec 27. [Epub ahead of print]

Mood symptoms may be a precipitating risk factor for gambling disorders predating **gambling behaviors** which are subsequently **used to alleviate depressive mood states.**

A second theory postulates that **gambling behavior and its consequences result in depressive symptoms.**

Thus, depressive symptoms may stem from issues including ***difficulties at work, problems with social and family relationships, and financial stress*** due to gambling losses.

Moreover, **the shame and guilt the gambler may feel as a result of his/her behavior can contribute to depressive symptoms.**

THE AIM OF THIS STUDY WAS TO FURTHER INVESTIGATE THE NATURE OF DEPRESSION THROUGHOUT THE COURSE OF RESIDENTIAL GAMBLING TREATMENT.

TO THIS END, WE EXAMINED IN-TREATMENT DEPRESSION SYMPTOMS OVER 8 WEEKS IN A SAMPLE OF INDIVIDUALS WITH GAMBLING DISORDER IN RESIDENTIAL TREATMENT.

ELSEVIER

Suicidal events among pathological gamblers: The role of comorbidity of axis I and axis II disorders

Anja Bischof [a,*], Christian Meyer [b], Gallus Bischof [a], Ulrich John [b], Friedrich Martin Wurst [c], Natasha Thon [c], Michael Lucht [d], Hans Joergen Grabe [d], Hans-Juergen Rumpf [a]

Volume 225, Issue 3, 28 February 2015, Pages 413–419

Pathological gambling does not only result in severe social and financial problems with devastating effects for patients and their families: additionally, international studies suggest that **suicidal events are frequent among pathological gamblers.**

Recently, a large *Austrian sample* of **862 pathological gamblers** undergoing treatment showed that **9.7% of the participants had a history of suicide attempts.**

Various **risk factors for suicidality** were found in general population: especially ***substance use disorders, anxiety disorders, personality disorders, younger age, female gender and treatment utilization*** are known to be high risk factors for suicidal ideation and suicide attempts.

Pathological gambling has been found to be **an independent risk factor for suicidal events.**

The present study is the first study that analyzes whether gambling disorder, comorbid Axis I disorders, and personality disorders are combined risk factors for suicidal events

Characteristics of pathological gamblers with or without suicidal events.

