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JOURNAL OF GAMBLING ISSUES

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Formerly the *Electronic Journal of Gambling Issues: eGambling* (*EJGI*)

intro

editorial

People and concepts behind the *Journal of Gambling Issues*

Readers go to journals for their contents, but in this editorial we invite you to see what lies behind those contents. We ask our readers—if they have not done so—to read the important information that we publish in each issue of the *Journal of Gambling Issues* (*JGI*) on our statement of purpose, the ethical and accountability code that we seek to follow, along with the names of the members of our international Advisory board, Editorial board, and the valuable reviewers who help us to publish this journal. You'll find these by scrolling down through either this editorial or the first editorial in any issue.

Statement of purpose. We conclude by saying that "...our aim is to help make sense of how gambling affects us all" and we strive to do that by providing original papers on gambling research, treatment, policy, and opinion essays. Reviews of books, videos, DVDs, educational materials, and movies can inform us of the state of knowledge and of new developments in the gambling field.

Ethics and accountability. The International Society of Addiction Journal Editors (ISAJE) developed the ethical and accountability code that we strive to follow. It represents conservative and long-established practices in publishing peer-reviewed social science. We are proud to belong to this society. A constant over the last few decades in publishing health-related research and treatment papers is to require increasing transparency and accountability by authors. As other journals and the ISAJE develop new standards we will evaluate them to see if they are appropriate for the *JGI*.

International Advisory board. This volunteer group has counselled us on matters of publishing policy and we are always grateful for their input.

Editorial board. Like other editorial boards, this group aids the editor in decision-making on day-to-day matters and long-term planning. They sometimes carry a heavy load of time and responsibilities.

Peer reviewers. It is a commonplace in scholarly publishing to say that the peer reviewers make a journal and this is true for the *JGI*. Our reviewers offer their spare time and bring so many helpful qualities: wise judgement and counsel, expertise in their specialties, a keen sense of the standards for a scholarly paper, and their desire to treat authors fairly. Without these qualities the *JGI* would be the poorer. An editor is in the fortunate position to see how papers are improved by wise and thoughtful input from peer reviewers. Authors are sincere when they thank the anonymous reviewers who helped them develop their papers during peer review.

We are grateful to all for their contributions to the *Journal of Gambling Issues*. For more detailed information, please scroll down.

We welcome your comments.

Phil Lange

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Statement of purpose

The *Journal of Gambling Issues* (*JGI*) offers an Internet-based forum for developments in gambling-related research, policy and treatment as well as personal accounts about gambling and gambling behaviour. Through publishing peer-reviewed articles about gambling as a social phenomenon and the prevention and treatment of gambling problems, it is our aim is to help make sense of how gambling affects us all.

The *JGI* is published by the Centre for Addiction and Mental Health and is fully funded by the Ontario Substance Abuse Bureau of the Ministry of Health and Long-Term Care. We welcome manuscripts submitted by researchers and clinicians, people involved in gambling as players, and family and friends of gamblers.

Disclaimer: The opinions expressed in this journal do not necessarily reflect those of the Centre for Addiction and Mental Health.

Ethics and accountability

The *Journal of Gambling Issues* is a member of the International Society of Addiction Journal Editors and supports the Farmington Consensus statement on ethical standards in publishing:
http://www-users.york.ac.uk/~sjp22/isaje/farmington.htm

Reviewers

issue 17 — august 2006

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research

Recovery in Gamblers Anonymous

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Abstract

This article was written to provide an overview of recovery in Gamblers Anonymous (GA). How GA's approach reflects the distinctive needs of compulsive gamblers is a central theme. GA is a mutual aid organization modeled upon Alcoholics Anonymous (AA), though differing in some ways from that organization. One notable feature of GA is its emphasis on patience in the recovery process, reflected even in its approach to the 12 Steps, which are "worked" at a slow pace for this reason. Another feature that distinguishes GA is a seemingly more rigorous approach to avoiding potential triggers, notably gambling establishments. Whereas AA leaves it up to the individual to decide whether or not it is safe to enter establishments where alcohol is served, GA's official stand on such questions is uncompromising: members should not enter, or even go near, gambling establishments. Reasons for these differences are discussed.
Key words: addiction, gambling, Gamblers Anonymous, mutual aid

Introduction

Gamblers Anonymous (GA) has earned a reputation in the literature for being a 12 Step fellowship in name only, downplaying spiritual and psycho-emotional concerns in favor of a pragmatic focus on abstinence from gambling and issues such as debts (Browne, 1991, 1994; Ferentzy & Skinner, 2003; Lesieur, 1990). In another article (Ferentzy, Skinner, & Antze, 2006), we report that, while this perception is still partly true, GA has more recently embraced a broader conception of recovery and has become more focused on the 12 Steps. Yet GA's approach to the 12 Steps and recovery is unique. One theme that distinguishes GA from many other 12 Step fellowships is that of patience. While substance addicts in recovery must clearly learn to resist the instant gratification offered by the substance, GA members must be doubly on guard against such impulses: beyond the immediate thrill associated with gambling, there is the very real possibility that large winnings could indeed solve many problems immediately. Compulsive gamblers are generally in difficult financial straits by the time they decide to make a change, and the temptation to solve problems quickly can jeopardize a gambler's recovery. Browne (1991) has said that instead of 12 Step consciousness, GA members have what could be called "page 17" consciousness—a reference to the practical recommendations on the last page of GA's most important text, the Combo Book (GAISO, 1999). While GA has changed since then, page 17 is still central, with

patience possibly being its most important message. This article is a discussion of GA's approach to recovery.

Methodology and limitations

This qualitative, 16-month ethnographic study was preceded by the compilation of an annotated bibliography of GA and mutual aid as it pertains to gambling problems. The study had two main components: participant observation and individual interviews. The principal investigator attended and documented the activity and discourse at 42 GA meetings in the Toronto area and conducted 27 interviews with GA members, three of whom were also long-standing members of Alcoholics Anonymous (AA). For comparative purposes, 29 Narcotics Anonymous (NA) meetings were observed and four NA members were interviewed. All interviews were audiotaped. Informal discussions during and after meetings with GA members, notably those with experience in other 12 Step fellowships, were also significant to this study.

Still, this study was regionally limited, and the advent of slot machines seems to have changed GA's character in some regions, raising potential questions our research team has yet to answer.[1] Efforts were made to compensate for regional limitations. Notably, two of our GA interviewees were from other North American locales, and the principal investigator engaged in informal (phone and e-mail) communications with GA members from across the continent. Beyond that, much of this article addresses issues by means of explicating GA literature in conjunction with our own findings—with the effect that our observations are interpreted in relation to themes that clearly apply to GA in general. While these efforts do not negate the regional bias, we have cause to believe that the bulk of our observations apply to many, if not all, North American regions. This was a qualitative study using a relatively small interview sample, designed to generate preliminary findings that could later be verified with formal methods employing larger samples.

Observational and interview strategies were revised in response to what had been uncovered. A grounded theory approach (Glaser, 1978) was used to generate observations and hypotheses about the meanings embedded in typical GA narratives and the ways members use them to overcome their addictions and to make sense of their lives.

Discussion

This section contains two parts. The first (A) is designed to provide some background information on GA and is delivered as a list of six important themes. The second part (B) then provides an account of recovery in GA with a focus on the 12 Steps and GA's main text.

A. General information

A1. The GA meeting

While formats vary, a typical GA meeting starts with members taking turns reading from the Combo Book (GAISO, 1999), which is really a pamphlet (9 cm by 14 cm) and only 17 pages long. GA does have a larger text—comparable to AA's Big Book (AAWS, 1976)—called *Sharing Recovery Through Gamblers Anonymous* (GAISO, 1984), but it is rarely used or even mentioned. Less textual in orientation than AA or NA, GA must put greater emphasis

on its oral culture. However, the Combo Book is a masterly exercise in concision and thereby reflects GA's traditionally no-nonsense approach to recovery. As mentioned, GA has tended to take what could be called a pragmatic approach. The last and probably most important page in that text, page 17, can be viewed as a summary of the Combo Book—another exercise in concision. Normally, the readings are followed by a section called "How was your week?" wherein each member briefly answers that question and possibly elaborates on his or her state of mind. If newcomers are present, they may be asked GA's 20 Questions (a diagnostic tool designed to determine whether someone is a compulsive gambler) or asked simply to read the questions and to think about them during and after the meeting. If several newcomers are present, and especially if many ask for feedback, such interaction may dominate the rest of the meeting. Usually, however, the chair will propose a topic—possible themes are regaining one's family's trust, abstinence, a particular step, helping newcomers (the options are countless)—and members will share on the given topic, or something else if they choose, for the duration of the meeting.

As with other 12 Step fellowships, GA members give their first names and acknowledge their addiction before speaking. Yet there is a difference. In AA or NA, a member might say, "My name is Sue and I'm an alcoholic/addict." In GA, one is more likely to hear, "My name is George, and I fully admit and accept the fact that I'm a compulsive gambler." So the admission is more adamant. Further, in GA the identification will usually be followed by an account of one's time abstinent (which is much rarer in AA and NA). Despite recent changes, GA still puts comparatively more emphasis on pure abstinence. Reasons for this are discussed below.

A2. Reasons for not succeeding in GA

Brown (1986, 1987a, b, c) has explored the reasons many new members leave GA. Perhaps his most notable observation is that members who seem very elated at their first meeting are more likely to leave than those with a balanced first impression.

Members have told us that some gamblers are simply not ready, the idea being that they have not, in 12 Step jargon, "hit bottom"—only after one has suffered enough will there be willingness to face the problem and address it. Some gamblers are said to be looking for excuses (which they inevitably find), and others are said to receive financial bailouts—something against which GA warns emphatically—and then consider their problem solved. GA emphasizes in strong terms that one has a gambling problem and not a money problem. So those who perceive their problem as primarily financial will in most cases either change this view or eventually leave GA, with or without a bailout, simply because they do not identify with the GA program.

Our interview participants stated that women are more likely to leave than men, but they (male and female) did not blame sexism, a "boys' club" atmosphere, or problems of that nature. So-called "war stories"—graphic and disturbing accounts of one's addictive career—are another possible reason. Such tales cause some members to think that, since their misfortunes are not so extreme, maybe they do not need help or are not true compulsive gamblers. Money can be an issue, especially for women. On average, the male GA members report having bet larger amounts, and a few are even said to belittle the seriousness of smaller bets (even in cases where these bets were made by someone with less money at their disposal). For this reason, there is a countertendency in GA—consistent with GA's official position (GAISO, 1984, 1999)—to emphasize that the amount of money

gambled is relative and not an absolute indicator of the seriousness of someone's gambling problem.

