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Theoretical models of pathological gambling

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Session IV: Towards the DSM-V

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*(Introduction.)***Jon Grant**: Our next presentation is by Dr. Carlos Blanco from Columbia University, and he doesn't have a bio in the sheet that you were given, but he deserves one. And then I was thinking, “Well, I could make up some things about Carlos,” but I was happy enough with what I know about Carlos, so I don't have to make up anything. He's at Columbia University, and he's been doing research on pathological gambling for at least the last eight to ten years in a wide variety of things, in some very interesting biological studies as well as treatment studies. He's gotten good funding from national organizations. And recently he has been doing a lot of work on understanding where gambling fits, building on Richard Rosenthal's presentation, “What's it like? What's it not like?” And what we should start thinking about in where to put it. Carlos.

Carlos Blanco: First I want to thank you all for being here. I want to thank Keith Whyte of the National Council for inviting me to come to this great meeting. And I also want to thank the agencies that have funded my research, and also Henry Lesieur, who has been an inspiration for me throughout all these years. I'm very sad that he's not here.

I'm going to initially disagree, of course, with Richard [Rosenthal], about the name. I actually think “pathological gambling” is a great name. *(Laughter.)* And the reason I think it's a great name, at least for the moment, is because it doesn't have any theoretical load. In general, I think that pathological gambling is pathological, and I think very few people would disagree with me that it has to do with gambling, so I think it describes the behavior. But I don't think it says whether it's an addiction, a compulsion, or an impulse-control disorder, and maybe 10 years from now we can

change the name, but I think for the moment, it's a very neutral name that may not be pretty, but I think it's descriptive.

I'm going to present four potential models of how to understand pathological gambling and I'm not wedded to any of these models. I'm just going to present them, and while there are probably other models, I'd be interested in your thoughts about these models and potential alternatives.

One of the models that I think is better known is the OCD model, for, as you know, obsessive compulsive disorder is characterized by repetitive behaviors, and by engaging in rituals or compulsions to relieve the anxiety produced for those upset by those obsessions. Eric Hollander, who has been the main proponent of this model, has enlarged the concept to include other behaviors. It's unclear to me exactly which behaviors are included, but certainly pathological gambling would be one. And probably trichotillomania, and maybe sexual compulsions or sexual addictions, would be included, as well.

The reason to include pathological gambling is because the first criterion from the DSM-IV is the increased preoccupation and repetitive thoughts about gambling, and that would fit the model nicely.

One potential reason why it might not fit the model so well is that, in general, the obsessions in obsessive compulsive disorders and related disorders like trichotillomania are what we call ego-dystonic. And ego-dystonic means that you are not at ease or you don't like having those thoughts. I think in the case of most gamblers or most pathological gamblers, they actually like having the thoughts, and they like engaging in the behavior. What they don't like are the consequences. Whereas I think, in general, obsessive compulsive patients are ego-dystonic in regard to the disorder and their thoughts. I think most pathological gamblers are ego-syntonic. I've seen a few that are ego-dystonic, and probably you other members of the panel have had this similar experience, but I would say 90 percent, 95 percent of the patients that I see like gambling. What they don't like is when they go home and they have trouble with the family. They don't like losing their jobs. They don't like going to jail. But the actual activity of gambling, I think, in general they enjoy it, which is what drives them back to gambling.

Another characteristic of obsessive compulsive disorders is the pathological doubt, which we all have, I think, to a certain extent, that occurs when you leave home and you check if you closed the door or you check the oven. The difference with obsessive compulsive disorder is that, in general, most of us, I think, check once or twice. And obsessive compulsive people or obsessive compulsive patients with obsessive compulsive disorder would check perhaps 10 times, 20 times.

I don't think that pathological gamblers have so much pathological doubt about

whether they want to gamble or not. They just go and gamble, so I think that this is not a very characteristic feature of the disorder.

There's a bit of disagreement on comorbidity. As far as I know, only three studies have studied comorbidity or OCD with pathological gambling. One was done by Renee Cunningham-Williams, who is here, and the other by Roger Bland in Canada. And then we have the National Comorbidity Survey-Replication, whose results have not been published yet.

