



# Negative Recovery Capital in Gambling Disorder: A Conceptual Model of Barriers to Recovery

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## Abstract

Recovery from any addiction, including gambling, involves continuous efforts to improve wellness despite the obstacles and challenges. The recovery capital (RC) model is a holistic conceptual framework operationalized along a continuum ranging from positive internal and external RC resources that enhance recovery to negative recovery capital (NRC) which are defined as obstacles that impede individuals from coping with their addiction. Although previous studies have conceptualized the positive side of the RC model, no study has systematically explored NRC. This study develops a model that maps and conceptualizes the elements that impede recovery from gambling disorder (GD). In the current study, 133 individuals with a lifetime GD were interviewed about the factors that have hindered their recovery. A content analysis identified 14 NRC categories that were classified into four domains: Human NRC (urges and uncontrolled urges, cognitive distortions, inaction, sensation seeking, stressful life events, negative emotions, ability to conceal, a lack of motivation to recover), Social NRC (lack of social or familial networks, conflictual or dangerous social networks), Community NRC (an environment that encourages gambling, money lenders), and Financial NRC (financial distress and debt, money as a risk factor). The discussion centers on a holistic perspective of the elements that hinder recovery from GD, and calls for intervention methods that aim to minimize NRC to provide more holistic solutions to GD and possibly other addictions.

**Keywords** Negative recovery capital · Gambling disorder · Recovery · Addiction

## Introduction

Gambling disorder (GD) is a devastating disorder defined as repetitive, maladaptive and persistent gambling behavior which affects individuals and their surroundings (American Psychiatric Association, 2013). The Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013) classified GD as an addictive disorder under Substance-Related and Addictive Disorders in 2013. It was the first behavioral addiction to be categorized as such (Nower et al., 2020).

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Recovery from GD is challenging for individuals, treatment providers, policy makers and researchers (Pickering et al., 2018). Current perspectives on recovery from addictions including GD extend beyond abstinence, and recommend a range of intentional, individualized and relational strategies designed to enhance wellness and construct a more meaningful life despite the obstacles imposed by addiction (Ashford et al., 2019; Davidson et al., 2005; Gavriel-Fried et al., 2019; Pickering et al., 2020).

Recovery capital (RC) is a holistic conceptual model which was originally developed to understand the factors influencing recovery from substance addiction (Cloud & Granfield, 2001; Granfield & Cloud, 1999). RC is operationalized along a continuum ranging from positive internal and external elements that enhance recovery, to elements composing negative recovery capital (NRC) that impede change and prevent individuals from coping or overcoming their addiction. These include personal circumstances, behaviors, individual attributes, values, and other factors (Cloud & Granfield, 2008). Recently, the positive side of RC was mapped and conceptualized for GD (Gavriel-Fried & Lev-el, 2020). Since the recovery process from GD involves both positive and negative elements, it is important to better understand the negative side of this model, which remains under-researched. The current study harnessed the conceptual framework of RC to suggest the first holistic model characterizing the elements that hinder recovery from GD.

### The Positive and Negative Sides of the RC Conceptual Model

In trying to answer the question of why some individuals succeed in overcoming their substance addiction whereas others fail, Granfield and Cloud (1999) and Cloud and Granfield (2008) developed the conceptual framework of RC which originally referred to the cumulative internal and external resources that individuals use and have an access to that enable them to overcome substance addiction. Recently, Hennessy (2017) charted the main RC domains that have been conceptualized and implemented in addiction studies. These include: Human Capital, which refers to skills, personal characteristics or traits, etc.; Social Capital, which relates to family and friends, virtual or actual social networks and the benefits of belonging to them; Financial Capital, a tangible domain that relates to financial assets such as income or property; Cultural Capital, that includes values, attitudes, norms and behavioral patterns that encourage pro-recovery perceptions; and Community Capital, that relates to resources available in the community such as formal and informal organizations or policies that support the availability of community resources and promote social norms of a recovery lifestyle. Thus, Community Capital incorporates certain elements of Cultural Capital (Burns & Marks, 2013; Hennessy, 2017).

This conceptual framework constituted a paradigmatic shift from the disease-based orientation that had dominated the addiction field for many years to a strengths-based approach consistent with the tenets of positive psychology (Granfield, 2004; Krentzman, 2013; Tew, 2013). RC has attracted considerable attention in the theoretical and empirical field of substance addiction (Burns & Marks, 2013; Hennessy, 2017), and has been explored in a variety of studies on substance and gambling addiction (Burns & Marks, 2013; Gavriel-Fried et al., 2019; Hibbert & Best, 2011) which consistently show that individuals in recovery from GD or SUD have higher levels of RC resources (Gavriel-Fried, 2018; Laudet & White, 2008).

In 2008, Cloud and Granfield expanded the RC model to include NRC; namely, elements that impede individuals' ability to overcome substance addiction, some of which mirror the positive side of the model. However, the negative side has never been conceptualized

consistently, and only a few studies in the substance addiction field have investigated NRC. For example, in a study of 30 alcohol and drug users living in homeless shelters, Neale and Stevenson (2015) found that relationships with substance-user friends encouraged drug-taking and law-breaking. They termed these relationships Negative Social Capital. Other studies have considered factors such as community stigma (Best et al., 2015), a social atmosphere that encourages partying in colleges (Terrion, 2013), and low perceived neighborhood safety (Evans et al., 2014) as Negative Community Capital. The accessibility of cash to purchase drugs was also defined as Negative Financial Capital (Neale et al., 2014).

## Obstacles to Recovery from Gambling Disorders

To better understand the hurdles preventing individuals with GD from recovering, studies have explored obstacles to help-seeking and treatment, and the risk factors leading to relapse. The most frequent intrinsic and extrinsic obstacles to treatment are shame, fear of stigma, denial, pride, lack of awareness of the severity of problem gambling, lack of knowledge of treatment and service options, and the accessibility, availability and cost of these services (Clarke et al., 2007; Gainsbury et al., 2014; Khayyat-Abuaita et al., 2015; Pulford et al., 2009a; Rockloff & Schofield, 2004).