GA members also theorized that those who drop out may not begin practicing the 12 Steps quickly enough. The idea is that without the emotional growth brought about by embarking on the 12 Steps, the problems associated with early recovery from gambling are overwhelming. This suggests that GA newcomers may face conflicting advice. On the one hand, they are urged to be patient and to take their time in all aspects of their recovery, while on the other they are warned against the hazards of procrastination. In GA, finding a balance between both impulses is an ongoing struggle. One member, when asked why some do not succeed in GA, had this to say:

> Well because they can't seem to make the transformation from the initial rush, the initial excitement, of finding a lot of people like themselves that had gone through the same experiences. And you know the stories—all the rush that we get when we first come into GA. And they can't seem to get to the steps, the 12 Steps of Recovery, fast enough. You know there seems to be a lag between ... some people get the excitement of the program when they first come in. And they get the power of example and the hope and everything ... And they fall off before they start looking, and working the steps. I think that's where we lose a lot of people. (#5, male GA member)

This statement is telling for two reasons: first, there is an implicit critique of GA's slow-paced approach; second, it is consistent with Brown's (1986) observation that those who are overly elated at their first encounter with GA may in fact be less successful in the long run.

A3. How new members are perceived

Perhaps with good reason, more experienced GA members perceive the newcomers as "sick" and troubled souls, with "huge egos" and inflated feelings of entitlement. For example, they say, newer members who have abstained for a week will often express outrage at not being trusted by their spouses, despite having pursued their destructive behavior for many years. Some new members enter GA believing that the fellowship might actually pay their debts. Several informants reported that they were also in this state of mind when they arrived, and one confessed that he would not have remained if not for his mistaken belief that GA might eventually pay his debts.

A4. GA's fear of triggers

GA is more guarded about potential relapse triggers than many other 12 Step fellowships. AA, for example, does not tell members to refrain from entering bars, whereas on page 17 GA members are told to not even *go near* gambling establishments. Many long-standing GA members tend to view themselves as vulnerable to relapse and hence in need of taking precautions.

A5. Spiritual awakening/conversion

GA puts less emphasis on spiritual awakening than do other fellowships, such as AA and NA. GA's Step 2, for example, speaks of a restoration to a "normal way of thinking and living" (GAISO, 1999) rather than the standard "restoration to sanity." GA's Step 12 speaks

of carrying the GA message to other gamblers, but unlike AA and NA, there is no mention of a "spiritual awakening." One might suspect that GA, long known to be more secular in orientation (Browne, 1991, 1994; Ferentzy & Skinner, 2003; Lesieur, 1990), has at least some good cause to have evolved this way. Anything associated with the mystical can be reminiscent of the mystification endemic to a problem gambler's mindset with respect to odds, hunches, or good luck charms.

A6. 12 Steps as key to healthy recovery

There was a strong association between 12 Step work and reported life satisfaction as well as not missing gambling at all. All but two GA members interviewed, even those who do not work the 12 Steps, agreed that those who do work the steps are better off spiritually and emotionally. GA also seems to gear 12 Step work to recovery needs associated with gambling. As mentioned, in GA patience is key, and the 12 Steps are treated to a large extent as an exercise in patience. On the whole, GA members take considerably more time on each step than their AA and NA counterparts.[2] So the theme of not solving problems quickly is actually practiced while members go through the 12 Steps.

B. Recovery in GA

B1. The 12 Steps of Gamblers Anonymous

Browne (1991) and Brubaker (2004) have discussed GA's early history and how the characters involved influenced the ways in which GA altered AA's 12 Steps. Our concern in what follows is with how GA's distinctive approach to the 12 Steps reflects the recovery needs of compulsive gamblers. Only those steps relevant to this end are discussed, that is, Steps 1 to 6 and 12.

1. We admitted we were powerless over gambling—that our lives had become unmanageable.
GA's Step 1 is the same as AA's, though of course gambling has been substituted for alcohol. In practice, though, GA has adopted a different approach to "powerlessness," in that GA takes the concept more seriously. As already mentioned, while AA takes no official stand on whether an alcoholic in recovery can go to bars, leaving it up to the individual (AAWS, 1976), page 17 of the Combo Book (GAISO, 1999) contains an admonition regarding gambling establishments: members are told not to go in, or even near. The best way to understand Step 1 in GA is through its interaction with the suggestions on page 17, which is discussed below.

2. We came to believe that a power greater than ourselves could restore us to a normal way of thinking and living.
Step 2 has been changed from the AA original, and sets GA apart from other 12 Step fellowships. Instead of the standard restoration "to sanity," GA members are restored simply to "a normal way of thinking and living." First, GA is less inclined to perceive its membership as "insane" to begin with. Second, the transition is less sensationalistic: our interaction with GA members has led us to conclude that for the most part they seek normalcy rather than earth-shattering conversion experiences. This is partly due to GA's secular orientation, but there is more to it (see Step 12, below).

3. We made a decision to turn our will and our lives over to the care of this Power of our own understanding.
Unlike AA and most other 12 Step fellowships, GA's Step 3 does not refer to "God as we understood Him." This is a secularized approach to a spiritual process. Though this approach is paradoxical and arguably laden with inconsistencies, of concern right here is what it entails. While in AA and NA there is often debate about whether atheists and agnostics can be "spiritual," every GA member with whom we spoke agreed that belief in God is not necessary to this end (though they are keen to respect all religious beliefs).

4. We made a searching and fearless moral and financial inventory of ourselves.
Note that beyond a moral inventory, GA members are also responsible for a "financial" inventory. This represents a dramatic shift in the framing of the recovery project.

5. We admitted to ourselves and to another human being the exact nature of our wrongs.
Unlike other 12 Step fellowships, GA does not suggest that members admit their wrongs to God, but only to themselves and another human being.

6. We were entirely ready to have these character defects removed.
Again, GA changes the step by not mentioning God as the one who removes these defects (though GA's Step 7 does mention "God of our understanding").

12. Having made an effort to practice these principles in all our affairs, we tried to carry this message to other compulsive gamblers.
Step 12 is telling in that there is no mention of a "spiritual awakening." Beyond GA's secular orientation, there is an aversion to the kind of quick conversion experience some of the first AA members underwent (AAWS, 1976). An overnight conversion would be akin to winning $100,000 at a casino. GA's entire culture of recovery seems to turn against such aspirations.

B2. The 12 Steps in practice

As practiced in GA, the 12 Steps are to a large degree geared toward teaching patience. For reasons already discussed, GA treats this virtue as key to a gambler's recovery. A recurring warning among GA members is not to move from Step 1 (admission of powerlessness) immediately to Step 12 (passing on the message to other gamblers). While a warning not to overstep one's ability in the enthusiasm of early recovery is common to other 12 Step fellowships—moving from Step 1 immediately to Step 12 is called "two-stepping"—in GA this warning also involves an emphatic call for patience. To quote a long-standing (35 years) GA member:

> You know some people, some people, and thank God, can be on Step 1 for a year. It's only when you jump from Step 1 to Step 12, and forget about all the ones in between, that there's a problem—a very serious problem. (#1, male GA member)

Clearly, if members were to spend an entire year on each step, it would be more than a decade before they were "ready" to spread the word, and act as sponsors. The latter might actually happen after about a year of abstinence (and the person may then be working on Step 3 or 4), but the point is that newcomers are *consistently warned against impatience and much less often against procrastination*. There are many reasons for this. When asked which

item on page 17 he considered most important, another member (over 7 years abstinent) replied,

> ... one day at a time, don't try to solve all your problems at once was very helpful to me as I had to face the chaos that I created but without number one [the first suggestion on page 17]—attending meetings—I wouldn't have ever understood how someone could take their problems one day at a time. (#27, male GA member)

Here, even meetings are treated primarily as a means to achieve patience. Like most GA members, this person had huge debts to pay—gamblers, more so than many other addicts, must understand that it may take time to set things right.

For obvious reasons, an attitude of avoiding quick fixes can be important to recovery from drugs and alcohol. As mentioned, it is simply more pressing to the GA member. Gambling is not only a quick fix in the sense that it may provide an escape or a thrill, it can (conceivably) be a source of quick revenue—and this temptation can spell death for a gambler. It may also take a gambler longer to earn the trust of family members. Not only has more money been wasted (possibly misappropriated or stolen from family members), but the newly abstinent gambler is not "obviously" abstinent, as a sober alcoholic or cocaine addict might be: it is much harder to tell whether or not a gambler has indulged that day in the addictive behavior. For these and other reasons, some GA members—even after 20 years of abstinence—are in a position where their spouses refuse to let them control more than nominal amounts of money. While the timelines vary, the latter scenario is something for which the new GA member may have to prepare. Again, patience is key. Recovery in GA can be seen as a complex interaction between the 12 Steps and the messages (primarily concerning patience and abstinence) found on page 17. Normally, recovery would begin with Step 1—the admission that one is a compulsive gambler, aided by GA's 20 Questions—and then turn quickly to the instructions on page 17 (some of which could be perceived as parts of, or additions to, Step 1).

B3. The Combo Book

> You know—every time you read the Combo Book you get one step closer to understanding it. And every time you read it there's a different meaning to it. There's a different understanding. There's something that speaks to you, you know, depending on your frame of mind, depending on how the page is being read, or even who's reading the page. You know, because it's kind of a magical book. (#2, female member)

One of GA's most striking features is the length of its main text. The Combo Book is a pocket-sized, 17-page pamphlet. At an AA or NA meeting, one might be introduced to one of several lengthy books published by the fellowship, or to one of several pamphlets. GA is grounded almost exclusively in the Combo Book.

A first glance at the Combo Book would not likely vindicate our interviewee's claim of it being profound and magical. It may appear quite simple and even shallow. But the authors of this pamphlet must have had a clear grasp of what compulsive gamblers need to hear. Otherwise, the Combo Book would not be so prominent. More than a few gamblers reported

that the Combo Book gave them the feeling that it was written about them personally. The Combo Book speaks to gamblers with more finality than even the famous Big Book speaks to alcoholics. In AA, there is in fact some disagreement—at times heated—over which AA literature is best. Some prefer the so-called 12 by 12 (AAWS, 1981), which can infuriate traditionalists who prefer the Big Book. Some AA members prefer other AA literature, and a vast majority prefer some variety. In GA, there seem to be no such divisions: practically everyone endorses the Combo Book.

The book begins with a history and then a brief description of GA. By pages 4 and 5, one is already reading the 12 Steps of recovery. Since they are only listed without explanation, GA members must rely very heavily on GA's oral culture to learn about the 12 Steps. They may also go to Step Meetings for more textual assistance and deeper discussion. But such meetings are only recently becoming more prominent, and at the time of this writing there were only 3 in the Toronto area out of about 23 meetings in all.[3]

Pages 6 and 7 contain The Unity Program, GA's version of AA's 12 Traditions, which are often called the "12 Steps of Unity."[4]

Pages 8 and 9 discuss compulsive gambling along disease model lines. These pages deal with the need for acceptance of one's condition, qualified by an endorsement of self-diagnosis: only you can decide whether or not you are a compulsive gambler.

