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## Using statistics to explore the DSM-IV criteria for pathological gambling

**Marianna Toce-Gerstein**

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Session IV: Towards the DSM-V

For correspondence: MTGerstein\_AT\_aol.com [replace “\_AT\_” with “@”]

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*(Introduction.)* **Jon Grant:** Marianna Toce-Gerstein is a research scientist working primarily in the use of qualitative and quantitative analysis, questionnaire design, and discourse analysis, and she is going to be talking about using statistics to explore and examine the diagnostic criteria for pathological gambling. And after her presentation, again, we'll open it up for questions.

**Marianna Toce-Gerstein:** [This presentation was authored by Marianna Toce-Gerstein and Dean Gerstein. Please contact the author for the slides.] Welcome to the bitter end. *(Laughter.)* I wouldn't mind if you all left. I've never talked in front of this many people before, and I am really, really nervous, so bear with me. I'm going to torture you all with a lot of numbers and statistics and make your eyes glaze over, I promise. But when I get to the end, there are some simple points that I'm going to make with all this.

Thank you, Keith, for inviting me to talk today. I was very lucky to have NORC [National Opinion Research Center] pay for me to prepare this talk for this conference. I took advantage and did an analysis that has been on my wish list of things to do for a long time, which is to combine a series of datasets that have been collected by NORC and Rachel Volberg, and merge them into a single dataset to look at the patterning of the DSM-IV criteria for pathological gambling among at-risk, problem, and pathological gamblers in a large enough sample to actually do some interesting analyses.

Well, I'll just go through the samples really quickly. There's a total of 18,381 adults,

and the samples include a U.S. national RDD [random-digit dial survey], a U.S. patron intercept survey, the reliability and validity samples that were done to originally test the NORC DSM-IV Screen for Gambling Problems (NODS), and the state survey samples for Arizona, Florida, Florida seniors, Nevada, North Dakota, and Oregon. And out of that, we got 1210 at-risk gamblers, 204 problem gamblers, and 201 pathological gamblers.

And at the pathological level, about 20 percent of the gamblers were from the clinical sample [that was used to test the NODS]. I think one of the earlier presenters said that about 10 percent of pathological gamblers have been in treatment? So this group is overrepresented in the sample, but I think the differences in the study designs and the different kinds of sampling [strategies used in the surveys likely] even each other out.

Do you feel fairly comfortable with the DSM-IV definitions of the criteria, or would someone like me to go through them really quickly? No? (*Laughter.*) In that case, I'll just say that we call them—we operationalize them as—Preoccupation, Escape, Chasing, Loss of Control, Withdrawal, Tolerance, and Lying, Risking Relationships, Bailout, and Illegal Acts (*a slide of graphs for percentage of gamblers reporting each criterion is presented*).

The sample that's represented in these graphs comprises the gamblers who reported one or more of the DSM-IV criteria, and that makes it about 1615 gamblers who qualified for these graphs. And on the X-axis, the bars start on the left with the people who report one problem, and if you go up to the far right, to the tall bars, you have the people who reported all 10, so they're necessarily 100 percent. The first row shows Preoccupation, Chasing, and Escape. And then we have Loss of Control, Withdrawal, Tolerance, Lying and Risking Relationships, Bailout, and Illegal Acts.

And, as you can see on the graph, some of the DSM-IV criteria dominate at the lower levels of the problems, and that's the first row: Preoccupation, Chasing, and Escape. And most progress at the rate that you would expect, and those are Loss of Control, Withdrawal, Tolerance, Lying, Risking Relationships, and Bailout. And then Illegal Acts doesn't appear with much frequency until you get to the very highest levels.

So the criteria with linear curves, the ones in the middle, increase at the rate you would expect if the probability of the criteria's incidence at different levels were directly dependent on increasing severity in a uniform underlying process. And the decelerating curves for Preoccupation, Chasing, and Escape suggest that when few or no other symptoms are present, the likelihood of these criteria being present is higher than one would expect based on chance. And, therefore, the opposite is true of Illegal Acts. In the absence of many other criteria, the symptom appears far

less often than you would expect.

Now I'm going to make your eyes glaze over (*table slide is presented*). Across the top [of this slide], the columns are the percentage of people reporting each criterion according to what their NODS score is, from one to ten. And the only thing you need to look at is the tan ones, which represent those cells in which the criteria appear more often than you would expect, and the blue ones are the ones that appear less often.

And to explain what I mean by what you would expect, among people who report one criterion, you would expect 10 percent to report Chasing, Preoccupation, Escape, Tolerance, and so forth. And that would sum to 100 percent. But nearly half of the sample that report one problem report Chasing.