The triggers of lapses and relapses reported in the literature include gambling urges, erroneous cognitions about winning, the need to make money, physiological arousal and withdrawal, exposure to gambling, lack of structured time, and mood state (frustration, fatigue, elation, etc.) (Hodgins & el-Guebaly, 2004; Holub et al., 2005; Oei & Gordon, 2008; Smith et al., 2015). However, no holistic or systematic model has been proposed that covers the multiple elements that hinder recovery from GD.

## The Current Study

Given that each individual has strengths and weaknesses and even people with a large amount of positive RC must cope with obstacles and challenges to initiate and sustain recovery (Hennessy, 2017), a holistic perspective of recovery needs to capture individuals' positive and negative resources to better evaluate their strong and weak points within the same RC model (Gavriel-Fried et al., 2019). The current study was designed to develop a model to conceptualize the elements that impede individuals from recovering from GD. Specifically, the goal was to identify the internal and external NRC components that hinder recovery from GD, and whether these components can be classified under the conceptual umbrella of the human, social, community and financial domains defined in the positive RC model. This conceptualization of NRC thus aimed to contribute to extending the model outlined by Cloud and Granfield (2008), and constitutes the negative side of the model that complements the characterization of positive RC in the GD model (Gavriel-Fried & Level, 2020).

## Methods

### Participants and Procedures

This study is part of a larger research project designed to apply the conceptual RC model to GD by exploring the resources that promote or hinder recovery in individuals with a lifetime GD, using both quantitative (self-report measures) and qualitative (semi-structured interviews) methods (Gavriel-Fried, 2018; Gavriel-Fried & Lev-el, 2020). To identify the obstacles to recovery from GD, semi-structured interviews were conducted with 133 individuals who were either in treatment when the study was conducted or had been treated from 2011 to 2016 in five gambling treatment centers in Israel. The data were collected in 2017. The inclusion criteria were the self-report of a lifetime history of DSM-V GD, over the age of 18, no co-occurring substance use disorders in the previous year (according to DSM-5 criteria), and a course of recovery of up to 5 years. GD recovery was defined as a self-reported lifetime history of DSM-5 GD without exceeding the DSM-5 GD criteria for the past year. Those who corresponded to four DSM-5 criteria or more were defined as non-recovered. One hundred and forty face to face interviews were conducted after obtaining signed consent from the participants. The interviews were conducted by the research team (the first author and two research assistants, all of whom are social workers with interview expertise). The meetings started with open-ended questions in which the participants were asked to describe what hindered or made their recovery process more difficult (in addition to other topics not reported here). The interviews were recorded and then transcribed. Because of technical problems seven interviews were unusable. Hence, 133 interviews were analyzed for the current study (91 recovered participants and 42 who were classified as non-recovered). Table 1 presents the demographics and the participants' gambling-related characteristics. The study protocol was conducted in accordance with the ethical standards of the American Psychological Association (2016) and was approved by the ERB of Tel Aviv University and the Ministry of Welfare Review Board.

### Data Analysis

The data were analyzed by a combination of deductive and inductive qualitative content analyses (Elo & Kyngäs, 2008; Forman & Damschroder, 2007; Hsieh & Shannon, 2005). A directed, deductive content analysis approach is appropriate when an existing theoretical model is incomplete and would benefit from further extension (Hsieh & Shannon, 2005). This applies to the current study, which aimed to determine the components that hinder recovery from GD by using the multi-dimensional model of RC proposed by Cloud and Granfield (2008). However, because the NRC side of the RC framework has only been generally defined, a deductive analysis process was implemented as a way of "getting into the data" (Forman & Damschroder, 2007). Thus, directed content analysis only provided an initial conceptual matrix. To reveal and generate new elements specifically related to NRC in GD, an inductive content analysis was used to enable categories to emerge from the data (Forman & Damschroder, 2007). This type of approach is recommended when there is little or no data on a phenomenon (Elo & Kyngäs, 2008).

The analyses were conducted using MAXQDA software (Kuckartz & Rädiker, 2019), and consisted four main stages. First, the literature relating to NRC was read in depth by the research team to develop an initial categorization matrix. Given the scant research

**Table 1** Participants' socio-demographic characteristics and gambling-related information (N = 133)

Variable	N	%
<i>Gender</i>		
Male	94	70.68
Female	39	29.32
<i>Age group</i>		
23–39	41	30.83
40–59	55	41.35
60–77	37	27.82
	M = 49.30, SD = 13.93	
<i>Recovery status</i>		
Recovered	91	50.38
Not recovered	42	31.58
<i>Country of birth</i>		
Israel	96	72.18
Former USSR	11	8.27
Africa	11	8.27
Other	15	11.28
<i>Relationship status</i>		
Married	69	51.88
Divorced	40	30.08
Single	21	15.79
Widow/widower	3	2.26
<i>Education</i>		
Up to 10 years	18	13.53
Up to 12 years	78	58.65
Tertiary education	11	8.27
Academic degree	26	19.55
<i>Employment status</i>		
Employed	105	78.95
Unemployed	28	21.05
<i>Preferred type of gambling</i>		
Electronic gambling machines (EGMs)	28	21.05
Lotteries	25	18.80
Online gambling	18	13.53
Card games	14	10.53
Sports betting	14	10.53
Stock market	7	5.26
More than one preferred gambling type	27	20.30
<i>Treatment status</i>		
Completed treatment	57	42.86
Dropped out of treatment	56	42.11
Currently in treatment	16	12.03
Other	4	3.01

on NRC to date, the matrix only contained five major categories. Four represented NRC domains (human, social, community, and financial) which were created to mirror the four main positive RC domains. The fifth category, labelled ‘other’, was designed to capture new negative RC elements that have not been mentioned in the literature.

In the next step, all 133 interviews were read and annotated. Relevant segments representing different negative recovery elements were coded and labeled inductively, and assigned to the matrix. Cases in which one segment of text could be classified into two labels were coded into both. To enhance the trustworthiness of the findings, any utterance that appeared to represent NRC but could not be categorized under one of the four initial domains was classified as ‘other’ (Assarroudi et al., 2018). This phase resulted in 795 segments, assigned to 70 codes/labels, under four domains and the ‘other’ category.

Next, the research team discussed and reviewed the 70 codes and abstracted them into higher order headings (categories) according to their similarities and differences in content (Burnard, 1991; Hsieh & Shannon, 2005). This led to a refinement of the categorization matrix to include 19 defined categories which were classified under the four NRC domains and 12 codes that were still classified under the ‘other’ category (such as the desire to be like everyone else, or pride in being a gambler). Throughout this stage, the set of utterances assigned to each code or category was frequently reread to verify that the final category definitions reflected the participants’ original meaning (Elo & Kyngäs, 2008).