So the OCD range in client populations varies from essentially 1 percent to 16 percent. And other characteristics of OCD may or may not fit pathological gambling. One is that, in general, obsessive compulsive disorder is associated with harm avoidance or trying to avoid anxiety. I don't think that's very characteristic of most pathological gamblers, although it may be in the case of escape gamblers. Also, an obsessive compulsive disorder is characterized by anticipatory anxiety, which, again, I don't think is very characteristic of gamblers.

An alternative would be the affective disorder model, which Susan McElroy and other people have suggested. And the reason to consider pathological gambling as a potential affective disorder is that the behavior is harmful, but also pleasurable, which happens also in bipolar disorder, especially in mania. This also leads in some pathological gamblers to mood fluctuations, very much as it happens, again, in bipolar disorder, where people may go from being elated or excited to being depressed or disappointed.

And I think most people will accept including escape gamblers in this model. Also very well established are increased comorbidity or increased rates of mood disorders and anxiety disorders among pathological gamblers. And, in general, even though an association doesn't mean that two disorders are similar, disorders that are similar to each other tend to share comorbidity, so that would be an indication or a hint that pathological gambling may be a variety or subtype of affective disorders.

The biochemical abnormalities that have been found in pathological gambling coincide with biochemical abnormalities that have been found in affective disorders, such as changes in the serotonin levels, dopamine, and noradrenalin. And, finally, some studies have shown a response to SSRIs [selective serotonin reuptake inhibitors], such as paroxetine (Paxil), and also to mood stabilizers like lithium and depakote.

So these aspects suggest that pathological gamblers could be, or at least some pathological gamblers would be, among a variety of patients with mood disorders.

The third possibility is to consider pathological gambling as an addiction and, more

specifically, what we would call a behavioral addiction as opposed to a chemical addiction. The distinction between a behavioral versus a chemical addiction is that the patient doesn't ingest a substance that induces a disorder. In other addictions, of course, like alcohol or heroin addiction, the patient has to consume the substance periodically. In pathological gambling, instead of a substance, we have an activity, here gambling, that substitutes for the substance of the addiction.

One thing that makes us think that pathological gambling may be an addiction is that gambling behaviors are very much like the consumption of heroin or alcohol or marijuana, which are ego-dystonic. A second characteristic that is becoming more and more important in the field of chemical addictions is the importance of motivation in the behavior of the person. When somebody starts using heroin, it may not be a very important part of their life. But as the person becomes more and more addictive, consuming heroin becomes more important than anything else in their life. At some point, the only thing that the patient cares about is consuming heroin, regardless of whether they go to jail, they lose their families, they lose their children. They don't go to the movies any more.

And I think that that happens a little bit to pathological gamblers. Initially, they start gambling, and maybe it's just entertainment, but as gambling becomes more and more important, other things in their life lose importance. I think that's pretty much reflected in the criteria. If you look at the last criterion of the DSM-IV, it reflects what Jon was saying, that committing illegal acts means that they care more about gambling than about remaining within the constraints of the law. They jeopardize relationships. They jeopardize their jobs.

There's also the issue of impulsivity that Richard brought up, and one way of measuring impulsivity is by [*unclear*], or, in general, comparing the importance of short-term rewards versus long-term rewards. If you're at the casino the short-term reward would be to gamble and enjoy the moment. Or if you're at the bar, the short-term reward is that you can drink and enjoy the wine or the alcohol or the company. But the second part is what happens later on.

If you gamble your money right now, then you may not be able to buy a house later on, or you may have trouble with your family. If you drink too much tonight, then tomorrow you might not be able to go to work, or you may have a hangover, or you may have liver disease. Part of what happens in the addictions is this imbalance between short-term rewards and long-term consequences of the behavior.

Finally, another reason to potentially consider pathological gambling as a behavioral addiction lies in responses to treatment. One of the best established treatments right now within the limitations of what we know would be cognitive behavioral therapy, and not just any cognitive behavioral therapy, but mainly the cognitive behavioral therapy that we call relapse prevention, which is the cognitive

behavioral therapy that is used in the treatment of addictions.