And then for those who are data nerds like me, you might be interested in the [statistical] significance as you move between levels. I found a couple of things interesting about this. Between the problem and the pathological levels, four and five, Tolerance and Withdrawal—two of the hallmarks of dependence—increased significantly. And then when you get between five and six, you see Loss of Control, Risking Relationships, and Bailout increasing significantly, to the point where they get to the level that you would expect them to be reported in that group. And then Illegal Acts is lower, far lower than you would expect, all the way across the line, and doesn't increase significantly until you get to between nine and ten criteria.

*(Correlation slide is presented. This is the overall correlation matrix for the dataset, which includes all gamblers who reported two or more criteria, or 680 gamblers.)*

The correlation matrix basically looks at how well each of the 10 criteria correlated with each other, and the numbers that you see here are for the sample overall, with the colors indicating differences by gender. I broke it down by males and females and found some interesting differences—some surprising differences—that I want to mention.

The tan boxes indicate where there is a high correlation coefficient for women and not for men. The blue boxes indicate where there is a high correlation coefficient for men and not women. Where there are tan lines going across these, that means they were not significant for women, but were significant for men. [Where there are blue lines,] they were not significant for men but were significant for women.

So the first point on this is that Chasing wasn't strongly correlated with other criteria for either men or women in the sample. The only three that it was correlated with were Tolerance, Loss of Control, and Bailout, but you can see the correlation coefficients are very weak. There doesn't seem to be much going on there with Chasing, as being part of the [same] underlying construct.

Among women, Tolerance has high correlation coefficients with four of the ten criteria: Preoccupation, Illegal Acts, Risking Relationships, and Bailout. Similarly, Illegal Acts has high correlation coefficients with other criteria for women more so than for men. And these differences were most pronounced with Preoccupation, Tolerance, and Withdrawal. And the differences for men and women are especially pronounced at the pathological level, where women were significantly more likely than men to report both Tolerance and Illegal Acts, which I found incredibly interesting.

Also, for women, Escape is not significantly correlated with any of the other criteria except for Lying and Risking Relationships. However, it was significantly correlated with most other criteria for men, although the only strong correlation coefficient was with Withdrawal. Yet the women are significantly more likely than the men to report gambling for Escape. This criterion, again, does not appear to be connected to the underlying construct among female gamblers in particular, but it's also less correlated than the other criteria in the matrix with perhaps the exception of Chasing.

And, lastly, you see the dark blue outline. It's to indicate those [criteria] that were significant for men and women and had high correlation coefficients for both men and women. And you'll see they include Withdrawal and Loss of Control, which is not surprising, since they both assume that you've tried to stop, cut down, or control your gambling at some point. And Lying, Illegal Acts, and Risking Relationships, and Bailout all seem to be very tightly connected.

These criteria were then tested in a factor analysis (*factor analysis slide is presented*). And those are the results of my next slide. The factor analysis sought to examine the patterning of the ten criteria by sex and by problem level among gamblers reporting two or more DSM-IV criteria.

Across levels and among both male and female gamblers, three underlying clusters of problems were identified that appeared to represent a specific type of problem with regard to gambling, but not necessarily a specific type of gambling. The first factor comprised Withdrawal and Loss of Control, which you'll recall had the highest correlation coefficient of any two DSM-IV criteria. And these are two of the three dependence criteria for the DSM-IV diagnosis of substance dependence with physiological dependence. They do not form a factor with Tolerance. They may be more suggestive of impulse control than dependence, per se.

Secondly, Risking Relationships, Illegal Acts, and Bailout formed a strong factor. And Lying, which formed its own factor at the subclinical level, joined these at the pathological level. And these criteria obviously all have in common breaking social norms. So I refer to this factor as the social dysfunction factor.

Finally, Preoccupation and Tolerance formed a factor; Chasing, which tended to form its own factor at the subclinical level, then joined them at the pathological level as a factor. And I thought about this one for a while. Maybe other people who have more experience treating clients can provide a lot more insight into this. It struck me as perhaps resembling the obsessive quality of gambling, but perhaps even more so, it reminded me of the action gambler. And I'll leave that to you to do further interpretation of.

The criterion of Escape was a really interesting case. It didn't have high consistent loadings with any of the factors at any of the levels. It mostly loaded negatively with a lot of the factors, which is difficult to interpret. But it didn't appear to be connected to any of these factors at any level.

In looking toward the DSM-V, we're presented with a number of challenges (*conclusions slide is presented*). A more sophisticated means of diagnosing pathological gambling is needed beyond simply counting criteria as if they were all equivalent. Up until now, researchers have not had available to them a large enough sample of lifetime at-risk problem and pathological gamblers to analyze the patterning of the criteria.