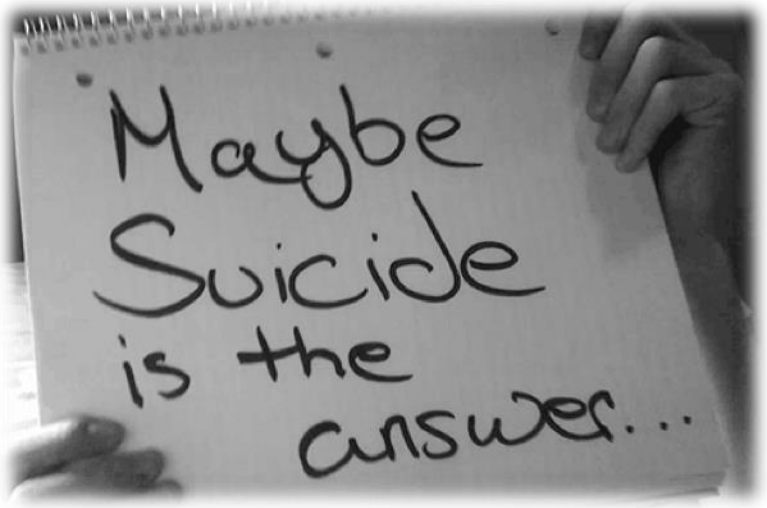
	Total sample (n=442)	No suicidal event (n=227)	Suicidal ideation (n=133)	Suicide attempt (n=82)
Gambling disorder related factors				
Number of lifetime DSM-IV criteria, MW (S.D.)	8.2 (1.6)	7.8 (1.6)	8.7 (1.32)	8.6 (1.5)
Age Onset of first symptom, MW (S.D.)	25.8 (10.2)	26.0 (10.3)	24.9 (9.2)	26.6 (11.5)
Duration of gambling disorder, MW (S.D.)	11.0 (9.3)	9.8 (9.2)	12.0 (8.8)	12.9 (9.9)
Recovered, n (%)	167 (37.8)	82 (36.1)	60 (45.1)	25 (30.5)
Lifetime comorbidity				
Substance use disorders excl. tobacco, n (%)	269 (61.1)	129 (56.8)	89 (67.4)	51 (63.0)
Mood disorders, n (%)	279 (73.1)	94 (41.4)	109 (82.0)	76 (92.7)
Major depression, n (%)	217 (49.1)	63 (27.8)	93 (69.9)	61 (74.4)
Anxiety disorder, n (%)	163 (37.0)	58 (25.6)	57 (43.2)	48 (59.3)
Social phobia, n (%)	59 (13.3)	12 (5.3)	24 (18.0)	23 (28.0)
Generalized Anxiety Disorder, n (%)	23 (5.2)	7 (3.1)	8 (6.0)	8 (9.8)
Post-traumatic Stress Disorder, n (%)	68 (15.5)	18 (7.9)	22 (16.7)	28 (34.6)
Any personality disorder, n (%)[1]	154 (35.3)	65 (29.0)	46 (35.4)	43 (52.4)
Cluster A, n (%)[2]	15 (3.4)	8 (3.6)	3 (2.3)	4 (4.9)
Paranoid	13 (3.0)	7 (3.1)	3 (2.3)	3 (3.7)
Schizoid	4 (0.9)	1 (0.4)	2 (1.5)	1 (1.2)
Schizotypal	1 (0.2)	0	1 (0.8)	0
Cluster B, n (%)[3]	92 (21.2)	36 (16.2)	24 (18.5)	32 (39.0)
Antisocial	52 (12.0)	28 (12.6)	8 (6.2)	16 (19.5)
Borderline	41 (9.4)	7 (3.1)	12 (9.2)	22 (26.8)
Histrionic	2 (0.5)	0	0	2 (2.4)
Narcisstic	23 (5.3)	11 (4.9)	8 (6.1)	4 (4.9)
Cluster C, n (%)[1]	86 (19.6)	31 (13.8)	31 (23.7)	24 (29.3)
Avoidant	39 (8.9)	8 (3.6)	16 (12.2)	15 (18.3)
Dependent	6 (1.4)	4 (1.8)	2 (1.5)	0
Obsessive–compulsive	52 (11.9)	21 (9.3)	16 (12.2)	15 (18.3)
Intense treatment utilization[4], n (%)	251 (56.8)	97 (42.7)	90 (67.7)	64 (78.0)
Social support appraisal scale[5], MW (S.D.)	23.3 (29.2)	24.2 (31.0)	24.3 (27.9)	19.2 (26.1)
Sociodemographic characteristics				
Female, n (%)	71 (16.1)	27 (11.9)	22 (16.5)	22 (26.8)
Age, MW (S.D.)	40.6 (11.9)	39.3 (12.5)	41.8 (10.9)	42.4 (11.3)
Migration background[6], n (%)	131 (29.7)	71 (31.4)	37 (27.8)	23 (28.0)
Unemployed, n (%)	125 (28.3)	57 (25.1)	43 (32.3)	25 (30.5)
Never married, n (%)	217 (49.1)	115 (50.7)	65 (48.9)	37 (45.1)

Suicidal events among pathological gamblers: The role of comorbidity of axis I and axis II disorders
Anja Bischof [a,*], Christian Meyer [b], Gallus Bischof [a], Ulrich John [b], Friedrich Martin Wurst [c], Natasha Thon [c], Michael Lucht [d], Hans Joergen Grabe [d], Hans-Juergen Rumpf [a]
Volume 225, Issue 3, 28 February 2015, Pages 413–419

Main findings are that **comorbidity of mood disorders and Cluster B personality disorders are the predominant risk factors for suicidal events,** independently from the severity of the gambling disorder.

In addition, an **earlier onset** of gambling problems was significantly associated with **suicidal ideation.**

Group comparisons showed significant associations of comorbidity of Axis I and II disorders with suicidal events in pathological gamblers in univariate analyses.



Suicidal events among pathological gamblers: The role of comorbidity of axis I and axis II disorders
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The multivariate comparison revealed **pathological gamblers with suicidal ideation to have a six-fold risk for a mood disorder** and independently an **almost two times higher risk for a substance use disorder compared to gamblers without suicidal events.**

Results underline that especially the strongly impulsive **Cluster B** personality disorders depict a **serious risk factor for suicidal events.**

Suicide attempters among pathological gamblers **have a significantly high errate of intense treatment utilization** in comparison with participants with no suicidal event.

Data revealed that especially **being female is an independent risk factor** for pathological gamblers to attempt suicide compared to individuals without suicidal events.