So there are a number of reasons, epidemiologically, biochemically, neuroanatomically, in terms of neuropsychology and treatment response that suggest that gambling could be a behavioral addiction.

I thought I would also bring up the rational addiction theory, also called RAT theory; I'm not sure why, but… *(laughter)* … that's what it's called in the literature. And, again, I'm not necessarily wedded to this theory, but I thought I would bring this up as a provocation. Rational addiction theory was proposed by Gary Becker, who's an economist at the University of Chicago, and he won the Nobel Prize in economics not just because of this, but this was part of the reason why he got a Nobel Prize.

And in contrast to the other theories where we interpret pathological gambling as a disorder, Gary Becker, the author of RAT, does not necessarily interpret pathological gambling as a pathological behavior. What he proposes for substance abuse can be extended to gambling. He suggests that addictions are not necessarily irrational behaviors or things that we should not do. To the contrary, he says that pathological gambling or other addictions can potentially be rational behaviors and things that we should engage in or some people should engage in, and that's why they do them. They're not irrational.

The reason why you may want to gamble is because by engaging in it you may maximize how much you can enjoy life. Suppose that you are unemployed, have no friends, have a terrible illness, and you're unable to enjoy anything else. But you enjoy gambling. Why wouldn't you gamble as much as you can? That's the best chance you have or the best way to enjoy life. I'm not suggesting you do it. I'm just saying some people may. *(Laughter.)* They may want to do it. And that dovetails with what I was saying before about alternative rewards. It's a balance between the reward of gambling and alternative rewards. If you have a family, if you have a good job, you have friends, you enjoy food, you enjoy going for a walk, then you may not want to give those up for gambling. But if you have nothing else, again, why not gamble?

One of the discussions in terms of rational addiction theory includes the terms “maximize pleasure” or “maximize enjoyment” or “maximize local utility” and any of the words that they use to describe those behaviors, because are we referring to maximizing pleasure right now or do you have to take into account the rest of your life?

Again, if you're at the bar, then maybe the best chance to maximize your utility or maximize your pleasure at that point is to have a drink. Maybe the people around you are boring, or maybe if you go home, you're going to get bored. There's

nothing else to do, at that point; maybe the best option is to drink. Or if you go to the casino perhaps the best way to enjoy yourself is to gamble; that would be a maximization of local utility or local pleasure.

But other possibilities include if you want to maximize your pleasure throughout your life, and if you gamble now, you maximize your short-term utility, but then throughout your life you're not going to be able to keep a job. You're not going to be able to keep your family. You may have to sell your house. You may go to jail. Then you're not maximizing your utility.

One of the reasons to consider gambling as a rational addiction is that gambling seems to be more prevalent or more frequent with people who have lower incomes. And people with lower income, in general, have fewer opportunities to enjoy life than do people who have more income. If they have fewer alternatives, then maybe gambling is an attractive option for those individuals.

Rational addiction theory also gives us some clues as to what we could do in terms of treatment. If the only thing that you can present to the patient is that they're not going to gamble, but there's no other advantage for not gambling, that would not be very attractive. But let's say, if gambling was associated with perhaps potentially paying patients for not gambling—I'm not saying that we should—but perhaps you could say, “Well, if you come to treatment and you don't gamble, I'm going to give you every month a thousand dollars, or five thousand dollars, or a million dollars,” then some patients may not want to gamble.

A different way of presenting that would be to present other alternatives like, “If you don't gamble, you're not going to go to jail” or “If you don't gamble, we'll give you a subsidized job.” You can present contingencies or other things that may encourage patients not to gamble, and I don't think these have been used very well in treatment, but I think they are worth some consideration.

What are some of the future directions that I think we should follow in terms of advancing the categorization of pathological gambling? Well, one thing would be, of course, to integrate the knowledge that we have, and we, hopefully, will continue to acquire in the coming years, from epidemiological or biological or clinical findings.

Another area that I think would be very important in categorization is that most of the research up to now has been focused on samples of treatment-seeking gamblers and on treatment-seeking pathological gamblers; but those may be very different from people who do not seek treatment. And we know that only about 10 percent of pathological gamblers seek treatment. We don't know what's going on with the other 90 percent of the people who don't go for treatment.