This analysis reveals that while differences exist between groups that need to be taken into account, nevertheless, three patterns exist that can help illuminate the nature of the disorder. Based on the findings, I would recommend further qualitative and exploratory research examining the individual criteria. Specifically, I would like to see Chasing and Preoccupation refined so that they are not overrepresented at the lower levels of the gambling taxonomy. Secondly, we need to learn more about the Escape criterion. Gambling to escape problems or negative emotional states may indicate a neutral or even healthy mechanism, a coping mechanism that is only a problem when it occurs in the presence of other criteria and higher levels of problems. Escape is the only DSM-IV criterion that is actually a risk factor. It does not become a symptom until the gambler starts gambling to escape the problems caused by his or her gambling. This criterion, therefore, may be more central to the cycle of the gambling problem, but not representative of the problem itself. As such, it may act contextually to accelerate the process of developing problems. The crafters of the DSM-V might consider discussing Escape in the narrative about pathological gambling, while removing it as a criterion.

Lastly, I believe we should consider the utility of requiring certain criteria for a diagnosis. For example, a problem gambler who reports Withdrawal or Loss of Control might be classified as pathological, while a gambler reporting five or more criteria without Withdrawal or Loss of Control would be classified as a problem gambler. I suggest this because I believe, with Drs. Blaszczynski and Ladouceur and many others, that Loss of Control is central to the construct of pathological

gambling. Individuals who lose control of their gambling are, at least in the survey context, those who have tried to essentially treat themselves and failed. Therefore, natural recovery is less likely for these gamblers, and they come to the clinicians, because they can't do it on their own, and that's where the DSM-IV comes in.

The three factors here may have implications for treatment, which I leave to you to deconstruct (*speaker flips back to factor slide*). A gambler may have one of seven possible combinations of factors, from only one to all three, and each may require a somewhat different approach. Brief interventions may work well for gamblers who fall into factors two and/or three, meaning those who experience Preoccupation, Tolerance, and/or Chasing, with or without mild social dysfunction. And gamblers who report high levels of social dysfunction without Loss of Control may first need to be treated for something entirely different than pathological gambling. Those whose problems span all three factors will obviously have the most intractable cases and require intensive treatment with long-term follow-up.

The last thing I wanted to mention is just an interesting footnote. A couple years ago, I talked about the NODS-CLiP, which is the three-item screen that Rachel Volberg and I developed. And I looked at most of these same datasets, and tried to find three questions that captured all problem and pathological gamblers, while filtering out as many as possible subclinical gamblers. And, interestingly, the three items that came out pertained to Loss of Control, Preoccupation, and Lying. And each of those is an element of [one of] the three factors. So there's something going on with these three factors that I think is real, and I look to you and the crafters of the DSM-V to figure out what to do with all this! Thank you.

**Jon Grant:** It's nice to know those data have finally been found to be useful for something besides sitting on my computer for a few years. That was a great job, Marianna. Great piece of work. I'm very struck by this question of the Escape criterion, and I wonder whether we may be looking at something that is more related to a type of gambling rather than to a psychiatric construct.

**Marianna Toce-Gerstein:** Yes.

**Jon Grant:** I'm very struck by the link that we've seen over the years between escape and the people endorsing the criterion of Escape, and their involvement in gaming machine gambling or whatever we're going to call it. Machines. Versus Preoccupation, which we know is endorsed more frequently by some of the old horse bettors or people who are engaged in games of skill.

And it occurs to me that there might be some utility in looking at the activities that these 1600 or so people are involved with to try to understand whether Escape is something that people are more likely to endorse if they're involved in machine gaming.

**Marianna Toce-Gerstein:** That was an excellent point. We have a few surveys underway, for example, in California, where I'm attempting to link the criteria to certain kinds of gamblers, and I think the data that we have—this dataset of these 11 samples—is an incredibly rich resource for doing that in the future. Since this is something that was just pulled together in the last two weeks that I got very excited about, and I did for this conference, there's a lot more work to be done with these data.

**Richard Rosenthal:** The comment I'd like to make, first of all, is that I'm very pleased to see the further research and exploration of these things with, I assume, you're using the NODS, is that right?

**Marianna Toce-Gerstein:** Yes.

**Richard Rosenthal:** And there are some problems that I think that you hit upon with this need to refine Chasing and Preoccupation. And we did some research in the horse-racing industry, and tried to apply the NODS to that, and one of the difficulties is that if you use the NODS criteria and apply them to serious handicappers in the horse-racing industry, they are all going to be listed as problem gamblers, because you can't be a serious handicapper without doing what would look like Chasing and what would look like Preoccupation. You just can't do it.

I think this brings up another point, and that is that, as you've mentioned, this is a screening device. And I think we need to remind ourselves, as I have to remind myself, that the DSM is intended for use by a sophisticated clinician, and that when we take those sophisticated concepts and apply them as used by interviewers who are not sophisticated clinicians, then it does come up with something different. I think we're going to have a more accurate presentation when we apply those DSM criteria in a screening way, but then follow that up with a sophisticated clinician.