Page 10 discusses three characteristics associated with being a compulsive gambler: inability or unwillingness to accept reality, emotional insecurity, and immaturity. Then, page 11 discusses "the dream world of the compulsive gambler," which may include such amenities as yachts and servants. Yet the dream will never materialize, because the gambler will use any money won to "dream still bigger dreams."

Pages 12 to 14 further discuss gambling along disease model lines, making it clear that even a penny-ante game or an office sports pool are sufficient to activate the addiction. Most important, perhaps, on page 12 it is explained that compulsive gambling is not a financial problem.

Pages 15 and 16 contain GA's 20 Questions, which help new members decide whether or not their gambling has been compulsive and also help experienced members confirm their status as compulsive gamblers. The book says that most compulsive gamblers will answer "yes" to at least seven of these questions. In practice, however, GA members insist that you definitely are compulsive if you answer seven positively—a contradiction of the previous statement on page 8 that self-diagnosis is the only valid criterion. This paradox is not specific to GA and has long haunted 12 Step/disease model approaches. Two legitimate concerns are involved: first, compulsion, marked by "craving" of any kind, is an experiential phenomenon that only the subject in question can identify with certainty; second, experienced addicts are often able to identify a kindred spirit who may be practicing some denial. A balance between these two legitimate concerns is integral to any healthy rapport with newcomers.

After these sparsely worded 16 pages, one turns to what is probably the most important page of all.

Page 17

Many GA members say that page 17, on its own, can ensure abstinence from gambling if a person takes all the instructions seriously. Others say that page 17, along with the two pages containing the 12 Steps of recovery, are sufficient reading material for healthy recovery. One cannot understand GA without understanding page 17. How could one short page resonate in such a powerful fashion? Page 17 contains seven suggestions, or admonitions. Despite their apparent simplicity, the suggestions reflect a philosophy of recovery as well as ideas about the nature of compulsive gambling. The page begins with bold, uppercase lettering:

"**TO ALL GAMBLERS ANONYMOUS MEMBERS, PARTICULARLY THE NEW GAMBLERS ANONYMOUS MEMBERS**"

And then the first admonition:

"1. Attend as many meetings as possible, but at least one full meeting per week. **MEETINGS MAKE IT**."

All 12 Step fellowships stress the importance of meeting attendance. Yet in AA and NA, the suggestion for newcomers in the Toronto area is normally 90 meetings in 90 days. In the mid-20th century, AA in the US normally suggested 30 meetings in 30 days (Kurtz, 1979). So why does GA consider one weekly meeting sufficient for new members? When the Combo Book was first written, GA was smaller and there were not enough meetings in most (maybe all) regions for a more ambitious suggestion. Some of the older GA members in Toronto recall when that city had only one weekly meeting. One may also speculate that a fellowship dominated by war stories with little discussion of life issues, emotions, or other matters—as GA was until recently—would not provide enough variety to entice members to attend with more frequency. But there is more to it. When first achieving abstinence, many compulsive gamblers are busy dealing with debts, legal issues, or both: "When I came in ... the concept was the guy goes out and gets two, three, four jobs if he has to." (#28, male GA member)

Our experience with GA members also suggests that, in general, they are an ambitious lot, keen to earn good incomes. But regardless of how we explain it, even today when there are plenty of meetings in the Toronto area and the meetings do offer much variety, we have yet to meet a GA member who claimed to attend a full meeting a day for a span of 90 days, though a few have claimed upward of 60 during early recovery.

Normally, a newcomer who attends three meetings per week is considered a good candidate for recovery. Conversely, we have found that it is far more common in NA (and in AA) for newer members to attend considerably more than three meetings a week, with many attending a meeting every day—or more than one per day when possible—well beyond the first 3 months. It would seem that, for most GA members, such goals are simply unrealistic. But page 17 is well thought out, as the second admonition seems designed to compensate for the relatively less frequent meeting attendance.

"2. Telephone other members as often as possible. Use the Telephone List!"

While all 12 Step fellowships make such suggestions, we have found that GA members put a very high emphasis on phone contact. Several members interviewed made a point of

discussing the amount of time they spend on the phone with other GA members. To whatever extent meeting attendance is less frequent than in other fellowships, GA provides a strong telephone culture as a corrective.

"3. Don't test or tempt yourself. Don't associate with acquaintances who gamble. Don't go in or near gambling establishments. **DON'T GAMBLE FOR ANYTHING**. This includes the stock market, commodities, options, buying or playing lottery tickets, flipping a coin or entering the office sport pool."

The reader may be impressed with the vehemence: Don't, don't, don't, and **DON'T**. GA takes these matters very seriously.

This exhortation contains two parts. The first provides a very broad notion of what gamblers need to avoid. The second provides a broad definition of "gambling."

Page 17 applies to all GA members, not just newcomers. One may find it strange that even after years of abstinence, a gambler should not enter—or even go near—a casino. AA, for example, does not tell its members that they will never be able to enter, or work, in bars. The first explanation is that until recently gambling venues were few, so contact with them was not integral to normal social interaction. Conversely, alcohol is everywhere. Today, however, most variety stores are "gambling establishments" because they sell lottery tickets. For this reason, some members have suggested to us that this section may require revision. Still, this does not explain it all. Most long-standing GA members we have spoken to would not enter a casino, or a racetrack. Most would, if need be, go "near" such a place (e.g., they would not take a detour in order to avoid walking past the track). Somehow, GA members perceive themselves as perennially vulnerable to relapse. Before discussing that, here is another consideration:

> Interviewer: So what you're saying to me is that a relapse is more dangerous for a gambler than maybe for an alcoholic.
>
> Respondent: The ... only difference is the amount of money. I mean an alcoholic goes back to drinking, he may drink for a month and then go back to AA. He may use up a couple of hundred dollars. If he's not gambling on the side. But a compulsive [gambler] goes back, they go back with a vengeance. (#1, male GA member)

This subject's words are important, for he is a long-standing GA member and among the two or three most respected figures among GA members in the Toronto area. The perception in GA is that members who relapse usually make up for lost time. And the point he makes is that while there are limits to how much one can drink, there are in principle no limits to how much one can gamble. While it is possible that an alcoholic who slips for a few days may, for example, cause tragedy from behind the wheel of a car, it is likely that when the binge is over a little bit of money (and health) will have been spent and the option to resume recovery will present itself. In the same amount of time, the gambler may have played away the family home or a child's college fund. GA members avoid potential triggers with a passion, and the fact that there are few limits to how much money they could gamble away is one reason.

Yet this does not explain everything. Gambling seems to call GA members in a very strong

way, so that it is not only the intensity of the relapse that is a concern, but also the perception of a greater likelihood. One member, abstinent since 1968, will enter casinos because his work requires it. But even for work-related reasons, he will not go to a racetrack (horseracing was his game of choice).

> I never gambled in a casino. Maybe that's the answer, I don't know. But when they show the news on, and they showed the last 15 seconds ... during the sports they show like the last 15 seconds of a feature race. I have to shut that off. I still, after all these years get anxiety, or my mind right away picks the outside horse, or the inside horse, or the gray horse. (#28, male GA member)

At one meeting, an older member, with over 25 years of abstinence, told the room that he still will not visit relatives in Nevada due to the proximity of Las Vegas.

And the admonition goes even further: members are told not to associate with acquaintances who gamble. While some GA members apply this only to those who gamble compulsively, and others ignore it altogether for the sake of family members or friends who gamble compulsively, there are many who take the warning seriously. They may say "hello" or engage in brief conversation, but they simply will not associate with someone who gambles even if the person only gambles recreationally.

So, rightly or wrongly, GA perceives gambling addiction as a practically all-powerful demon. But there is more: while GA is becoming more spiritual in orientation, its Step 12 still has no mention of a spiritual awakening. We have discussed possible reasons for this, but it may also be another reflection of what members see as their permanent vulnerability. The AA Big Book mentions that only after such an "awakening" can an alcoholic go safely anywhere, regardless of how much alcohol is consumed. One can speculate over the power of such experiences, and perhaps the prophecies—both in AA concerning one's invulnerability to relapse and in GA concerning one's vulnerability—are to an extent self-fulfilling. Either way, the distinction is not lost on at least a few GA members:

> Interviewer: ... Now, all of these suggestions in item 3 imply that gambling addiction is a very serious illness. Now AA for example has no official policy on whether or not members can go to bars, you know, even if different AA members have their opinions. The AA message seems to be that once in recovery and free of alcoholism, an alcoholic can go anywhere.
>
> Respondent: Well because they supposedly have a spiritual awakening ... in some shape [or] manner. (#28, male GA member)

It is possible that as GA becomes more attuned to the spirituality associated with the 12 Steps, it may modify its stance on the suggestions contained in item 3. Still, we should not take this for granted. Some GA informants, who are also alcoholics and attend AA, have said that while they are not bothered by people drinking around them, they would feel uneasy in a gambling environment. Could these individuals be "less spiritual" in the face of one addiction than the other? Or could it simply be that gambling is more likely to present stronger urges? Currently we have no answer to this puzzle.

The second part of item 3 deals with the definition of gambling, which for GA includes even

the smallest, seemingly insignificant bets and also stock market activity or risky investments such as commodities or options. There seems to have been much conflict over including what many consider legitimate investments in the definition, and this is only a recent addition. There have been conflicts in the Toronto area over whether someone who plays the stock market should be able to receive a "pin" and a special meeting designed to celebrate that person's abstinence. As it happened, they cannot. One might suspect that more than a few GA members at this point simply refrain from sharing that aspect of their lives with the fellowship.

This broad definition of gambling reflects GA's uncompromising stance toward what is and is not dangerous. We should recall that members are told not to associate even with noncompulsive, recreational gamblers. One informant was mainly involved in the buying and selling of real estate—and currently questions his status as a compulsive gambler. GA guards heavily against such developments, and item 3 of page 17 reflects just how guarded GA can be about the dangers of compulsive gambling.

This certainly helps to explain why GA members, rather than simply stating that they are compulsive gamblers when identifying themselves at meetings, prefer a more vehement admission, which can be as adamant as the following: "My name is Betty. I fully and completely accept and admit the fact that I am a compulsive gambler." This, in GA, can be taken as part of Step 1, which involves powerlessness over compulsive gambling and an admission that one's life cannot be "managed." Step 1 runs through page 17, and GA takes this step more seriously than any other 12 Step fellowship of which we are aware.