In the fourth and final stage, the frequencies of participants whose utterances corresponded to each category were counted. Categories with very low frequencies were merged with similar categories according to their content. This use of quantification in qualitative analysis is a method of triangulation (Humble, 2009) which helps to confirm the robustness of ideas and findings (Miles et al., 2014). The research team discussed the NRC components and the categorization matrix and made amendments to the matrix until each category was deemed to be sufficiently comprehensive. All the stages of analysis were conducted by the second author and reviewed by and discussed with the first author to enhance the confirmability of the findings (Lincoln & Guba, 1985). The analysis ended with the construction of a GD NRC model composed of 14 categories that were classified under four NRC domains: human, social, community, and financial. These constitute the GD NRC model presented in Table 2.

## Findings

The data analysis yielded 14 categories of NRC which were classified under the four main NRC domains labelled human, social, community and financial. These generated a broad picture of the obstacles and challenges faced by individuals with a GD on their way to recovery. The percentages in each domain and category represent the numbers of participants who related to this specific category as a factor that prevents or hinders their recovery.

**Table 2** Frequencies and percentages of each negative recovery capital (NRC) category with examples (N = 133)

Category	N <sup>a</sup>	%	Sample Quotes “What hinders my recovery is...”
<i>Human NRC</i>	109	81.95	
Urges and uncontrolled urges	37	27.82	I felt like I am sick and can't control myself. (#138, male, age 60, divorced, recovered)
Cognitive distortions	48	36.09	The need to make money and the thought that this is the easy way to do it... You say to yourself that you can win. (#176, male, age 38, married, not recovered)
Inaction	20	15.04	My lapses in gambling happened when I didn't stick to my routine or I wasn't working. (#302, female, age 36, married, not recovered)
Sensation seeking	27	20.30	It gives you a thrill than can't be described. You feel like you're the king of the world when you are gambling and waiting for the jackpot. (#120, male, age 54, divorced, not recovered)
Stressful life events	35	26.32	If there is a loss in the family. If someone in the family is sick. If there is a serious illness. Things like that can push you over the cliff. It gets you into a difficult situation. It can make you gamble. (#432, female, age 73, divorced, recovered)
Negative emotions	36	27.07	Feeling down, that's the most dangerous today. You mustn't get depressed, it is not healthy to be focused on yourself, be angry or hold a grudge. All bad feelings can put you in bad places. (#173, male, age 31, married, recovered)
Ability to conceal and inability to share/seek help	19	14.29	A gambler is always presenting a façade... It's as if he looks good, even when he comes to a G.A. meeting he doesn't look like a drug addict who lives in an air raid shelter and eats rats. ... The whole thing of masks with a gambler is really dominant... This is why recovery from gambling is very difficult. (#351, female, age 55, married, recovered)
A lack of motivation to recover	15	11.28	If you have no willpower, then it won't help. (#142, male age 44, married, recovered)
<i>Social NRC</i>	84	63.16	
Lack of social and familial networks	28	21.05	This was an escape for me... from being alone. (#116, female, age 58, divorced, not recovered)
Conflictual or dangerous social networks	74	55.64	When you have friends who gamble, it's more tempting. (#412, married, not recovered)
<i>Community NRC</i>	51	38.35	
An environment that encourages gambling	44	33.08	They make it so addictive, so that you come in the morning and hand over all your money at once for all six lotteries, so that evening you are betting on all the lotteries. No problem; you're all set. Every two hours—a thrill. This lottery is broadcast live on your phone, it's Miphal Hapayis [Israeli legal gambling company]. Miphal Hapayis is the worst disease for most of the country—you get it?! It's everywhere, all the time—its available and easy! It's always in view, in every kiosk. (#120, male, age 54, divorced, not recovered)
Money lenders	11	8.27	They give you credit so you can gamble some more... The problem is Miphal Hapayis itself... That's what makes it hard for gamblers and also because the vendor lets his clientele play on credit. They find ways to keep you roped in. (#122, male, age 75, married, recovered)

**Table 2** (continued)

Category	N <sup>a</sup>	%	Sample Quotes “What hinders my recovery is...”
<i>Financial NRC</i>	53	39.85	
Financial distress and debts	41	30.83	The terrible economic situations that I am in now, the pressure I am under, that I have no money to pay the rent... together it creates pressure and everything gets mixed up... Crises can arise—not that I am looking for them—that’s my risky situation. (#166, male, age 33, married, recovered)
Money as a risk factor	18	13.53	When cash is available, it’s much more tempting. So I say that I am putting in 50 shekels—that’s OK since I’ve got more. (#413, male, age 40, married, not recovered)

<sup>a</sup>The numbers and percentages in each category or sub-category represent the numbers of participants who cited this specific category as a factor that hinders or hindered their recovery

### Negative Human Capital (81.95%)

This domain includes personal characteristics, negative emotional, cognitive and behavioral patterns and states, and negative life circumstances. This domain is composed of eight categories.

#### Urges and Uncontrolled Urges (27.82%)

The urge to gamble and difficulties controlling it are major hindrances to the recovery process. This urge often appears spontaneously: “The urge is really strong, it’s physical... you go nuts if you don’t play. Even games that you know you will lose, you go nuts if you don’t play.” (#118, male, age 34, married, recovered), and can resurface with even greater intensity in the case of a lapse: “You feel a kind of urge that gets under your skin and you say to yourself: ‘I will just go [to gamble] for a little while, up to some amount of money and then I will get up and leave’. Nothing. You stay, you don’t get up and leave, and you go home with nothing... even when I won and I got up and left, no one could guarantee that I wouldn’t go back the next day.” (#111, female, age 50, single, not recovered).