**Marianna Toce-Gerstein:** I would like to build on that. I agree with some of those points, and one limitation is that some of the differences that are found may be due to the fact that the NODS is not administered by a skilled clinician. It's done by a lay interviewer, and the questions may have some biases of their own that are built in that we're not aware of, even though the wording is very closely built on the wording of the DSM-IV. But it's also a general population sample, and we need to have cognitive interviews that ask people who don't have serious problems and people who do have serious gambling problems whether they perceive the question in the same way.

It's very possible, perhaps even likely, that people at low levels who hear the question about Escape just think of it as, "Well, I'm there having fun, so I guess I'm escaping." Or someone at a much more serious level may see it as part of their cycle of addiction, so to speak.

**Kamini Shah:** Marianna, a comment, I guess, and then a question or a statement, I'm not sure. It's interesting to me to see this because some of the work that we've done, which was with DSM-III-R criteria, which are obviously a little different, showed the same layout, and we used a latent class analysis as opposed to a factor analysis. But we also saw this thing where you had a low-level gambler, a middle level, and then your really impaired pathological gamblers. The same sort of thing where Chasing didn't seem to do much to distinguish things.

**Marianna Toce-Gerstein:** Yes.

**Kamini Shah:** You got into that middle level of more dependence-related symptoms where Tolerance, Withdrawal seemed to distinguish that middle group from the bottom group, and then the tail-end group, it was in those criteria that we had the things like impaired relationships and obligations. It's interesting to me that both our work with the III-R and your work with the IV show a similar thing. I also advocate looking at the notion of not just adding up symptoms, but looking at what the symptoms are and maybe using that to distinguish.

And the comment, then, or the question is that when you said you'd found that Escape didn't load on any of the factors, and, as we're always very interested in the issues of comorbidity and what is the gambling and what is the other psych illness, and it just strikes me that maybe the reason that's not falling into place is that Escape is tying in to the depressive aspects that often go comorbid with gambling, but aren't the gambling, per se, and that's why it's not loading on these other factors.

**Marianna Toce-Gerstein:** If I had had more time, I would've gone through, and I would've connected all the variables in these 11 datasets that had factors such as depression and substance abuse and other issues, and have done something super interesting for you. But, unfortunately, I didn't have the time. But that's part of the future directions for this.

**Richard Rosenthal:** I wanted to clarify something about a couple of the criteria. First of all, I agree with Curtis about the Preoccupation in the serious social gamblers and the handicappers, that you would see Preoccupation. The Chasing criterion, I think, is overused and overdiagnosed. What Henry Lesieur, who did his original work on horse racing, believed is that all gamblers chase, and that what we tried to do in writing the criteria was to distinguish regular chasing or normal chasing from malignant chasing.

And returning another day or in the questionnaire that we developed to test the criteria, the person had to chase more than half the time; it has to be at least a regular thing. It's not, "did you ever chase" or "do you chase sometimes"; that may be why it doesn't fit in with the other criteria in your analysis. [Author's note:

Chasing item is worded “Has there ever been a period when, if you lost money gambling one day, you would often return another day to get even?”]

And the other comment I wanted to make is about the Escape criterion, and that's not the same as the escape-seeking gambler or the subtype of escape gambler. We believe that all pathological gamblers escape dysphoric feelings, and we list what the most common feelings are, and so that Escape should approach 100 percent in the pathological gamblers. The reason it doesn't is that some male gamblers, in particular, are not aware of their feelings and deny that they're gambling because they're angry or because they're getting away from some feelings. And it's only after you've worked with them for a little while or sometimes in the second or third session when you see them that they can be specific about that. And that's one of the questions that they frequently change their answer to from a negative to a positive after you've seen them for a short while.

The escape-seeking subtype is the gambler that's specifically seeking numbness or oblivion, and they describe that experience differently. But the escaping from the intolerable feelings is something that's true for all pathological gamblers.

**Carlos Blanco:** One thing that I don't think has been discussed enough in this meeting, but maybe this is right place to do it, is problem gambling. I think we've been very focused on pathological gambling, but I don't think we have discussed what is the right cutoff for the diagnosis. Richard can correct me, because he knows the story better than I do, but my understanding of how the cutoff of five was selected is by comparing treatment samples to [*unclear*] samples with known pathological gamblers. And actually the cutoff could have been as well four as it was five, and the APA politically decided that it was five instead of four.

But I think Marianna's analysis suggests that there's no clear cutoff point for the diagnosis, and I think that has very important implications for both treatment and policy. If the cutoff point is five for pathological gambling, then the prevalence is probably around one percent. But if the cutoff point, let's say, is one criterion or two criteria, then it's probably more like five percent. I think it would be interesting to get your impression, both the panel and the audience, and see where you think that the cutoff should be, who should be offered treatment, what treatment should we offer, should we give different treatments to different levels, is it the same disorder?

I know there's some discussion of calling problem gambling or comparing problem gambling with substance abuse and then comparing pathological gambling with substance dependence. But, actually, that may not be appropriate, because the substance abuse and substance dependence are not two degrees of severity, but two different types of disorders. They load on different factors.