"4. Live the Gamblers Anonymous Program **ONE DAY AT A TIME**. Don't try to solve all your problems at once."

Again, the theme of *powerlessness*: one cannot simply force reality to comply; things will change at their pace, not yours. Acceptance of this is integral to healthy recovery in GA. That is partly why the Serenity Prayer is so central to GA: *God grant me the serenity to accept the things I cannot change, courage to change the things I can, and the wisdom to know the difference.* While also important in other 12 Step fellowships, this prayer rings even more true in GA: many members we have spoken to consider this prayer one of the three or four most important components of their recovery. (That the prayer is important to many atheists in GA reflects a paradox that has long haunted 12 Step recovery: the need to retain the word "God" while seemingly doing away with the need for a deity.)

Browne (1991) claims that GA (as opposed to AA) does not focus on self-centeredness as a problem in recovery, and that page 17 is not about that at all. Yet telling gamblers that things will not go their way overnight is, in practice, to tell them to cease being self-centered. The Combo Book stresses the lack of maturity involved in gambling addiction—an assessment to which GA members seem to relate. While there may be more to impatience than self-centeredness, the latter tends to be a key ingredient that must be overcome through maturity and acceptance of events proceeding in ways that may not parallel one's desires.

There are many slogans associated with 12 Step recovery used by members to deal with a host of issues. It is no accident that "One Day at a Time" receives a special mention on page 17. While this slogan can be used to help members struggling with abstinence—it is easier to say that one will not drink, use drugs, or gamble today, rather than imagining an entire future

without one's addictive behavior—here the stress is immediately placed on patience (another common interpretation of this slogan). "Don't try to solve all your problems at once" has, as we explained, a special meaning for those suffering from an addiction geared toward reaping financial benefit. As one GA member, who is also a recovering alcoholic, put it:

> Gambling certainly presents a dream world that seems to be something I have to constantly guard against, perhaps made more alluring by my memories of the times I actually won gambling, and the false hope I could win again reinforced by industry and government agency advertising "Millions Win." I can't imagine harboring such delusions about drinking again, perhaps because I have no memories of "winning" when I was drinking. (#27, male member)

"5. Read the **RECOVERY** and **UNITY** steps often and continuously review the Twenty Questions. Follow the steps in your daily affairs. These steps are the basis for the entire Gamblers Anonymous Program and practicing them is the key to your growth. If you have any questions, ask them of your trusted servant and sponsors."

Page 17 can be viewed as a tool kit for staying abstinent. So it is a practical guide. Yet members read more into it. We have given some reasons for why this is so. Here, the 12 Steps of recovery are mentioned, along with the Unity Steps, as the foundation of the GA program. While it is true that these aspects of the program are reduced to one item, which also deals with the 20 Questions, page 17 does acknowledge them. First, the steps of recovery and then the Unity Steps—the latter being a political as well as a spiritual set of rules. Yet page 17 has already tried to explain the importance of patience to the GA member, and the seriousness of avoiding triggers has been addressed. Browne (1991, 1994) may have viewed page 17 as simply a practical set of rules, but as we have explained it involves a philosophy of recovery along with a theory about compulsive gambling. Here, another point must be clarified: page 17 is more than just practical.

> Interviewer: One thing that struck me is that page 17 is a set of practical principles; it seems just pragmatic, how to avoid gambling and so on. But to some members it's a lot more than just a practical guide. Do you have any thoughts on this?
>
> Respondent: I think it paraphrases the necessity for someone to utilizing the tools of the book. It talks about read the 12 Steps often, read and review the Unity Steps. It encompasses every highlight of the book that I think is necessary. So I think it's way more than practical. I think it's practical and spiritual. (#16, male member)

"6. When you are ready, the Trusted Servants will conduct a Pressure Relief Group meeting, or evaluation for you and your spouse (if married), and adherence to it will aid in your recovery."

Pressure Relief is a process where experienced GA members help a newer member with financial (and sometimes legal) planning. Here the most telling words, consistent with the rest of page 17, are "when you are ready." Normally, members must demonstrate some commitment to GA at least in the form of meeting attendance before Pressure Relief becomes an option. This is consistent with the overall message of page 17 and GA

regarding not rushing into the solving of problems. Some GA members have been critical of this, stating that without early, immediate Pressure Relief, many gamblers return to gambling out of a desperation to win sorely needed funds.

> What happens is that there are people in GA that have the concept that says, "We shouldn't give a guy or a woman a budget meeting or a pressure group ... until we know that they're for real...." And there's a lot of advocacy that says 6 to 8 weeks. Which to me is stupid because the pressure, the financial pressure is so great, that sometimes you gotta do it right away or they can't recover 'cause they think that the only way to pay the bills is to go back to gambling and get a big win. (#28, male member)

This may be an example of when GA's recovery culture hits a snag. Could the emphasis on patience, in this and perhaps other cases, be taken too far? In any case, despite its wisdom, page 17 runs into a paradox, as can be seen from our discussion of the seventh and last admonition.

"7. Be Patient! The days and weeks will pass soon enough, and as you continue to attend meetings and abstain from gambling your recovery will really accelerate."

Despite patience being so necessary for successful recovery from compulsive gambling, our meeting observations and interviews suggest that it may be the most difficult virtue for many new GA members to acquire. The last, and most difficult, suggestion on page 17 highlights the fact that this page is not merely a starting point for recovery in GA: it is also an endpoint. Members report that it takes time to "get 17"—which may surprise a casual reader who found the page quite simple. What is required is a profound grasp of what patience entails, along with an emotional state amenable to such wisdom.

> Be patient. That is ... there's our magic. That's so hard. But you see, you can't ... I can say to you the first day you come in, "be patient." What the hell are you talking about? Here I've got problems up to my, you know? So that's why you don't come to page 17 for quite a while. (#1, male member)

There really is some "magic" to it, as the same interviewee explained at the start of the section on the Combo Book: "I gambled compulsively for 30 years. I come in I got troubles ... Be patient. I don't even know what the word means." (#1, male member)

Conclusion

GA has been designed to suit the specific needs of problem gamblers, which differ in many respects from those of substance addicts. GA also provides a good example of why it is imprudent to assume that all 12 Step associations are essentially the same. Despite the common grounding in a disease conception of addiction, along with a 12 Step approach, the many fellowships modeled upon AA are nonetheless able to develop distinctive cultures of recovery. While this article provides a preliminary analysis of GA's approach, there is much more to be learned about this mutual aid organization. Given the growing significance of pathological gambling in the wake of the proliferation of legal gambling venues, a better understanding of GA has become an urgent necessity.

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Contributors: PF attended GA meetings and conducted all interviews on his own, save for one which was conducted by PF and WS. Co-authors met regularly with PF to discuss research results. PF wrote the initial draft of this article, save for parts of the section on methodology, which were written by PA. All authors were involved in the writing of the final draft.

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[1] This point was brought to our attention by an anonymous reviewer, and also by a woman who attends GA meetings in Regina.

[2] While we would not hazard to offer average timelines, GA members with experience in AA have confirmed this statement. Our study also involved NA. The main difference seems to be that in both AA and NA there is some debate between those who advocate moving quickly through the 12 Steps and those who argue that the Steps should be worked slowly, while in GA the dominant message is clearly the latter.

[3] We hesitate to provide an exact number of meetings, as meetings often close down and new ones form. The estimate of 23 is based upon the most recent GA meeting list as well as our own information about newer developments.

[4] The 12 Traditions of AA are a set of rules for the entire fellowship to follow. They were designed to ensure, among other things, a decentralization of authority, anonymity, and the absence of a profit motive in all AA activities.

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research

Impacting attitudes towards gambling: A prison gambling awareness and prevention program

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Abstract

Research indicates that approximately one third of prison inmates meet the criteria for problem or pathological gambling (Williams, Royston, & Hagen, 2005). However, despite this rate being among the highest of all gambling populations (Walters, 1997; Shaffer & Hall, 2001), there appears to be a lack of prison gambling awareness and prevention programs. This study sought to develop, implement, and evaluate one such program at the Lethbridge Correctional Facility in Alberta, Canada. Forty-nine inmates completed a six-session program over 18 months. Gambling screen results revealed a significant increase in cognitive error recognition, and attitudes towards gambling became significantly more negative. The program did not render any significant differences in math skill score, Canadian Problem Gambling Index (CPGI) score, or past-year South Oaks Gambling Screen (SOGS) score. Changes in the past-year frequency score approached significance. This study suggests that programs of this kind can be effective for inmate populations, particularly in changing attitudes towards gambling.
Key words: prison, inmate, problem gambling, pathological gambling, prevention

Introduction

The purpose of the Gambling Awareness and Prevention Project was to develop, implement, and evaluate a psycho-educational gambling program for prison inmates that focused on awareness of gambling and problem gambling, cognitive distortions (reduction of thinking errors), and attitudes towards gambling (towards a more realistic and negative perspective). The program was delivered from 2002 to 2004 through collaboration between the Lethbridge John Howard Society, a prominent prisoner rehabilitation agency that delivers addiction recovery programs inside prisons, and the Addictions Counselling Faculty of the School of Health Sciences at the University of Lethbridge.

During the past two decades, there has been increased acceptance of gambling in areas where legalized gambling has been introduced (Shaffer, Hall, & Vander Bilt, 1997). As the availability of gambling venues in North America has increased, legalized gambling has become a commonplace cultural pastime (Cox, Lesieur, Rosenthal, & Volberg, 1997; Hope & Havir, 2000; Morgan Research, 1997; Volberg, 2002; Williams et al., 2005). In the mid-1990s in southern Alberta, the local executive director of the John Howard Society began noticing an increase in the number of inmates convicted of gambling-related offences, mainly

economic crimes, in the local correctional centre. This increase appeared to correspond to the introduction of video lottery terminals (VLTs) in pubs, lounges, and bars beginning in 1992 in Alberta and to the opening of casinos in 1996.

However, there was no indication that gambling awareness and prevention programs existed in prisons in Alberta, or even in Canada. Problem gamblers were showing up in recovery programs intended for alcohol and drug abusers. This observation became the impetus behind the creation of the Gambling Awareness and Prevention Project in 2002.

International trends in problem gambling among prison inmates

Previous studies have reported prison prevalence rates ranging from 12% to 38%, depending on the instruments and criteria used and the population sampled (Abbot & McKenna, 2000; Abbot, McKenna, & Giles, 2000; Anderson, 1999; Kerber, 2000; Lesieur & Klein, 1985; Maden, Swinton, & Gunn, 1992; Templer, Kaiser, & Siscoe, 1993; Walters, 1997). Williams et al. (2005) reviewed 28 prevalence studies conducted among prison populations in countries such as Australia, New Zealand, the UK, and the US and found a combined problem and pathological gambling prevalence rate of almost 33%. Williams et al. (2005) and Crockford and el-Guebaly (1998) suggested that the high rates of problem and pathological gambling in prison populations are traceable to offender demographic characteristics (young, male, minority group status) and comorbidities (substance abuse, antisocial personality). However, research points to the fact that gambling is a significant problem with female inmates as well. Abbott and McKenna (2000) report a 33% lifetime pathological gambling rate and a further 12% problem gambling rate in their study of 94 recently sentenced female prison inmates.