#### Cognitive Distortions (36.09%)

These involve erroneous thoughts and cognitive biases related to gambling games and the gambler’s skills, and were divided into three components: (a) *Misconceptions about gambling*: the misperceptions that making money from gambling is possible, that gambling is a legitimate leisure activity, that there is an inherent difference between games of skill and games of chance or that wagering a small amount is not really a gamble: “The thought that I will maybe buy a lottery ticket and buy a car, maybe I will go gamble and maybe I will win and buy that car. Dumb thoughts like that.” (#127, male, age 50, divorced, recovered); (b) *Cognitive distortions regarding the gambler him/herself* such as an illusion of control or hubris: “I was too proud to admit that I was stupid and throwing away my money and I said ‘I will win and make up the losses’.” (#164, male, age 55, married, recovered); (c) *Inherent memory bias* such as recalling wins more easily than losses, focusing on positive gambling experiences and disregarding the pain it caused: “When you win you remember everything that you won. But when you lose you don’t remember anything, you only remember the wins and not the losses, only the good stuff. The profits but not the losses.



Your subconscious tells you that maybe next time you will win.” (#174, male, age 36, single, not recovered).

### **Inaction (15.04%)**

Inactivity, inaction and lack of involvement in work or leisure activities, as well as a lack of routine or a daily agenda are factors that lead to a sense of emptiness and boredom that challenge recovery. One of the interviewees described this as follows: “This is one of the biggest problems gamblers face: they are stuck at home doing nothing. So, when they have nothing to do... they gamble for the thrill.” (#114, male, age 23, single, not recovered).

### **Sensation Seeking (20.30%)**

The search for the excitement and thrills of gambling is a personality trait that can be a hurdle to recovery. The enjoyment and satisfaction associated with these experiences exert a powerful pull on recovering gamblers: “First of all, the love of gambling and the excitement; sometimes when there is no excitement in life you look for some.” (#161, male, age 31, married, recovered).

### **Stressful Life Events (26.32%)**

The stress caused by negative life events can impede recovery. These include major crises such as divorce, or the illness or death of a loved one, but also more minor day-to-day events such as getting a parking ticket or being insulted at work. In these cases, gambling becomes a safe haven: “You know, when my brothers died, that really destroyed me. I wanted the escape of gambling, especially when I thought about death and separation. These thoughts propelled me into gambling: ‘Run away and clear your head.’” (#151, female, age 38, single, recovered).

### **Negative Emotions (27.07%)**

Difficult feelings and emotions including depression, unease, mental distress, loneliness and emptiness, fear and anxiety, anger, nervousness and pressure, feelings of failure and inferiority, and self-pity all trigger relapses. The interviewees described gambling as something that helps them deal with these feelings: “When I get angry, when I am hurt, when I am insulted, it’s as if I want to pamper myself... When I get angry and I feel rage and hurt, I go [gambling].” (#305, female, age 75, married, not recovered).

### **Ability to Conceal and Inability to Share/Seek Help (14.29%)**

Difficulties in sharing, and lying about gambling are obstacles to recovery. This pattern of behavior, which is conscious, even if not always controlled, is described as one of the reasons that prevents gamblers from asking for help: “Since I conceal [my gambling] I can’t ask for support.” (#182, female, age 65, married, not recovered).

### **Lack of Motivation to Recover (11.28%)**

This category is characterized by a lack of willpower or a lack of faith in one's ability to recover from gambling, which from the outset prevents the person from choosing the path toward recovery or sticking to it. Lack of willpower was described as a lack of an honest, conscious internal decision to work toward recovery: "If the guy doesn't do it, uh... if he doesn't go willingly, with a real desire and honesty [he will not recover]." (#437, male, age 57, single, recovered). The interviewees suggested that lack of faith in recovery stems from the belief that addiction is a chronic disease that cannot be cured, which thus decreases their willpower to try to recover: "I think that it is chronic. I don't believe in it [in recovery]. Look, there are those that stop, but there are so few of them that you can count them on one hand. Basically it is a disease that is difficult to get rid of." (#409, male, age 65, divorced, not recovered).

### **Negative Social Capital (63.16%)**

The lack of emotional or tangible support from family and friends that can facilitate recovery is a major issue. In certain cases, social and familial circles do not exist or the gambler has no contact with them. In other cases they are characterized by a network of destructive and conflictual relationships that undermine the recovery process.

#### **Lack of Social and Familial Networks (21.05%)**

Lack of friends is primarily the result of severing relations with previous social circles from the gambling period: "It's hard since you have really lost a lot of friends [from the gambling period]. You had things to do, people would call you: 'Come on over', and you were in relationships, had activities and exchanges with people. Suddenly the circle of friends shrinks because you stopped gambling. So what's left? Home? And maybe one or two friends? This is very difficult." (#178, male, age 67, married, recovered). The lack of a family circle can also stem from divorce, a death, or being cut off from one's family. The following interviewee described it well: "A person whose... network of relationships has fallen apart, let's say. As a result, he has to deal with two things: both giving up his gambling and the breakup of his family unit. That isn't the same thing as a person who is getting support at home. I think this is harder since in addition there is no one to support you." (#419, male, age 37, married, recovered).

The absence of a family circle may also prevent the recovering gambler from having the opportunity to support significant others. The interviewees made the point that having no one to support constituted a risk factor that thrust them back towards gambling: "If I were still with my family today, with my wife, I would be more careful. It would be more difficult for me [to gamble] and I would be more responsible... If I am the breadwinner, my responsibility for the family is greater." (#120, male, age 54, divorced, not recovered).

#### **Conflictual or Dangerous Social Networks (55.64%)**

Families can make the recovery process more difficult when they do not provide assistance to the recovering gambler or when family life is characterized by spousal arguments, frustration, and/or a lack of mutual trust. One of the interviewees described the impact of this

lack of support as follows: “A non-supportive family can make you depressed and give you a low self-image and a negative mood... In this situation, all you can do is gamble; it’s difficult to cheer yourself up.” (#417, male, age 62, married, recovered).

The interviewees noted that tensions had always existed in some families while in others it was related to gambling. Difficulties dealing with these problems often initiate a return to gambling: “A negative wife... if the wife isn’t supportive... my wife... even when I stopped gambling, every time we argued she reminded me of it [the consequences of gambling]... for her, it would never be over. Saying ‘if you hadn’t gambled, today we could live [better]’ In the end... I am sure that she contributed to [my return to gambling]. All the time, I was thinking how to escape.” (#242, male, age 50, married, recovered).