And here it doesn't seem like problem gambling and pathological gambling load on different factors. It seems to be a continuum. I would like to have some debate from the others on the panel on what you think about this.

**Marianna Toce-Gerstein:** I would just like to stress again that I think Withdrawal and Loss of Control are very central to the pathological gambling construct and that they should be present for someone to be diagnosed with pathological gambling. And even somebody who has three criteria, who exhibits one of those, who's tried to stop and failed, is on their way to needing treatment or needs treatment already.

**Carlos Blanco:** Right now, the [*unclear*] insurers and state agencies would probably not reimburse treatment if you only meet three criteria or four criteria. And, again, the prevailing studies reflect people who have five or more criteria. But you're suggesting a slightly different approach where you're saying that maybe three criteria, if they are specific criteria, should qualify and then those people should be considered pathological gamblers and not subclinical population, but really would be a clinical population, and we should be reimbursed for treating those people, and they should be included in DSM-V, or—

**Marianna Toce-Gerstein:** If you've tried to stop, cut down, or control your gambling and failed, then you have not been successful at treating yourself, and natural recovery hasn't come about for you as it does, I believe, for the vast majority of people who do attempt to stop or cut down their gambling. And, therefore, I think you need the help of a therapist, and you should be reimbursed for your treatment. That's my own bias.

**Jon Grant:** From what you're doing in terms of gender analysis, in terms of your refinements, would you go so far as to make a recommendation that we have to look at different criteria for this diagnosis if a man comes in versus a woman?

**Marianna Toce-Gerstein:** I had expected the different factors for male and females. I had expected Escape to be highly correlated with some factor for women, maybe Preoccupation, Tolerance, Chasing. And that wasn't the case. In fact, those three factors were consistent for males and females at most levels at which there were enough people to do a factor analysis. It got a little sketchy once it started getting below 100 people.

But these factors that I'm presenting weren't different for males and females and that was surprising to me. It was when you got into the details of the correlations and the actual frequencies; for example, women report Escape more often than men, and Illegal Acts and Tolerance at the higher levels. That's where the differences started coming through. But in terms of the actual number of criteria, the only thing I would think that would make a difference with the diagnosis would

be if we threw out Escape as an actual criterion. That might affect your prevalence.

**Carlos Blanco:** I think there may be at least one alternative interpretation of your findings. As you have probably guessed by my accent, I'm not from here, and I speak Spanish very well, and if I brought here, let's say, 100 Spanish pathological gamblers and asked them the criteria in English, they wouldn't endorse any, because they wouldn't understand English. That doesn't mean they don't meet the criteria.

So one possibility would be that people are actually having the symptoms, but not endorsing the criteria, and I think that Richard alluded a little bit to that. You may be gambling to escape, but you don't realize you are doing that. That doesn't mean you don't have the symptoms. You're just not endorsing the symptoms. I think one possibility from what you're suggesting is that the factors are different. Another possibility is that the questions are asked in a way that is more easily endorsable by certain populations but not by others.

**Marianna Toce-Gerstein:** Oh, I strongly believe that people who have been through therapy, for example—particularly a 12-step program—come to see and are taught to see their lives in a new frame of pathological gambling. And problems that they had originally thought were disconnected, they see under that umbrella now as being connected to their pathological gambling, and so they are far more likely to see themselves as having experienced certain criteria than people who would be in the general population, for example. My hope, and I don't know if this is what really happened, but by having 20 percent of the pathological gamblers in my sample be from a clinical population, I think some of that difference might have been watered down a bit in the results, and that maybe that isn't as much of a shortcoming as one might think.

**Richard Rosenthal:** A couple of comments. First of all, in response to Carlos. When we developed the criteria, it wasn't just from the treatment population. We made the effort to get a cross section of pathological gamblers. Some were GA volunteers. Some were nontreatment samples, and they were from all over the country and represented different kinds of gamblers.

The question of the threshold was brought up, and what Henry and I recommended was that the cutoff be four, and that was what we sent to the DSM-IV committee, and they decided it should be five. Again, I think I mentioned earlier, I think there was a bias in their concern about there being too many pathological gamblers, whatever. But four actually worked a little better, and Marianna's study seems to confirm that.

The other point to remember is that it says in the beginning of the DSM manual that it's not to be used as a cookbook. It's to be used by clinicians, and judgment is

important, and so you can diagnose someone as a pathological gambler who only meets three criteria. And there is that kind of leeway. I don't know what you're doing in the state that requires a score of five on the NODS, but you certainly can submit to an insurance company or whatever that someone's a pathological gambler just because there's the Loss of Control and the Withdrawal, and base it on the two or three criteria.