Our current ideas about pathological gambling may only apply to a very small percent of the population, and when we know more about the population, the overall population, we'll have very different ideas of how to categorize pathological gambling. Maybe the subset of patients that we see are closer to the addiction model, but perhaps 90 percent or 50 percent of them fit better into a different model.

I think another important consideration is to conduct longitudinal studies. One of my criticisms of the subtypes is that, in general, they have been derived using cross-sectional data, data collected only at one point in time, but we don't know if those subtypes are stable. We don't know what those subtypes predict, and I think it would be very useful to categorize gamblers according to different subtypes and then see which one of those subtypes better predicts both the natural course of the disorder and the response to treatment.

Another possibility that was suggested by Marc Potenza—who unfortunately is not here—is the use of hybrid models. It's possible that pathological gambling, instead of being an addiction or an obsession, shares some features from addictions and some features from obsessions, and so it represents a different category. Ultimately, of course, some people would fit the addiction subtype and some patients would fall more into the OCD subtype.

And that brings my presentation to an end. Thanks for your attention, and I'll be happy to answer your questions.

Jon Grant: Questions?

Richard Rosenthal: The most direct examples on subtyping, I think, are those of Iver Hand from Germany, who's presented at our conferences before. He distinguishes addictive pathological gamblers from, I guess, OCD or compulsive pathological gamblers, and how they get treated in Germany in different settings, in different hospitals, and the subtyping of those with obsessive compulsive disorder and those with the addictive… whatever. And that's the way they subtype gamblers and it determines not only the treatment, but actually where they get treated.

Carlos Blanco: Maybe I'll offer the last word on why I think the models are useful. I think that they are useful clinically, because I think they help us understand the patients, and I think also in terms of research, they're very useful, because, depending on how you understand the disorder, you're going to try to devise treatments or devise strategies for the research in one direction or the other, and maybe one of the most clear examples is treatment with psychotherapy. There are at least two models that I can think of right now. One is, again, the relapse-prevention model, or the motivational approaches, which I think tend to assume that this is an addiction model.

But then the treatment developed by Enrique Echeburúa's model is much more based, I think, on extinction, which is more part of an obsessive compulsive based model, more of an anxiety model.

Depending on how you understand the disorder, you're going to approach the patient either in one way or in another way. I don't think this is just academic. I think it has a lot of very practical implications. [*Unclear*.] I mean, I don't see how you're going to extinguish the conduct by bringing the person to the shores of the substance. In relapse prevention, it's just the opposite. You try to avoid the person getting close to the substance. I think that the models have very, very important clinical and research implications.

Richard Rosenthal: I wanted to ask a question about addiction. The impression that I've gotten is that, in terms of addiction, one possibility is that pathological gambling will be brought over to the psychoactive substance use disorders because of the associations with it, and will be or could be categorized there, as a special or unique kind of thing, because of the many similarities and the comorbidity, et cetera.

But a second approach would be to introduce behavioral addictions and, if pathological gambling is a behavioral addiction, then that would be a very large category with a lot of these other disorders that we talked about. Here are two very different approaches within the addiction umbrella. And then possibly a third is in an article I came across recently. Peter Martin used the term “addiction spectrum disorders,” and I thought that was kind of interesting.

Carlos Blanco: I think if any of these disorders would make it to the dependence or the addiction category, it would be pathological gambling. My concern is that it's a slippery slope argument. Once you include pathological gambling in the addictions, then are you going to include sexual compulsions or sexual addictions? And then once you include those, what about shopping? What about kleptomania? And then where do you stop? And I think part of the concern is then the category can become so wide, so broad, that it becomes sort of meaningless. Yes, the person has something that is wrong, the person is ill, but this has implications for treatment. That's one of the concerns, as I said.

The other concern, as I said before, is political. I think right now the government is interested in funding research and treatment for substance abuse and alcohol, because it has not only scientific but very important social implications. But I'm not sure that the government is ready to diffuse that funding into kleptomania or compulsive shopping, which have very different social implications. Science is science, but I think there's also a lot of politics.

[End of presentation.]