Certain social circles may be a risk factor for recovery. The social milieu of active gamblers is composed of recreational gamblers and individuals with ongoing GD who form a milieu that encourages gambling: “Friendship with the wrong people. Connecting with gamblers. That is also something that can take you down. Talking about gambling within this group is in some way a trap; it brings back the urges.” (#422, male, age 65, married, recovered).

### **Negative Community Capital (38.35%)**

Physical or virtual communities that facilitate the availability, accessibility, advertising and marketing of gambling all contribute to Negative Community Capital. These communities view gambling as a normative behavior and thus make the recovery process more difficult.

### **An Environment that Encourages Gambling (33.08%)**

The accessibility and availability of gambling venues, multiple lottery booths, advertising and intensive marketing and a lack of social awareness of the damage caused by gambling are the primary components of negative environment: “I go out in the morning and I see the [lottery] kiosk across from my house, it’s smack in my face... If it wasn’t there, I think there would be no [problems with recovery].” (#114, male, age 23, single, not recovered). The internet and aggressive marketing of virtual gambling games has made gambling immediately accessible: “Technology in my opinion has totally changed gambling, which did not use to be so accessible. Today, a person can destroy his whole world at home by one click on the cellphone. All the technology: they even added the sports channels so you can bet on games from all over the world. All of this is confusing to a gambler. In the past, it didn’t exist.” (#155, male, age 29, single, recovered).

Exposure to advertisements that encourage gambling or publicize events that are connected to gambling (such as sports events) were described as a temptation that triggers relapse: “Greater exposure. Like I told you: the moment you see it, or you hear it during a commercial on television in the evening while you’re watching a program. Suddenly the game between, let’s say, Hapoel Jerusalem and Maccabi Tel Aviv [Israeli basketball teams]; this appeal to make some money. It’s... even if you are not there, suddenly it gets under your skin. The increased exposure.” (#413, male, age 40, married, not recovered).

The lack of social awareness of the addictive potential of gambling behavior, which is reflected in a social perception that normalizes such behavior, was described as another component connected to the community and its norms that is likely to delay the recovery process: “I am sitting with people and they all say that it’s just money. There is no awareness of it—of gambling as an addiction disease. For most people, addiction is drug addicts

and drunks. Gambling is not an addiction disease in people's minds... there is not enough awareness; people aren't even aware that they are addicted." (#180, female, age 55, married, recovered).

### **Money Lenders (8.27%)**

Community and social sources that loan money constitute a unique stumbling block to recovery from GD. Vendors of lottery kiosks, the grey market, banks, friends and family members are included in this category: "In our neighborhood, there is a kiosk across the street and that's where it started... There's one kiosk owner who terrorized us. She lets people pay by check or lets them pay the next month. She really destroyed them." (#113, female, age 68, married, not recovered). Since community and social entities allow gamblers to borrow money, this component straddles the community domain and the social domain.

### **Negative Financial Capital (39.85%)**

This domain covers economic distress, lack of money, and debts incurred from gambling. Paradoxically, for several interviewees, the availability of cash constituted a risk factor that could send them back to gambling.

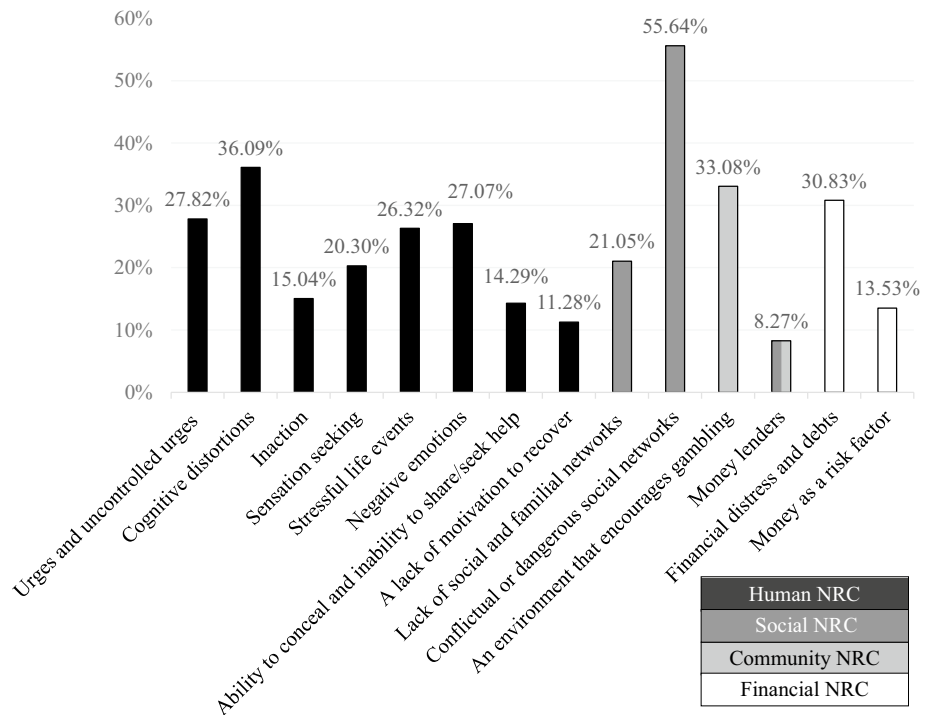
### **Financial Distress and Debts (30.83%)**

A shortage of financial resources: "For me, it's a result of economic pressure. Economic pressure, without a doubt." (#302, female, age 36, married, not recovered). Financial problems become a serious hindrance when combined with the cognitive distortion (Human NRC) that money can be made by gambling: "Sometimes when there is no money, you think maybe gambling will rescue you." (#113, female, age 68, married, not recovered).

Gamblers face the specific issue of outstanding debts (incurred during the gambling period) that need to be paid back during the recovery process: "You get into this vicious circle of having to pay money back by gambling more... If someone could pay the debts for you maybe you could stop earlier." (#106, male, age 60, divorced, recovered). These negative experiences can be compounded by threats from loan sharks who come after the recovering gambler: "A guy loses five million shekels or two million shekels or I don't know how much on the grey market. This is a different situation. There are threats made on his life; his personal life can go to pieces." (#419, male, age 37, married, recovered).

### **Money as a Risk Factor (13.53%)**

Prosperity and available cash were described as possible risk factors since they provide an immediate way to gamble. This was described by one of the interviewees: "What is funny in fact is that when I worked, when I was making a lot of money and I had a certain amount of cash, it gave me an urge to go... I had an urge to gamble." (#101, male, age 46, married not recovered).