**Kamini Shah:** I don't mean to hog the microphone, but two things. One is that I hear the frustration, at least, in counselors from Missouri and elsewhere about not being able to get funded treatment for individuals who clearly have the problem, but because of the way that the regs are written, if you don't meet the diagnosis of five plus, you can't get the treatment. But, the flip side of that is there's limited funding for states, too. So if you could have this lower threshold and then had a ton of people getting free treatment, that wouldn't work either.

So, again, this idea of finding something that's necessary and sufficient, that's documented in some way other than us talking about it here or a clinician being able to submit to an insurance company based on two or three symptoms, but if it's not documented somewhere from a legal perspective, that's not going to work. If there were some subcategory within the DSM that documented that perhaps one or two or three particular symptoms were also indicative, that would help there. It would help both issues.

The other thing that makes me curious about this, and I guess it's self-report data in general, is hearing Richard talk about how, when a clinician assigns a certain criterion, such as Chasing or whatever, Escape, and that the clinician's interpretation of whether this—it's the “all gamblers chase” versus “is this the pathological chasing?”—is a distinction that could be made by clinicians when they're doing a full evaluation and being able to explore.

A lot of these samples, and ours included, come from self-report over the phone, and when we ask, from the criteria based on the NODS or SOGS or whatever, “Do you chase?” I don't think they have the ability, and I don't think I even realized it until I just heard Richard say that there's distinctions with Chasing. And I wonder how that affects what we're reporting with our surveys, because we're looking at these things from a self-report, and if maybe there's some way to think about creating new instruments that get into that, so the question asked of the gambler is more focused on what the clinical interpretation of that symptom is.

**Marianna Toce-Gerstein:** Can I just say something really quickly about Kamini's first point? When we did the analysis for the Gambling Impact Study Commission, I did a little side thing on my own because I was interested in seeing if the prevalence rate changed depending on whether you included the people who reported dependence but were actually subclinical, and if you eliminated [those

who did not report dependence] from the pathological, and, actually, the prevalence rate was exactly the same. If you make that a requirement, you are probably not going to have floods of people coming in and demanding free treatment. I would guess that it would be just about the same.

**Jon Grant:** You make another point about this aspect of the subcategory of problem gambler and what drives the fact that clinicians see it all the time. And we all describe it in the literature and yet DSM has not discussed it. I'm not so sure if what's driving that for DSM-V is the worry about a flood of people. Well, if people have problems, shouldn't we recognize and address the flood of people who are around three or four criteria and are having problems? It doesn't seem like we should worry about the epidemiological numbers going up.

My question for Richard is when you were creating the DSM-IV, and you were obviously taking from the substance dependence criteria, did you think about, and what dissuaded you, if it did, from the idea of abuse dependence distinction, or in the case where it translates to gambling, problem gambling and pathological gambling? And would you, if you did DSM-V, put problem gambling in now?

**Richard Rosenthal:** First of all, we were not copying substance dependence. We were trying to see what was unique about pathological gambling, and we were comparing the criteria to previous sets of criteria—DSM-III-R, DSM-III, the GA 20 questions—and we spent a lot of time testing different wordings of the questions to see which were more significant.

The question of problem gambling, we didn't consider putting it in at the time. As I said, we're aware of the bias about pathological gambling and not wanting too many gamblers, on the part of other people, and there still was a questioning of whether the disorder existed, and even after DSM-IV came out, there were articles about this being a fake diagnosis. We would submit articles to journals in those days and be told, "This is really interesting, but I don't believe that pathological gambling exists," and that would be the comments of the editor or the reviewers.

So the timing was not right politically and socially, culturally, whatever, to introduce problem gambling. The definition of problem gambling that I like is basically anyone who has a problem with gambling. (*Laughter.*) Now, as to whether it should be included in DSM-V and what the criteria should be, I would like to hear from the audience. I have mixed feelings about it. Are we introducing a subclinical condition, or are we trying to intervene earlier? I don't know. I would like to hear from people here about that.

**Marianna Toce-Gerstein:** [...to a question about DSM criteria...] Well, that's where my little interesting footnote comes in about the NODS-CLiP. In this three-item screen, each of them is from a criterion from each factor, and this screen

captured all but one pathological gambler in our combined sample. And 95 percent of the problem gamblers. So it overdiagnoses, obviously, but then you follow through with the rest of the [NODS]. But, obviously, if you want to minimize the number of criteria, the place to start is with these factors.

**Richard Rosenthal:** We were aware, when we wrote the criteria, when we introduced the criteria, that there were three dimensions, and that it wasn't one-dimensional and that was nicely brought out by what you showed.

**Marianna Toce-Gerstein:** And could I say something about what you said earlier, Richard, about the problem gambling diagnosis? With substance abuse there's a subclinical diagnosis, and the criteria are very different from the criteria for substance dependence. They're much more related to the antisocial or dangerous behaviors that someone who's on drugs or alcohol might do. For example, driving under the influence.