In addition, Abbott and McKenna (2000) and Bellringer (1986) have found that a significant amount of gambling takes place within prisons despite the fact that gambling in prison is banned in the various jurisdictions. In New Zealand, 28% of recently imprisoned women and 26% of men reported gambling participation, the majority of whom gambled weekly or more often (Abbott & McKenna, 2000; Abbot et al., 2000).

Previous studies have concluded that addictive gambling behaviour is an important criminogenic factor, with 77% to 89% of surveyed pathological gamblers admitting to having committed a criminal offence (Brown, 1987; Meyer & Stadler, 1999). Most crimes are nonviolent (i.e., income generating or property related) including fraud, forgery, embezzlement, larceny, selling drugs or stolen goods, shoplifting, burglary, and petty theft or robbery (Abbott & McKenna, 2000; Brown, 1987; Lesieur & Puig, 1987; Meyer & Stadler, 1999). The majority of crimes committed appear to be gambling related in that they are committed to finance gambling activities or pay gambling-produced debts, and a significant proportion of problem gamblers indicate that they have been arrested or convicted for a gambling-related offence (Abbott & McKenna, 2000; Blaszczynski, McConaghy, & Frankova, 1991; Lesieur & Klein, 1985; Potenza et al., 2000).

To date, a study of the prevalence of problem gamblers among Canada's prison populations has not been concluded. However, a subculture of gambling in prisons has been noted anecdotally. Gambling may occur as a pastime to alleviate boredom, despite its prohibition within the prison. However, gambling among prisoners may be difficult to detect by prison staff. The justification for a gambling prevention and education program is based on two

interconnected issues: (a) high problem gambling prevalence rates in prison populations where research has been conducted and (b) the link between problem gambling and criminal behaviour.

While further substantiating the relationship between crime and gambling is beyond the scope of this study, it can be reasonably assumed that a prevention program that improved prisoners' attitudes and potentially their gambling behaviours might diminish criminal activity. Prison substance abuse programs have shown their rehabilitation potential, with therapeutic community programs enjoying particular success with a 23% rate of return to prison or violation of parole 3 years after release (Levinthal, 1999). However, the lack of research into prison gambling programs makes this link difficult to assess. Lahn and Grabosky (2003) warn that it is seductive to purport a link between problem gambling and crime, as not all problem gamblers offend and some offend for reasons unrelated to gambling.

Prison gambling programs and crime prevention

The treatment of pathological gambling behaviour is believed to be an effective strategy to reduce or prevent the risk of further criminal behaviour, particularly in cases where gambling addiction has led to property crimes (Meyer & Stadler, 1999). Brown (1987) found that once gambling behaviour is changed there are rarely any further convictions. Yet with regard to interventions for problem gambling, offenders are an underserved population. Anderson (1999) has suggested that further assessment of gambling problems among incarcerated offenders is needed and recommends the inclusion of gambling topics in treatment and release programs. Walters (1997) points out that "intervention needs to be made available to these individuals, but it must be made relevant to the problems and concerns of gambling-involved incarcerated offenders" (p. 22).

Unfortunately, there appear to be relatively few published accounts of prison gambling prevention programs internationally. Lahn and Grabosky (2003) reviewed various methods for offender screening and treatment specifically in relation to problem gambling in Australia. They found that all states assess offenders for risk and need, but no assessment tools are used explicitly for gambling. Although all states have offender programs, only two (New South Wales and Victoria) have a specific program for gambling problems. In the UK, gambling has not been a focus of correctional services, but Gamblers Anonymous runs groups for people with gambling problems in some prisons. Currently, a few US states (e.g., New York, Minnesota, Nevada) have specific gambling programs for incarcerated prisoners (Williams et al., 2005; Lahn & Grabosky, 2003). In Canada, the gambling awareness program piloted at the Lethbridge Correctional Centre, which is the focus of this study, appears to be the only prison gambling program operating at this time (Lahn & Grabosky, 2003; Williams et al., 2005).

To summarize, the high problem-pathological gambling rate in prisons, the existence of a gambling subculture among inmates, the link between gambling and crime, and the lack of gambling programs in Canadian prisons all point to the importance of developing a gambling educational awareness and prevention program for prison populations in Canada and elsewhere.

A prison gambling awareness and prevention program

Description

The goals of the Gambling Awareness and Prevention Project were to develop and implement a program that would educate prison populations and to measure the degree, if any, of that program's impact on participants' attitudes, knowledge, and behaviour. The Gambling Awareness and Prevention Project comprised a series of six 90-minute group sessions offered to men and women inmates serving their sentences at the Lethbridge Correctional Centre in southern Alberta. The series was delivered on six separate occasions over a 15-month period (2002–2004) at the Centre. Inmates registered voluntarily for the program. Participants were surveyed at the beginning and end of each series using a combination of problem gambling instruments to measure any changes in their awareness of problem gambling, attitudes towards gambling, odds (math) calculation skills, cognitive skills, and behaviour.

Design

The gambling program fell into the evening "support" programming at the Lethbridge Correctional Centre. Other programs, such as academic upgrading programs and skill training, were scheduled during the daytime. Support programs deal largely with life skills subjects and were allowed a limited time slot and had to share evening time slots with other support programs. On that basis, a time slot of one and a half hours was selected for the gambling program.

A further consideration was the optimum length of time during which a serving prisoner could attend a complete series of program components. Inmates of provincial correctional centres such as the Lethbridge Correctional Centre serve shorter sentences than prisoners in penitentiaries. The average time is less than 3 months when the statutory remission of one third of the sentence is taken into account. Exacerbating the limited time frame were factors such as frequent transfer of inmates to other correctional centres, transfers for appeals, and disciplinary procedures that can interrupt continuous attendance at programs. A further disruption during the program time was caused by extensive kitchen renovations, which led to a reduction of the inmate population and a high number of transfers to other centres in the province. Originally, the gambling program was scheduled for one session per week over 6 weeks, but for the reasons mentioned above it was changed to occur twice a week over a 3-week period to maximize uninterrupted enrolment.

Consequently, it was necessary to select six topics that would adequately cover the core content of a gambling awareness and prevention program that would provide cohesion and integrity within the goals of the program. This was done through consultation with addiction experts at the University of Lethbridge and by exploring other successful addictions programs delivered previously at the Centre as well as reviewing gambling literature on such topics as cognitive distortions and the phases of gambling (Andres & Hawkeye, 1997; Toneatto, Blitz-Miller, Calderwood, Dragonetti, & Tasanos, 1997). The overall direction of the program was to move from awareness to wellness through the six-part series. The program consisted of the following topics:

1. definitions of addiction and gambling addiction, types of gambling, and facts about problem gambling;

2. phases and progression of problem gambling and the negative consequences of problem gambling;

3. external reinforcement of addiction and problem gambling through an outside speaker (two guest speakers from Gamblers Anonymous) or appropriate video, *Gambling: It's Not About Money* (Hazelden Foundation, 2000), followed by discussion of key points;

4. the reality of odds and characteristics of denial and cognitive distortions and false beliefs, called "mistaken thinking" in the program, and the realities behind such thinking, sometimes referred to as "myth-busting";

5. identifying barriers to quitting problem gambling and ways of overcoming barriers, relapse triggers, and the development of a relapse prevention plan, including techniques for self-protection;

6. alternatives to gambling and the development of a lifestyle plan, a reminder of signs of problem gambling, and follow-up services for problem gamblers.

Each session of the program was designed as a free-standing unit of information without dependence on the other units in the series. Thus, individual sessions were intended to produce a singular contribution to the overall impact of the program. In this way, the program borrowed from brief counselling theory, in which each counselling session is considered as potentially the only session during which to facilitate some degree of change in the individual (Cade & O'Hanlon, 1993). While the structure of free-standing units was retained in designing and delivering the Gambling Awareness and Prevention Project, entry into the program at any point in the series was not allowed in order to maintain consistency between pre- and posttesting of inmates attending the program. As a result of this decision, there was an average attrition rate of one third in each series due to transfers out, disciplinary measures, and voluntary withdrawal.

Procedure

Recruitment for the program was voluntary and was accomplished by placing a notice in each living unit of the Centre giving details of the program and the start date, along with the sign-up process. This was the same process for requesting a service, namely filling out an inmate request form to be placed on the program list. There was no prescreening involved in determining who might participate in the program, since the program was preventive as well as awareness providing, and no exclusion criteria applied. Once the list of participants was known, the first set of evaluative screens and instruments was administered before the program began.

Participants were issued a workbook organized into six sections that included subtopics for each session. Each session of the program was highly interactive and Socratic in method, whereby the group leader asked questions to elicit answers from participants, who responded with information drawn from their cumulative knowledge and experience. When information was not forthcoming, the facilitator provided it to the group. Each component of

the session was examined thoroughly; for instance, in the first session, definitions of gambling, problem gambling, "betting," and addiction were explored. As well, various types of gambling that require skill or no skill were listed and compared to statistics on the most popular types of gambling.

Following discussion and answers, which were written on the chalkboard, the group members wrote down the information in the relevant section of their workbook. Individual group members could tailor the information and its emphasis to their own particular experiences, circumstances, needs, and plans. This process was intended to give group members a sense of ownership in developing answers and solutions to the issues addressed in the program and provide them with a personal record of the information in their workbook.

Of necessity, the group facilitator was knowledgeable about the topics and experienced in using group interaction techniques to guide participants through the program content. In addition, the workbook contained factual and technical information about gambling that group members most likely would not know, for instance, a profile of gambling expenditures of problem gamblers and an explanation of the progressive nature of gambling addiction. This information was necessary and added to the knowledge and experience contributed by the group and ultimately their awareness of problem gambling and its consequences and prevention.

Communication, both spoken and written, was at the grade 8 to 10 level so as to be understandable by all participants. Many prison inmates are familiar with terms associated with various addictions, both from their own culture and conversations and from prior involvement in addictions counselling. Nonetheless, technical terms were replaced with more familiar terms where possible to aid understanding and to avoid distancing the facilitator from the group through language. For instance, the term "cognitive distortion" would be replaced by wording such as "mistaken thinking."

At the end of the program, a Certificate of Completion was awarded to each participant who finished all six sessions of the program. For those who were unable to complete the program through no fault of their own (for example, through being transferred, court appearances out of the region, sickness, or other similar reasons) a Certificate of Attendance was provided prior to leaving the group in recognition of their participation in the program.