**Fig. 1** Model of negative recovery capital in gambling disorder

## Discussion

For the first time in the addiction literature, this study presents a detailed model that conceptualizes NRC. This model, depicted in Fig. 1, maps the components that prevent or hinder recovery from gambling, as described by individuals with GD. As in the case of the positive RC model which focuses on the resources and strengths of the individual and his/her surroundings that have been mapped onto the human, social, community and financial domains (Gavriel-Fried & Lev-el, 2020; Hennessy, 2017), this model is also multidimensional and holistic. The analysis showed that the negative elements could be classified under the same domains as those documented on the positive side of RC model and largely mirror them. The findings are a complement to the positive RC model conceptualized for individuals with GD (Gavriel-Fried & Lev-el, 2020). The findings provide a broader and more holistic picture of the recovery process by depicting the challenges and weaknesses in addition to the strengths and resources affecting individuals' road to recovery.

Most of the NRC elements identified here have been noted in previous studies of gambling. Elements such as cognitive distortions, negative emotions, inaction, stressful life events, urges and uncontrolled urges, financial distress and debt, money as a risk factor, seeking excitement, lack of motivation, lack of social and familial networks, conflictual or dangerous social networks, and environments that encourage gambling have all been reported in studies probing the predictors of relapse in individuals who were seeking treatment for gambling problems, were already in treatment, or had recently quit gambling

(Hodgins & el-Guebaly, 2004; Holub et al., 2005; Smith et al., 2015) and in studies that have examined obstacles to help-seeking and treatment in people with gambling problems (Clarke et al., 2007; Gainsbury et al., 2014; Pulford et al., 2009a).

By systematically categorizing NRC for the first time, the current study innovates by providing a more comprehensive view into the recovery process from GD. The structure of the model and its division into domains help to map and identify problems hindering recovery. The findings suggest that most of the difficulties in recovery are situated in the human domain, in terms of both the percentage of interviewees who mentioned these factors (81.95%) and the number of categories (eight) included in it. This may be indicative of the interviewees' high level of awareness of the personal aspects that hinder their recovery, and their complexity. It may also reflect the interviewees' internalization of conventional treatment approaches to gambling, which are centered on the individual, such as the cognitive behavioral approach, the motivational interview approach and the brief treatment approach (Petry et al., 2017; Yakovenko & Hodgins, 2016) that place the responsibility for recovery squarely on the gambler's shoulders. Thus, the interviewees may have adopted the social and therapeutic discourse that presents the problem of gambling as an individual's personal deviation or as a personal medical problem that views the gambler as responsible for both the addiction process and recovery from it (Miller et al., 2016; Reith, 2008). This discourse reduces society's responsibility for recovery.

In comparison to other domains in the model, the community domain had the lowest frequency. About thirty-eight percent (38.35%) of the interviewees related to the community environment as an element that hinders recovery. Nonetheless, this is a critical dimension since situational features not only lead to gambling in the first place, but also serve as inducements to continue gambling regardless of the individual's social-psychological status (Griffiths & Parke, 2003). Hence the findings also suggest that these characteristics are pertinent to the recovery process. These environmental factors have been examined in the gambling literature dealing with public health and the comprehensive nature of addictive gambling (Abbott et al., 2015; Wardle et al., 2019). The results emphasize the impact of the environment and the community on people's gambling behavior, as well as the importance of policy that regulates, prevents and minimizes gambling-related harm.

Lottery kiosks, especially those offering credit, were cited as a key temptation. This finding is consistent with qualitative research on Israeli women with GD (Gavriel-Fried & Ajzenstadt, 2012). Individuals who tend to gamble at the same venue are likely to develop a relationship with the vendors. These asymmetrical relations (Abbott et al., 2015) are bound to include an inherent tension between the vendor's interest in maximizing profits which depend on the volume of sales, and the need of the gambler to limit or control betting. Even though the legal gambling industry in Israel is committed to a responsible gaming policy, relationships between vendors and gamblers should be under more stringent supervision.

The impression of some participants that the public and their surroundings do not perceive gambling behavior as having an addictive potential contradicts findings from a previous study reporting that Israeli adults viewed gambling in a negative light (Gavriel-Fried, 2015). This inconsistency may be due to the fact that the questionnaire examined attitudes towards gambling in general rather than gambling as an addiction. In any case, the current finding calls for heightened public awareness of the potential harm caused by gambling.

Unlike studies in other countries which have shown that lack of access to treatment and recovery programs may make recovery a more difficult process (Pulford et al., 2009b), availability of therapy was not mentioned at all by the interviewees in this study. This may be because of the characteristics of the current sample which was made up of individuals

who were in treatment, and because Israel provides relatively comprehensive welfare services to its citizens. Treatment for GD is included in public welfare services provided by the State for a nominal fee.

Roughly sixty-three percent (63.16%) of the interviewees related to the negative elements of Social Capital. As in the case of previous studies that have described how gamblers' relationships with their social environment and family members are undermined (Dowling et al., 2014, 2016), some of the interviewees in the current study drew attention to the isolation that can stem from family crises. Some respondents who had preserved their closest social circles mentioned conflictual family and social situations as factors that hindered recovery. This finding is consistent with studies showing that family members can act as triggers of relapse (Kalischuk et al., 2006), and findings showing that marital problems or conflicts with family or friends are not often mentioned as reasons for help-seeking (Pulford et al., 2009b). Thus, conflicts and anger on the part of family members not only has little effect on encouraging the individual to seek initial help but may hinder the recovery process. Clinicians should consider integrating family members into the individual's treatment to help families process the burdens and resentments of the past.

About thirty nine percent (39.85%) of the interviewees viewed Financial Capital as a factor that hindered recovery. The gambling literature has acknowledged the role of financial problems in gamblers' concerns (Heiskanen, 2017), which constitute one of the main reasons for seeking help (Pulford et al., 2009b) and are a trigger for relapse (Hodgins & el-Guebaly, 2004). Unmanageable debt has been shown to be associated with gambling-related suicides (Wong et al., 2010).