And this factor on the bottom right, with the Illegal Acts, Risking Relationships, Bailout, and Lying, it's probably the closest thing that I've found in the data to an abuse construct. Something where people are harmed by the gambler's behavior, and it's probably the closest thing I would say to a problem gambling diagnosis. If other people are being harmed by the gambler's behavior, as if the gambler were driving under the influence. It seems parallel to me.

**Carlos Blanco:** My plan was to disagree with Richard, but I have to disagree with Marianna, (*laughter*) because I think, in general, the diagnosis of substance abuse and possible dependence is considered—even though they are not degree of severity—but is considered something of a lower-level diagnosis. It's in a way better to have substance abuse than to have substance dependence. But I think in the gambling, it is the opposite. I mean the factor of lying and stealing and jeopardizing a relationship is much more, I think, a mark of higher severity than lower severity. In that sense I think when we talk about problem gambling, we, in general, refer to lower-level severity pathological gambling where there's the factor that you're suggesting as problem gambling would be—or gambling abuse is the marker of severity—rather a different entity as I understand it.

**Marianna Toce-Gerstein:** I wouldn't argue that it's a different entity, but rather the reason—an important reason—for having a diagnosis of substance abuse is to get people into treatment who need it, who are somehow dangerous to others. The vast majority of people who are substance abusers get that classification because they've been driving drunk or driving under the influence of drugs. And they need help before they get to the substance dependence level, because they're on the way fast.

**Marvin Steinberg:** Weighing in on the same issue, I do think that an abuse

category for pathological gambling dimension would be helpful to identify people earlier, and I do think that some of the Illegal Acts and serious consequences, social and legal consequences, are more end-stage problems, and wouldn't fit the abuse category. In my mind, it would be more a case of someone who's chronically dependent on gambling and his life is really disordered.

I did want to make a comment. I certainly agree with Marianna's statement about refining Preoccupation and Escape, because I do think that once we change the wording and clarify what we mean, not just escape from a day of stress at the workplace, but to escape dysfunctional, dysphoric feelings. I think that would be very helpful in eliminating some of those who say “yes” to that, but in the comments before about what the racetrack owners say about the criteria is the same thing that the casino people say about it, and they often dismiss the criteria because they say, “Well, half—ha-ha—half my employees would be considered to escape or have preoccupation.” To me, I think that the primary group from which pathological gamblers and abusive gamblers come are the regular gamblers. If we try to make a distinction and say just because someone is a regular horse player or a regular machine player, and they would say “yes” to Preoccupation and Escape, means that we dismiss those two criteria, and I don't think we dismiss them at all. I think we need to refine them, and I think that a large percentage of people who say “yes” to both Preoccupation and Escape even now have a problem or a beginning of the problem.

**Marianna Toce-Gerstein:** I guess the question is, how long does the problem last? I just wanted to point out one thing with your first point (*flips back to second slide*). For people who report four problems on the NODS, which was originally suggested to be the cutoff point for pathological gambling, you'll notice that Risking Relationships and Bailout and Loss of Control significantly increase between the people who report three and people who report four [criteria], and more than a quarter of people at that level report Risking Relationships and Bailout. That's a significant number, and I wouldn't underestimate it. I wouldn't say that it's only something that comes up at the highest levels of pathological gambling.

**Rina Gupta:** Can I throw two cents in regarding adolescents? We're from McGill University in Montreal; we've done a lot of youth work. One of the things that seems to be very important to our understanding of where an adolescent is when they walk in through our doors is the whole notion of impaired control, and I think this was discussed throughout this conference a little bit. Instead of going straight to a DSM type of evaluation, we try right away to determine whether or not there is a severe inability to control one's behavior.

So if they say, “I don't want to. I tell myself I'm not going to, but I find myself doing it. I was supposed to be at this friend's birthday party. I wanted to be there, but I found myself needing to leave and go gamble,” this seems to be between impaired

control and a preoccupation and we right away have a very good sense of whether or not this adolescent is experiencing a serious problem with gambling. The whole idea of the DSM- or consequence-based criteria that are then met, with respect to our experience, goes on to reflect a degree of severity with which they've been experiencing their problems.

Jeff Derevensky and I always wonder, are we talking about adolescents, and is it a different situation with adults, or is this the same thing that we're seeing with adults as well? We don't have the experience with adults, so it's hard for us to say, but my personal sense is that it is the same. And, ideally, when we look at a pathological gambling problem with an adolescent compared to one with adults, we don't see a different phenomenon going on. We just see different consequences.

We see the amounts of money that they're gambling with being different. We see how their life trajectory might be affected differently, because where an adult may have already completed education or established a career, an adolescent has not, and so they may not get into the program that they wanted to, or they may not be able to be in the profession they wanted, even though they may stop gambling down the line.

It would be interesting to me if there could be a way to include adolescents in the consideration of the DSM-V criteria. You may find that there is no difference in terms of the problem itself. But, I think, since there's been so much youth work done in the field till now, it would be unfortunate not to have a specific section addressed in the DSM-V. Thanks.