Instruments

The South Oaks Gambling Screen (SOGS) for lifetime and past year was used for pre- and postprogram testing (Lesieur & Blume, 1987, 1993). Scores of 3 or 4 are considered to indicate the presence of "problem gambling" and scores of 5 or higher "probable pathological gambling." The more recently developed Canadian Problem Gambling Index (CPGI) was also used. It has been tested as a reliable and valid instrument and uses a 12-month time frame (Ferris & Wynne, 2001). It has four levels: non-problem gambling, low-risk gambling, moderate-risk gambling (roughly equivalent to "problem gambling"), and severe problem gambling (roughly equivalent to "pathological gambling"). These screens provided a baseline measure of the prevalence of problem gambling among the participants.

In conjunction with the gambling screens, a previously designed gambling questionnaire was also utilized that collects and assesses demographic information, cognitive errors in

gambling (six questions), attitudes towards gambling (three questions), and the ability to calculate gambling odds (one question) (Connolly, Williams, & Morris, 2001). The same screens and questionnaire were administered at the end of the program and completion was required in order for the inmates to receive a Certificate of Completion.

Results

Quantitative analysis using SPSS software was conducted to compile descriptive, demographic data and determine the effects of the awareness program. Paired *t* tests were conducted to test for changes in attitudes, cognitive errors, odds calculation, gambling frequency past year, CPGI, and SOGS past year. It was deemed unnecessary to test for changes in SOGS lifetime scores due to the short duration of the program.

Baseline sample

A total of 71 inmates completed the baseline questionnaires. There were 46 males (64.8%) and 25 females (35.2%). The ages (*n* = 69) ranged from 18 to 58, with an average age of 30 years. Of the 64 participants who included ancestry, 37 (57.8%) were of European descent, 22 (34.4%) Aboriginal, 3 (4.7%) African, and 1 (1.6%) each Hispanic and Asian. With regard to level of education (*n* = 65), 41 (63.1%) had not completed grade 12, 21 (32.3%) had a high school diploma, and only 3 (4.6%) had some college or university. According to the CPGI at baseline, there were 9 (12.7%) non-problem gamblers, 11 (15.5%) low-risk gamblers, 27 (38%) moderate-risk gamblers, and 24 (33.8%) problem gamblers. According to the past-year SOGS (*n* = 71), there were 7 (9.8%) problem gamblers and 33 (46.5%) probable pathological gamblers. According to the lifetime SOGS (*n* = 64), there were 6 (9.4%) problem gamblers and 34 (53.1%) probable pathological gamblers.

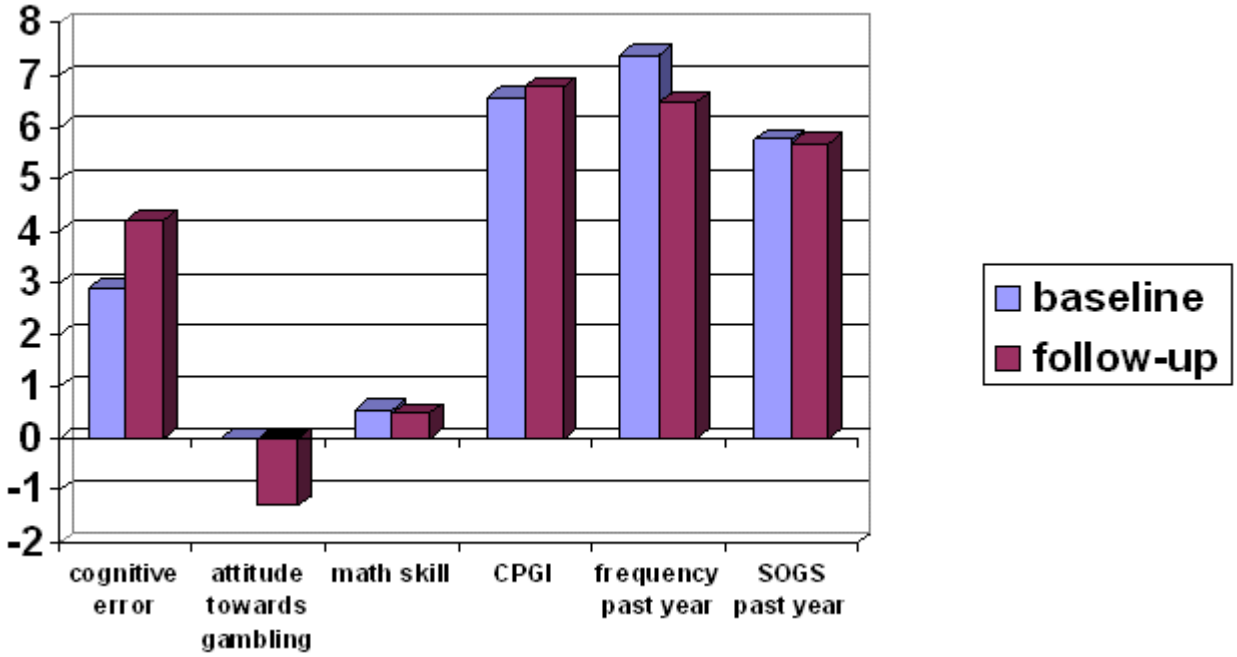
Follow-up sample

Although 71 surveys were initially collected, only matched pretest/posttest pairs were included in the statistical analysis and 49 of the 71 individuals (69%) completed follow-up questionnaires. Attrition occurred due to expected transfers in and out, loss of privileges and other disciplinary measures, short sentences, early releases, attendance at other compulsory activities, interruptions such as lockdowns and other institutional events, and voluntary withdrawal (e.g., more attractive entertainment options, such as sports on TV). There were 30 (61.2%) males and 19 (38.8%) females. Regarding age, 41 of 49 responded, with ages ranging from 18 to 53, and an average age of 30 years. Regarding ancestry, 46 participants responded, with 28 (57.8%) being of European descent, 15 (30.6%) Aboriginal, and 1 (2.0%) each African, Hispanic, and Asian. With regard to level of education, 46 responded, where 29 (63%) had not completed grade 12, 15 (32.6%) had a high school diploma, and only 2 (4.3%) had some university or college. According to the CPGI, with all 49 responding, there were 5 (10.2%) non-problem gamblers, 8 (16.3%) low-risk gamblers, 20 (40.8) moderate-risk gamblers, and 16 (32.7%) problem gamblers. According to the past-year SOGS (*n* = 49), there were 4 (8.2%) problem gamblers and 23 (46.9%) probable pathological gamblers. According to the lifetime SOGS (*n* = 47), there were 5 (10.6%) problem gamblers and 23 (48.9%) probable pathological gamblers.

Impact of the program

Summary scores from each of the instruments were entered into SPSS 11.0 computer software (Paired samples *t*-test). A bar graph depicting the mean pre-test and post-test scores of each category visually represents the differences between the six categories (see Figure 1).

Figure 1 Mean Pre- and Post-test Scores



Means and standard deviations were calculated for each of the instruments (see Table 1), and pre-test scores were compared with post-test scores. With regard to the impact of the gambling awareness and prevention program, statistical analysis showed a significant

Table 1
Paired samples results

Pair	Mean	N	Std. deviation	Std. error Mean
Baseline cognitive error	2.89	47	1.108	.162
Followup cognitive error	4.21	47	.931	.136
Baseline attitude towards gambling	.00	49	3.069	.438
Followup attitude towards gambling	-1.29	49	2.389	.341
Baseline math skill	.56	45	.503	.075
Followup math skill	.49	45	.506	.075
Baseline CPGI	6.59	49	5.712	.816
Followup CPGI	6.78	49	6.734	.962
Baseline past year freq	7.39	49	4.769	.681
Followup past year freq	6.49	49	4.874	.696
Baseline past year SOGS	5.76	49	5.914	.845
Followup past year SOGS	5.69	49	6.329	.904

difference between the pre-test and post-test scores in two of the six pairs: cognitive errors ($p<0.001$), and attitudes towards gambling ($p<0.01$). Past year frequency of gambling

approached significance (p=0.087) (see Table 2).

Table 2
Paired samples t-test comparing pre-program and post-program results

	Paired differences					T	df	Sig (2-tailed)
	Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
				Lower	Upper			
Pair 1 cognitive errors	-1.32	1.181	.172	-1.67	-.97	-7.65	46	.000
Pair 2 attitude towards gambling	1.29	3.310	.473	.33	2.24	2.719	48	.009
Pair 3 math skill	.07	.539	.080	-.10	.23	.829	44	.411
Pair 4 CPGI	-.18	4.522	.646	-1.48	1.12	-.284	48	.777
Pair 5 past year frequency	.90	3.595	.514	-.13	1.93	1.748	48	.087
Pair 6 past year SOGS	.06	4.455	.636	-1.22	1.34	.096	48	.924

Correlation coefficients were calculated to determine if there were relationships between the variables. Not surprisingly, there was a significant correlation ($r=.287$, $p<0.05$) between level of education and baseline math skill. There also was a significant correlation ($r=-.238$, $p<0.05$) between age and baseline attitude towards gambling. Thus, as age increased, attitudes towards gambling became more negative. This is not surprising, as today's youth are the first to be raised in an environment with extensive legalized gambling and increased positive societal attitudes towards gambling.

Discussion

Impact of program

The purpose of the Gambling Awareness and Prevention Project was to develop a program that would educate prison populations and to measure the degree, if any, of that program's impact on attitudes, knowledge, and behaviour. It achieved this objective in terms of improving attitudes towards gambling and knowledge of cognitive distortions. Attitudinal shifts indicated that inmates no longer believed that gambling was a simple recreational pastime. Moreover, for many of the participants, this attitudinal shift included recognizing that they indeed had a problem with gambling and that gambling played a part in the mix of addiction and criminal activities that led them to become incarcerated. Through the recognition that gambling was part of a larger and ongoing "living problem," some inmates signalled their intention to enter counselling for their gambling addiction on release by making arrangements through their caseworker as part of their release plan. One individual even arranged to enter a treatment program upon leaving prison.

Most important, gambling was no longer viewed as an "innocent activity" but became

recognized as an activity that held potential dangerous effects that are manifested when gambling becomes chronic in nature. If negative attitudes and cognitive error recognition play a part in behaviour change, the choice of entering this program may be a step in the right direction for those inmates who choose to commit themselves to responsible gaming participation and those who want to remain abstinent from gambling altogether. By improving gambling attitude, the program achieved an important step towards the final goal of improving gambling behaviour.