The interviewees drew attention to financial factors that sometimes conflicted with each other. Economic difficulties and a lack of resources were often cited as NRC whereas ready cash was also seen as impeding recovery, since it makes gambling easier. Similarly, a study carried out in the UK reported that somewhat fewer than two-thirds of all problem gamblers reported that they had no gambling debts (Barnard et al., 2014). These authors explored gamblers' attitudes toward expenditure and debt, and suggested that they are related to and influenced by many factors, only one of which is problematic gambling. Thus, attitudes toward spending, and by extension debts and financial problems, may reflect the complexity of negative financial capital.

Overall, the recommendations for practice that emerge from the current study point to the importance of a holistic solution to the problems faced by individuals in recovery from GD. Individual therapy should relate to the individual's problems as a whole, including his/her financial state, family and social relationships, and the community in which he/she lives. This treatment should include the diagnosis and provision of a tailored solution in each of these domains. For example, this means emotional treatment for depression, psycho-educational treatment and realization of social rights that can guide economic/financial behavior and management, employment rehabilitation to help overcome unemployment, isolation and boredom that can emerge from it, etc. Treatment must also bridge domains by considering the reciprocal effects between elements from different domains such as between financial distress and negative emotions. Family treatment should be oriented towards turning family relationships into a positive rather than a negative factor in recovery. Group therapy can strengthen the supportive social network of recovering gamblers (alongside dealing with all domains within a group setting). Practitioners should also engage in policy practice to reduce the accessibility and availability of gambling and the ubiquity of advertising (both physical and virtual), which were found in the current study to be a component of NRC. Combining these practices will send a clear social message that

the recovery of individuals with a GD is the responsibility of society as a whole and not solely that of the individual.

This study has a number of limitations. It was based on interviews with individuals with GD who had already sought help. Future studies should include subpopulations of gamblers such as natural recoverers. The study was conducted in Israel; hence, features that may hinder recovery may be specific to the local context. The NRC model should thus be examined in other countries. Despite these limitations, the study is the first to map the negative components impeding recovery in a RC model. The potential to extend this NRC model to other types of addictions should be considered.

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## References

- Abbott, M., Binde, P., Clark, L., Hodgins, D., Korn, D., Pereira, A., Quilty, L., Thomas, A., Volberg, R., & Walker, D. (2015). *Conceptual framework of harmful gambling: An international collaboration revised September 2015*.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.
- Ashford, R. D., Brown, A., Brown, T., Callis, J., Cleveland, H. H., Eisenhart, E., Groover, H., Hayes, N., Johnston, T., & Kimball, T. (2019). Defining and operationalizing the phenomena of recovery: A working definition from the recovery science research collaborative. *Addiction Research & Theory*, 27(3), 179–188.
- Assarroudi, A., Heshmati Nabavi, F., Armat, M. R., Ebadi, A., & Vaismoradi, M. (2018). Directed qualitative content analysis: The description and elaboration of its underpinning methods and data analysis process. *Journal of Research in Nursing*, 23(1), 42–55.
- Barnard, M., Kerr, J., Kinsella, R., Orford, J., Reith, G., & Wardle, H. (2014). Exploring the relationship between gambling, debt and financial management in Britain. *International Gambling Studies*, 14(1), 82–95.
- Best, D., Bird, K., & Hunton, L. (2015). Recovery as a social phenomenon: What is the role of the community in supporting and enabling recovery?
- Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse education today*, 11(6), 461–466.
- Burns, J., & Marks, D. (2013). Can recovery capital predict addiction problem severity? *Alcoholism Treatment Quarterly*, 31(3), 303–320.
- Clarke, D., Abbott, M., DeSouza, R., & Bellringer, M. (2007). An overview of help seeking by problem gamblers and their families including barriers to and relevance of services. *International Journal of Mental Health and Addiction*, 5(4), 292–306.
- Cloud, W., & Granfield, R. (2001). Natural recovery from substance dependency: Lessons for treatment providers. *Journal of Social Work Practice in the Addictions*, 1(1), 83–104.
- Cloud, W., & Granfield, R. (2008). Conceptualizing recovery capital: Expansion of a theoretical construct. *Substance Use & Misuse*, 43(12–13), 1971–1986.
- Davidson, L., Lawless, M. S., & Leary, F. (2005). Concepts of recovery: Competing or complementary? *Current Opinion in Psychiatry*, 18(6), 664–667.
- Dowling, N. A., Rodda, S. N., Lubman, D. I., & Jackson, A. C. (2014). The impacts of problem gambling on concerned significant others accessing web-based counselling. *Addictive Behaviors*, 39(8), 1253–1257.
- Dowling, N. A., Suomi, A., Jackson, A. C., & Lavis, T. (2016). Problem gambling family impacts: Development of the problem gambling family impact scale. *Journal of Gambling Studies*, 32(3), 935–955.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115.
- Evans, E., Li, L., Buoncrisiani, S., & Hser, Y.-I. (2014). Perceived neighborhood safety, recovery capital, and successful outcomes among mothers 10 years after substance abuse treatment. *Substance Use & Misuse*, 49(11), 1491–1503.