**Carlos Blanco:** Richard and I were talking about something that is probably not appropriate, but I'll still say it. Since we have Jon Grant here who is the leader of the *Journal of Gambling Studies* (laughter), I think it might be interesting maybe to have an issue devoted to issues on the DSM-V and talk about adolescents and problem versus pathological gambling issues and criteria. Have I embarrassed you enough or—

**Jon Grant:** As a matter of fact, I think that one of the things just in terms of adolescent gambling, I'm surprised by how little, even as much as there is, more than there was a few years ago, how little there actually is out there. It seems we do a general disservice when everybody knows that adults tell us that they started when they were younger. But it seems like we should go right to the source and hit it at home.

An issue with the DSM and one that we've had with all disorders is with understanding what the disorders look like in adolescents. Does adolescent depression look different from adult depression? Does adolescent phobia look different? Also, I think sometimes the one worry that I always have about

adolescents, and I'm wondering if this prevents us from doing more adolescent research, is the public perception of whether we're pathologizing our kids and this kind of stuff. But I think, unfortunately, that gets in the way of finding people who actually are having budding problems and to fix them before they become problems.

So I'm always willing to accept, or to look at for review, articles on DSM-V issues, particularly with adolescents. I'm always just amazed by how few there are, as much as this is an issue when you go to conferences, so let's think about DSM. I'm not seeing a lot of people—at least from my journal—who are actually critically appraising it as much as I would like and trying to think about it. We have Richard here to talk about DSM-IV, but we're all saying, “Who's on DSM?” “Who's in charge of DSM-V?” “Where is the pipeline?”

As somebody asked, if we had a great idea and if all of us in this room could come to a great consensus that “this is what DSM-V has to do,” then who do you tell? I'm not even sure who. It's like all these mystery people and somebody puts it together, but I'm not sure who they are and how we actually do influence DSM-V.

**Carlos Blanco:** That was my point. I think that maybe we could have a monograph and several of us would write papers, or I mean, I don't have to be one of the authors, but some people who are experts in the field write papers, and then we submit the whole monograph of the general gambling studies to the proper committee of the APA, and say, “This is the statement of the field. We may not be on the committee, but this is what we think as gambling researchers.” And then they can still disregard it, but I think it'd be harder to do if several of us agree on what the issues are as opposed to just having one person who is the chair of the committee, or whoever, saying, “This is what I think, and I don't care what you think.” We make it free—it'll be much more compelling.

**Richard Rosenthal:** One issue that was brought up was problem gambling and whether that should be included and what the criteria should be, and we need studies, and we need people writing up cases and contributing to that.

Something else that hasn't been mentioned at all today, but should've been, is that in DSM-IV, there's an exclusion criteria or a partial exclusion criteria for manic episode. That was something that our committee was against. There were no data to support it, and we even had a letter-writing campaign at the time trying to influence the editors of DSM-IV not to include that, and we were unsuccessful. But since that occurred, there's not been a single piece of research that has come out testing that exclusion criterion, and unless somebody looks at it and writes something about it or does some research, it may automatically just be carried over into DSM-V.

**Marvin Steinberg:** Just a comment on changing the criteria. When we started in 1980, you could read the literature in a few days and I think that being within our first 25 years, we are being appropriate in an evolutionary way. Changing the criteria? I think that maybe another 10 or 15 years from now, we should look for fairly stable criteria, because we're going to have a lot more research.

But I just want to symbolically make a motion, which is inappropriate in this context, and that is that since Henry and Richard were instrumental in the last DSM-IV, and they are board members of the National Council, it seems appropriate for the National Council to take a lead in forming a committee and putting together a white paper that might take a year or two or three, that actually looks at the current criteria and the exclusion criteria, and see what research supports it and doesn't support it, and perhaps come up with a clearer conceptual basis for the criteria, and I think that if we could demonstrate that within our own field, a collection of five to ten experts, we could actually agree on a conceptualization and put it forth. I think whoever actually is on the committee will have something to work from and then know what the field is and test it out over the next few years. It's not a real motion, but I think it's a decent idea.

**Rachel Volberg:** Well, I'm going to second Marvin's inappropriate motion. *(Laughter.)* And, as president of the National Council, I think it's entirely appropriate for me to be able to say that I think that's a very, very good idea. I'd like to hear from members of the board if they would like to serve on that committee. But not just members of the board, but also others who are members of the National Council. You don't have to be a member of the board to serve on one of our committees.

I'd also like to put the pressure on Jon, if the National Council committee is able to come up with the white paper that Marvin has described, or a series of papers such as Carlos was proposing, we'd like to feel that we could ask the *Journal of Gambling Studies* to publish that and make it available to the DSM-V committee.

**Jon Grant:** I think that's probably a good spot to end. Thank you very much. Great questions, great presentations.

[End of presentation.]

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