Addictive Behaviors 39 (2014) 1713–1717

Problem gambling and family violence: Prevalence and patterns in treatment-seekers

N.A. Dowling [a,b,c,*], A.C. Jackson [b], A. Suomi [b,d], T. Lavis [e], S.A. Thomas [f], J. Patford [b], P. Harvey [e], M. Battersby [e], J. Koziol-McLain [g], M. Abbott [h], M.E. Bellringer [h]

THERE IS GROWING EVIDENCE THAT SUGGESTS A SIGNIFICANT ASSOCIATION BETWEEN PROBLEM GAMBLING AND FAMILY VIOLENCE

Most of the studies in this area report past year or lifetime **intimate partner violence (IPV) victimisation** estimates ranging **from 60% to 69%.**

There is also limited evidence that a significant proportion **(56%)** of problem gamblers **report past year IPV perpetration.**

Findings relating to gender differences indicate that **women (100%) are more likely to report lifetime abuse victimisation than men (69%).**

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THERE IS GROWING EVIDENCE THAT SUGGESTS A SIGNIFICANT ASSOCIATION BETWEEN PROBLEM GAMBLING AND FAMILY VIOLENCE

Problem gambling is likely over-represented in samples of IPV offenders, there are currently no prevalence estimates of problem gambling in samples of individuals presenting to treatment services for IPV or family violence victimisation experiences.

Given that alcohol and substance use disorders and psychiatric disorders are highly comorbid with both problem gambling and family violence, **there are surprisingly few studies that explore their relationship in other treatment seeking samples.**

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Prevalence of past year problem gambling and family violence (FV) across treatment services.

Screen[a]	Gambling services (%; CI 95%)			Family violence services (%; CI 95%)	Alcohol & drug services (%; CI 95%)	Mental health services (%; CI 95%)	Financial counselling services (%; CI 95%)
	Men	Women	Total				
FV victimisation	20.8 (15.6–24.9)	37.6[d] (29.3–44.2)	27.0 (22.1–30.2)	[c]	54.1[e] (36.2–65.9)	61.9[e] (46.6–77.2)	37.0 (17.8–56.5)
FV perpetration	20.8 (15.6–24.9)	26.5 (18.6–32.0)	22.9 (18.2–25.8)	[c]	49.3[e] (38.4–68.0)	32.5 (17.3–45.2)	33.3 (14.3–50.2)
Any form of FV	28.7 (23.0–33.4)	43.0 (34.6–49.8)	33.9 (29.0–37.6)	[c]	84.0[e] (68.9–95.9)	61.6[e] (45.6–77.5)	48.1 (28.1–68.3)
Problem gambling	[b]	[b]	[b]	2.2 (−0.1–5.1)	4.3 (−0.2–10.3)	2.0 (−0.2–5.9)	10.6[f] (1.5–20.2)
Mutually exclusive FV groups							
FV victimisation only	7.8 (4.8–11.1)	16.5[d] (11.1–22.6)	11.0 (8.3–14.1)	[c]	16.2 (3.8–28.9)	28.2 (13.4–43.0)	14.8 (4.9–29.1)
FV perpetration only	7.8 (4.8–11.1)	5.3 (1.9–8.9)	6.9 (4.8–9.5)	[c]	18.9 (5.7–32.2)	2.6 (−2.6–7.8)	11.1 (−1.6–23.8)
FV victimisation & perpetration	13.0 (3.6–12.2)	21.2[d] (13.8–26.1)	16.0 (11.7–18.2)	[c]	48.9 (31.8–65.5)	30.8 (15.6–45.9)	22.2 (5.5–39.0)

The **prevalence of family violence** in the gambling sample was **27.0% for victimisation, 22.9% for perpetration, and 33.9% for any form of family violence.**

Women were significantly more likely to report victimisation than men.

The **alcohol and drug sample reported significantly higher rates of family violence** victimisation, perpetration and any form of family violence than the gambling sample.

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Problem gambling and family violence: Prevalence and patterns in treatment-seekers

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The findings of this study underscore the **need that other services,** such *alcohol and drug services, mental health services, and financial counselling services,* should develop screening, referral and management protocols for problem gambling and family violence.

NATIONAL PRIORITIES FOR PROBLEM GAMBLING RESEARCH: FUTURE DIRECTIONS

June 2009

Report to the
National Council on Problem Gambling

Lia Nower, JD., Ph.D.

Center for Gambling Studies
Rutgers University

In 2008, the NCPG commissioned this report as a first-step toward identifying and, subsequently, funding a **body of research that will finally provide comprehensive evidence** to inform policymakers, legislators, treatment providers, program administrators, and gaming officials in future decision-making.

The purpose of this project was to identify key topic areas for study, and, within those areas, to posit important research questions that must be answered to better serve the population of problem gamblers and their families and communities in the future.