On the other hand, the program did not render any significant differences in math skill score, CPGI score, past-year frequency score, or past-year SOGS score. With regard to math (odds calculation) skill, only one question was used to measure this facet. Future studies could incorporate more math skill questions to increase reliability and the ability to detect a postprogram difference. As well, because odds calculation skills showed a reduction, not an improvement, more attention might be given in future to this area of programming. Additionally, it is probably important to devote more attention to the cognitive distortions and mystique that surround the question of odds if a more realistic view of odds is to be gained.

We did not expect significant changes in past-year SOGS or CPGI scores, since program participants were incarcerated at the time of the program and therefore had limited opportunities to engage in forms of gambling normally available outside of prison. However, the data were collected in order to measure the prevalence of problem gambling among our participants at baseline, with the hopes that a future study would include follow-up data after release from prison. The lack of significant change in past-year gambling could also be due to the short duration of the program, and hence the minimal impact on past-year reporting. Future research could investigate the impact of a lengthier program, with a larger sample. However, due to the complexities of prison research, the delivery of a longer program may be difficult. More important, it is apparent that to measure the true impact of a prison awareness and prevention program, a follow-up at 6 months and 1 year after release from prison is needed. Despite positive shifts in attitudes and cognitive error recognition, this study was not able to determine whether or not offering an educational and awareness program focusing on problem/pathological gambling and its facets will help in reducing or eliminating problem gambling behaviour after inmates are released from prison, especially without ongoing individual or group support in the community.

It is also important to note that criminal records were not made available to the researchers, as that information was classified. Voluntary postprogram interviews with program participants pointed to such crimes as fraud, check forgery, break and enter, and drug-related offences. Two participants engaged in bank robbery to secure money to gamble. Sex crime inmates were secluded from the general prison population and thus were not available for the program. The general nature of the crimes pointed towards nonviolent crimes against property and thus supported a link between gambling and crime, but without having access to all criminal records this link was impossible to systematically evaluate.

Screening

For the Gambling Awareness and Prevention Project, the issue of relevance of program to inmate need (Walters, 1987) is partly addressed by the fact that attendance at the program was voluntary. Inmates attended the program according to their perceived personal need. However, it is important to determine that there are other bases for a program than simply inmate choice, because some inmates may choose to attend for reasons of entertainment, to

meet members of the opposite sex in the case of coeducational programs, or to see what the program is like in relation to other program choices. For these reasons, a prescreening instrument would be an effective tool in future programs to eliminate the merely curious.

Prescreening would also assist inmates to recognize the existence of their problematic gambling behaviour. As the program progressed, it became apparent that many of the participants were genuinely unaware of the severity of their problem gambling because they attributed all of their difficulties to an overwhelming single cause in their eyes, such as another addiction, typically substance abuse. Severe gambling disorders therefore can be "hidden" in some cases. In this circumstance, it can be expected that many inmates with gambling problems will be missed, if entering a program is purely on a voluntary basis. Assessment for gambling problems at the casework level, along with testing for substance abuse problems, would provide the information necessary for inmates to make an "informed" choice about entering a problem gambling program.

In setting up screening procedures for a gambling program, institutional factors must be kept in mind, as these factors will affect program numbers. Issues of attrition and late entry need to be considered in any similar prison gambling awareness and prevention research project and decisions made ahead about how these may affect the program and what course of action to take to ensure consistency and integrity.

Prison gambling awareness and prevention programs

At the time of providing this program, there were no known prison gambling programs in correctional facilities in Canada (Lahn & Grabosky, 2003). The results of the program point to the need for further prison gambling programs with follow-up after the inmates leave prison to measure the impact of gambling programs not only on attitudes but also on gambling behaviour. As well, with the inroads achieved on affecting gambling attitudes, stronger links to follow-up addiction counselling services for inmates leaving prison would build on the momentum already established. In addition, further studies would track comorbidity, as many of the inmates spoke about other addictions in addition to gambling during the program, but no data were collected.

Overall, with the high prevalence rates of problem gambling within inmate populations identified in some studies, the link between gambling behaviour and crime, and the potential impact of a gambling program as seen here, it seems apparent that correctional institutions need to begin to implement gambling awareness and prevention programs as a regular part of prison programming. Further research is also needed into the characteristics and outcomes of a successful prison gambling awareness and prevention program.

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research

The South Oaks Gambling Screen (SOGS): A rebuttal to critics

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Abstract

A review of the literature reveals strong support for the construct validity of interpretations based on scores obtained with the original and more recent versions and/or variants of the South Oaks Gambling Screen (SOGS). Criticisms of the SOGS are shown to lack merit, to be offset by more important criteria, or to be no longer relevant. The evidence reviewed indicates that the construct of pathological gambling as represented by the SOGS and its variants provides a robust definition and implies that the SOGS meets the important criterion of validity generalization. The construct of chasing and behaviors related to chasing is shown to provide powerful measures by which to discriminate between the presence and absence of pathological gambling. The viability of the SOGS to continue to make important contributions to the understanding of pathological gambling is discussed in terms of the criteria for selecting a research instrument.
Key words: construct validity, validation strategies, validity generalization, diagnostic criteria, pathological gambling, South Oaks Gambling Screen, SOGS

Introduction

The South Oaks Gambling Screen (SOGS) (Lesieur & Blume, 1987) has been the subject of a number of critical reviews (e.g., Battersby, Thomas, Tolchard, & Esterman, 2002; Gerstein et al., 1999; Shaffer & Korn, 2002; Volberg, 1999; Walker & Dickerson, 1996), beginning with Culleton's analysis of methods (1989). This has led to calls for replacement of the SOGS as the primary research instrument used in prevalence studies of the general population.

Although Lesieur (1994) and Gambino (1997) have provided responses to some of the issues, it is clear that a more detailed response is needed. Our goal is to demonstrate that the SOGS remains an important and viable choice among current alternatives by arguing the case that the major criticisms lack merit, are outweighed by other criteria, or are simply no longer relevant.

The SOGS is a 20-item instrument initially developed to screen clinical populations, for example, substance abusers, for the presence of pathological gambling. Responses to the 20 items are summed, and endorsement of 5 or more items is interpreted as evidence of the presence of pathological gambling. Criteria from the DSM-III and DSM-III-R were used in the development of the SOGS; the interested reader will find the original validation data in Lesieur and Blume (1987). The first use of the SOGS as a screen to detect pathological gambling in the general population was by Volberg and Steadman (1988). It is impossible in a short report to do justice to a review of the SOGS. We have therefore limited our response

to what we believe are the most relevant and important issues. A more detailed report by the second author is available by request at hlesieur@lifespan.org. This includes an extensive list of references through early 2003 and a set of summary tables. In part, the criticisms leveled at the SOGS reflect the scarcity of systematic reviews and evaluation of the literature, i.e., meta-analysis. The references compiled by the second author should provide an excellent starting point for those investigators planning such analyses.

A brief review

A wide selection of validation strategies have been employed to demonstrate the validity of the SOGS. These include the use of single-stage (e.g., Gambino, 1997; Poulin, 2002) and multiple-stage (e.g., Abbott & Volberg, 1996; Abbott, Williams, & Volberg, 1999; Gambino, 1999a) designs, a description of the mathematical models for evaluating the accuracy of estimates based on these designs (Gambino, 1997, 1999a), and methods for evaluating the precision and cost-efficiency of these designs (Gambino, 1999b). Other investigators have employed statistical modeling techniques for the purpose of validation, including factor analysis (e.g., Winters, Stinchfield, & Fulkerson, 1993), logistic regression (e.g., Poulin, 2002; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2001), Rasch analysis (Strong, Lesieur, Breen, Stinchfield, & Lejuez, 2004), and stratification analysis (e.g., Tavares, Zilberman, Beites, & Gentil, 2001).

Evidence supporting the psychometric soundness of the SOGS, while less extensive than evidence that supports the validity of the many applications of the SOGS, continues to be accumulated (e.g., Abbot & Volberg, 1996; Lesieur & Blume, 1987; Stinchfield, 2002; Winters et al., 1993). These include measurement of internal validity (e.g., Stinchfield & Winters, 2001; Volberg, 2002; Welte et al., 2001), the use of concurrent validation strategies (e.g., Doiron & Nicki, 2001; Westphal & Johnson, 2000), postdictive or retrospective criterion validity (e.g., Gambino, Fitzgerald, Shaffer, Renner, & Courtnage, 1993; Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000), and the use of convergent and discriminant validation strategies (e.g., Lesieur & Blume, 1987; Stinchfield, 2002). Convergent validity as demonstrated by the correlation between the SOGS and its variants with the DSM, both earlier and current versions, is impressive in its consistency and ranges from moderate (e.g., Sproston, Erens, & Orford, 2000) to high (e.g., Welte et al., 2001). These correlations hold for both clinical (Stinchfield & Winters, 2001) and general (Stinchfield, 2002) population samples as well as comparisons among both adult and adolescent versions (e.g., Volberg, 1996, 1998).

Much of the criticism of the SOGS has its roots in the failure to recognize what qualify as statements of validity (Gambino, 2003a). For example, the proposed relationships between pathological gambling and frequency of gambling (e.g., Hing & Breen, 2001), duration of gambling (e.g., Wong, McAuslan, & Bray, 2000), distance to gambling (e.g., Gerstein et al., 1999), and expenditures on gambling (Cox, Kwong, Michaud, & Enns, 2000), are *all statements of construct validity* (Cronbach, 1988). Recent epidemiologic studies have provided additional support by employing the SOGS to measure the strength (relative risk) and magnitude (attributable risk) of the relation of pathological gambling to suspected indicators of enhanced risk such as age, adults versus adolescents; severity, clinical versus general populations (e.g., Shaffer, Hall, & Vanderbilt, 1997); and comorbidity, e.g., substance use disorders (e.g., Feigelman, Wallisch, & Lesieur, 1998).

Several investigators have used the SOGS to search for the putative causes of pathological gambling in terms of genetic (e.g., Walters, 2001) or neurobiological (e.g., Ibáñez, Blanco, de Castro, Fernandez-Piqueras, & Saiz-Ruiz, 2003) factors; track its natural history (e.g., Shaffer & Korn, 2002); and measure the progression from gambling onset to diagnosis of pathological gambling (e.g., Tavares et al., 2001). Others have employed the SOGS to examine the construct of pathological gambling from a theoretical perspective, e.g., the debate over whether to view pathological gambling as an obsessive-compulsive or addictive disorder (Frost, Meagher, & Riskind, 2001).