- Forman, J., & Damschroder, L. (2007). Qualitative content analysis. *Empirical Methods for Bioethics: A Primer*, 11, 39–62.
- Gainsbury, S., Hing, N., & Suhonen, N. (2014). Professional help-seeking for gambling problems: Awareness, barriers and motivators for treatment. *Journal of Gambling Studies*, 30(2), 503–519.
- Gavriel-Fried, B. (2015). Attitudes of Jewish Israeli adults towards gambling. *International Gambling Studies*, 15(2), 196–211.
- Gavriel-Fried, B. (2018). The crucial role of recovery capital in individuals with a gambling disorder. *Journal of Behavioral Addictions*, 7(3), 792–799.
- Gavriel-Fried, B., & Ajzenstadt, M. (2012). Pathological women gamblers: Gender-related aspects of control. *Sex Roles*, 66(1–2), 128–142.
- Gavriel-Fried, B., & Lev-el, N. (2020). Mapping and conceptualizing recovery capital of recovered gamblers. *American Journal of Orthopsychiatry*, 90(1), 22.
- Gavriel-Fried, B., Moretta, T., & Potenza, M. N. (2019). Associations between recovery capital, spirituality, and DSM–5 symptom improvement in gambling disorder. *Psychology of Addictive Behaviors*, 34, 209.
- Granfield, R. (2004). Addiction and modernity: A comment on a global theory of addiction. *Nad Publicacion*, 44, 29–34.
- Granfield, R., & Cloud, W. (1999). *Coming clean: Overcoming addiction without treatment*. NYU Press.
- Griffiths, M., & Parke, J. (2003). The psychology of the fruit machine. *Psychology Review*, 9(4), 12–16.
- Heiskanen, M. K. (2017). Financial recovery from problem gambling: problem gamblers' experiences of social assistance and other financial support. *Journal of Gambling Issues*, 35, 24–48.
- Hennessy, E. A. (2017). Recovery capital: A systematic review of the literature. *Addiction Research & Theory*, 25(5), 349–360.
- Hibbert, L. J., & Best, D. W. (2011). Assessing recovery and functioning in former problem drinkers at different stages of their recovery journeys. *Drug and Alcohol Review*, 30(1), 12–20.
- Hodgins-Guebal, D. C. N. (2004). Retrospective and prospective reports of precipitants to relapse in pathological gambling. *Journal of Consulting and Clinical Psychology*, 72(1), 72.
- Holub, A., Hodgins, D. C., & Peden, N. E. (2005). Development of the temptations for gambling questionnaire: A measure of temptation in recently quit gamblers. *Addiction Research & Theory*, 13(2), 179–191.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288.
- Humble, Á. M. (2009). Technique Triangulation for Validation in Directed Content Analysis. *International Journal of Qualitative Methods*, 8(3), 34–51.
- Kalischuk, R. G., Nowatzki, N., Cardwell, K., Klein, K., & Solowoniuk, J. (2006). Problem gambling and its impact on families: A literature review. *International Gambling Studies*, 6(1), 31–60.
- Khayyat-Abuaita, U., Ostojic, D., Wiedemann, A., Arfken, C. L., & Ledgerwood, D. M. (2015). Barriers to and reasons for treatment initiation among gambling help-line callers. *The Journal of Nervous and Mental Disease*, 203(8), 641–645.
- Krentzman, A. R. (2013). Review of the application of positive psychology to substance use, addiction, and recovery research. *Psychology of Addictive Behaviors*, 27(1), 151.
- Kuckartz, U., & Rädiker, S. (2019). *Analyzing qualitative data with MAXQDA*. Springer.
- Laudet, A. B., & White, W. L. (2008). Recovery capital as prospective predictor of sustained recovery, life satisfaction, and stress among former poly-substance users. *Substance Use & Misuse*, 43(1), 27–54.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Beverly Hills. CA Google Scholar.
- Miller, H. E., Thomas, S. L., Smith, K. M., & Robinson, P. (2016). Surveillance, responsibility and control: an analysis of government and industry discourses about “problem” and “responsible” gambling. *Addiction Research & Theory*, 24(2), 163–176.
- Neale, J., Nettleton, S., & Pickering, L. (2014). Gender sameness and difference in recovery from heroin dependence: A qualitative exploration. *International Journal of Drug Policy*, 25(1), 3–12.
- Neale, J., & Stevenson, C. (2015). Social and recovery capital amongst homeless hostel residents who use drugs and alcohol. *International Journal of Drug Policy*, 26(5), 475–483.
- Nower, L., Mills, D., & Anthony, W. L. V. (2020). The first behavioral addiction. *The Routledge handbook of social work and addictive behaviors*.
- Oei, T. P., & Gordon, L. M. (2008). Psychosocial factors related to gambling abstinence and relapse in members of gamblers anonymous. *Journal of Gambling Studies*, 24(1), 91–105.
- Petry, N. M., Ginley, M. K., & Rash, C. J. (2017). A systematic review of treatments for problem gambling. *Psychology of Addictive Behaviors*, 31(8), 951.
- Pickering, D., Keen, B., Entwistle, G., & Blaszczynski, A. (2018). Measuring treatment outcomes in gambling disorders: A systematic review. *Addiction*, 113(3), 411–426.

- Pickering, D., Spoelma, M. J., Dawczyk, A., Gainsbury, S. M., & Blaszczynski, A. (2020). What does it mean to recover from a gambling disorder? Perspectives of gambling help service users. *Addiction Research & Theory*, 28(2), 132–143.
- Pulford, J., Bellringer, M., Abbott, M., Clarke, D., Hodgins, D., & Williams, J. (2009a). Barriers to help-seeking for a gambling problem: The experiences of gamblers who have sought specialist assistance and the perceptions of those who have not. *Journal of Gambling Studies*, 25(1), 33–48.
- Pulford, J., Bellringer, M., Abbott, M., Clarke, D., Hodgins, D., & Williams, J. (2009b). Reasons for seeking help for a gambling problem: The experiences of gamblers who have sought specialist assistance and the perceptions of those who have not. *Journal of Gambling Studies*, 25(1), 19–32.
- Rockloff, M. J., & Schofield, G. (2004). Factor analysis of barriers to treatment for problem gambling. *Journal of Gambling Studies*, 20(2), 121–126.
- Reith, G. (2008). Reflections on responsibility. *Journal of Gambling Issues*, (22), 149–155.
- Smith, D. P., Battersby, M. W., Pols, R. G., Harvey, P. W., Oakes, J. E., & Baigent, M. F. (2015). Predictors of relapse in problem gambling: A prospective cohort study. *Journal of Gambling Studies*, 31(1), 299–313.
- Terrion, J. L. (2013). The experience of post-secondary education for students in recovery from addiction to drugs or alcohol: Relationships and recovery capital. *Journal of Social and Personal Relationships*, 30(1), 3–23.
- Tew, J. (2013). Recovery capital: What enables a sustainable recovery from mental health difficulties? *European Journal of Social Work*, 16(3), 360–374.
- Wardle, H., Reith, G., Langham, E., & Rogers, R. D. (2019). Gambling and public health: We need policy action to prevent harm. *BMJ*, 365, 1807.
- Wong, P. W., Chan, W. S., Conwell, Y., Conner, K. R., & Yip, P. S. (2010). A psychological autopsy study of pathological gamblers who died by suicide. *Journal of Affective Disorders*, 120(1–3), 213–216.
- Yakovenko, I., & Hodgins, D. C. (2016). Latest developments in treatment for disordered gambling: review and critical evaluation of outcome studies. *Current Addiction Reports*, 3(3), 299–306.

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