If pathological gambling lies on a continuum of severity (Shaffer & Korn, 2002), then strong support for the validity of the SOGS would be found by showing that predictions of pathological gambling, in terms of the likelihood that a specific score discriminates the pathological from the nonpathological gambler, should increase as scores on the SOGS increase. Evidence in support of the SOGS is presented in Table 1 employing the likelihood ratio (LR). The LR is a measure recommended by clinical epidemiologists for validating clinical indicators and instruments (Kraemer, 1992). LRs can be used to validate individual clinical indicators, diagnostic and screening tests, or a range of test scores. The interested reader will find more detailed descriptions elsewhere (Chu, 1999; Koch, Capurso, & Llewelyn, 1995; Kraemer, 1992; McGee, 2000; Sackett, Haynes, & Tugwell, 1991; Schmitz, Kruse, & Tress, 2000; Zhou, Obuchowski, & McClish, 2002).

The LR provides an empirical measure of the goodness of a test definition (or individual criterion) by defining the odds of finding a particular test result in those with versus those without the disorder. It is this *difference* of frequency of occurrence that is looked for when assessing the validity of a symptom, sign, or test result (Koch et al., 1995). It measures the degree of certainty with respect to the diagnosis being confirmed. Larger values for the LR are interpreted as indicative of greater certainty that the presumptive diagnosis is correct; i.e., one may have greater confidence in the diagnosis. Values of LR equal to one mean that the results have no diagnostic value, and values of LR less than one indicate that the disorder is less likely to be present.

The LR is defined as the true-positive rate (sensitivity) divided by the false-positive rate (1 – specificity). Estimates of sensitivity and specificity were obtained following well-established procedure (Zhou et al., 2002). Sensitivity was estimated by assuming that gamblers in treatment represent individuals known to have the disorder; specificity was estimated by assuming that gamblers from the general population represent individuals free of the disorder. These are surrogate definitions since there will be some probability that some gamblers in the general population will be false negatives and some probability that some gamblers in treatment will be false positives. The use of these two populations as surrogates is reasonable since the analysis assumes that these labels apply on average, and not in any individual case (Schlesselman, 1982). This form of validation is equivalent to correlating test items with the total score. The LR provides an empirical estimate of the power of an instrument, one or more items, or a range of scores to discriminate the pathological gambler from the nonpathological gambler. The LR is interpreted as a measure of the credibility of the instrument or item(s) in accounting for the empirical evidence (Clayton & Hills, 1996).

Table 1, based on a reanalysis of Stinchfield's data (2002), provides evidence to support this view and demonstrates that the SOGS meets this strong criterion for validity as indicated by increasing estimates of the LR with increasing scores on the SOGS.

Table 1
LRs based on general population and gambling treatment samples

Score on SOGS	Se	1 − Sp	LR
> 0	1.00	.159	6.49
> 1	.996	.066	15.09
> 2	.991	.043	23.04
> 3	.988	.028	35.28
> 4	.985	.017	57.92
> 5	.976	.013	75.04
> 6	.948	.008	118.5
> 7	.893	.006	148.83
> 8	.841	.001	841
> 9	.765	.000	∞

Se = sensitivity, based on responses of treatment sample (*N* = 327); 1− Sp = 1 − specificity, based on responses of general population sample (*N* = 845); LR = Se/(1 − Sp).

The evidence clearly demonstrates support for the validity of the SOGS as an instrument for research on both clinical and general population samples (e.g., Volberg, 1994), its usefulness in case finding in clinical (e.g., Petry & Armentano, 1999) and correctional settings (Walters, 1997), the identification and testing of hypotheses about the determinants of pathological gambling (e.g., Cox et al., 2000; Gambino et al., 1993), and its usefulness in evaluating treatment outcomes (e.g., Stinchfield & Winters, 2001) and tracking long-term changes in prevalence rates among adults (Volberg & Moore, 1999) and adolescents (Winters, Stinchfield, Botzet, & Anderson, 2002), among others.

In sum, the SOGS has been employed for a multitude of purposes, in a wide array of settings, with diverse populations and cultures, and has been translated into at least 36 languages for use on six continents (contact the second author for a list of SOGS translations). These studies have found consistent replicable relationships between pathological gambling, as measured by the original and revised versions of the SOGS; personal attributes across times, places, communities, and clinical settings; and comparison with other instruments. The consistency of these findings provides strong support for the construct validity of the SOGS (e.g., Beaudoin & Cox, 1999; Hodgins & el-Guebaly, 2000).

Our review of the evidence in support of the validity of the SOGS is not presented as an argument that efforts to develop alternatives are misguided. Indeed, the continuing appearance of studies designed to validate improved alternatives is to be encouraged and represents a welcome challenge (e.g., Cunningham-Williams & Cottler, 2001; Fisher, 2000; Gerstein et al., 1999; Smith & Wynne, 2002; Stinchfield, Govoni, & Frisch, 2001). Comparisons among alternative instruments will continue to help identify the strengths and weaknesses in contrasting and related views on how to define the construct of pathological gambling; it may be expected that the SOGS will continue to contribute to this important task.

Criticisms of the SOGS

The initial evaluation. The criticism that the SOGS was validated on clinical samples, thus making invalid its application to the general population, was reasonable, but it should not

have been implicitly accepted in the absence of support for or against the application's validity. The apparent unquestioning acceptance of this criticism represents a failure to understand that it is not the test that is being validated, but inferences and conclusions based on test score interpretations (Rubin, 1988). This criticism has subsequently been shown to be unwarranted in view of the strong support for the construct validity of findings employing the SOGS and its variants in studies of the general population. More specifically, recent research has validated the SOGS with general population samples in a number of settings and cultures (e.g., Abbott & Volberg, 1996; Volberg, Abbott, Ronnberg & Munck, 2001; Stinchfield, 2002; Volberg & Vales, 1998

Items on the SOGS. An additional set of criticisms revolve around the specific items on the SOGS, particularly its emphasis on borrowing. Table 2 presents an analysis of the 20 SOGS items, based on the data reported by Stinchfield (2002), that rebuts this criticism. The primary measure employed in Table 2 is the LR described earlier. An interpretation of the LR

Table 2
LRs based on general population (1 – Sp) and gambling treatment (Se) samples

SOGS item	Se	1 – Sp	LR[a]
Cashed in stocks	17.0	0.0	∞
Borrowed from loan sharks	5.0	0.0	∞
Borrowed money and not paid them back	52.0	0.1	520.0
Borrowed from banks	40.0	0.1	400.0
Sold personal or family property	35.0	0.1	350.0
Lost time from work	49.0	0.2	245.0
Felt like you wanted to stop but didn't think you could	81.0	0.4	202.5
Borrowed from relatives or in-laws	48.0	0.4	120.0
Borrowed from checking account	54.0	0.5	108.0
Had money arguments centered on gambling	64.0	0.6	106.7
Felt you had a problem	91.0	0.9	101.1
Hid betting slips	74.0	0.9	82.2
Borrowed from credit cards	44.0	0.7	62.9
Borrowed household money	70.0	1.2	58.3
Went back another day to win back money (chasing)	80.0	1.4	57.1
Borrowed from spouse	33.0	0.6	55.0
Criticized by others for your gambling	83.0	3.0	27.7
Felt guilty	90.0	3.7	24.3
Gambled more than you intended	92.0	5.5	16.7
Claimed to be winning money gambling but weren't	52.0	4.5	11.6

Se = sensitivity, based on responses of treatment sample (N = 327); 1 – Sp = 1 – specificity, based on responses of general population sample (N = 845) of gamblers who did not meet criterion; LR = Se/(1 – Sp).

has been provided by Jaeschke, Guyatt, and Sackett (1994). These investigators propose the following interpretive guidelines: greater than 10 (large, often conclusive), 5 to 10 (moderate), 2 to 5 (small but sometimes important), and 1 to 2 (small, rarely important). The data show clearly that exceptionally high LRs were obtained for all items.

Two findings are of special interest. First, chasing as defined in the Stinchfield (2002) study (Table 2) is a strong discriminant (LR = 57.1) for separating pathological and nonpathological gamblers. Second, the five most discriminative items and seven of the top ten were items assessing borrowing. In view of the importance of the concept of chasing as a major characteristic of the pathological gambler (Lesieur, 1984) and the obvious relationship between chasing and the need to obtain money to chase, the discriminatory power of items on borrowing should not be surprising. These results provide additional strong support for the concepts embedded in the SOGS.

It needs to be emphasized that not all forms of borrowing discriminate between pathological and nonpathological gamblers; only forms of borrowing that discriminate between these two groups were included in the original SOGS (second author). It has been suggested that a better alternative is to replace the questions on borrowing with an omnibus question. The above analysis indicates that this may be expected to result in the generation of false-positive responses. In a similar vein, analysis of DSM-IV (first author), employing the validation results reported by Stinchfield et al. (2001), revealed that while chasing was the second most endorsed item (88%) by gamblers in treatment, slightly less than preoccupation (91%), it was the second poorest discriminant (LR = 12.1), reflecting the high proportion of nonpathological gamblers who endorsed this item (7.3%).

Lesieur (1984) has noted the importance of the distinction between short-term chasing, which is common among regular gamblers, and long-term chasing, which is not. In addition, research conducted for the original SOGS (contact the second author) found chasing "most of the time" after losses effectively discriminated, while chasing "less than half the time" the gambler lost did not! Accordingly, "less than half the time I lost" is not given a point in the SOGS while "more than half the time" is accorded a point in the 20-item screen. It is critical for researchers to take care to properly word the item to reflect this important distinction. Failure to do so will, as in the case of using an omnibus question on borrowing described above, generate additional false-positive responses.

Changing criteria. Arguments that the changing nature of the definition of pathological gambling has invalidated the SOGS are not persuasive. First, the lack of a gold standard for pathological gambling leaves unanswered the question, on what basis is the replacement of one set of criteria, e.g., DSM-III, DSM-III-R, with another definition, e.g., DSM-IV, justified? Recent examples of debate over the changing of diagnostic criteria that illustrate the issues include acute myocardial infarction (e.g., Pell et al., 2003) and diabetes mellitus (e.g., Borch-Johnson & Vej, 1998). The question of replacing old criteria with new criteria is an important one, but remains a difficult one to resolve due to the lack of accepted standards for evaluation (Zhou et al., 2002).

Second, the selection of which criteria to validate is typically the result of agreement by a panel of experts (Koch et al., 1995). The problems with the use of experts to establish diagnostic criteria have been detailed elsewhere (Kupfer & Regier, 2002), but in the main reflect the lack of rigorous diagnostic standards and the biases inherent in subjective judgments. Additional problems facing the experts include such factors as the historical lack

of funding to support a series of rigorous validation studies (e.g., Cunningham-Williams & Cottler, 2001; Zhou et al., 2002), the lack of a consensus on a conceptual model of pathological gambling (e.g., Walker & Dickerson, 1996), and limitations imposed by the amount and quality of extant research available for evaluation (e.g., Lesieur & Rosenthal, 1991).

Liberal versus conservative estimates. A related issue is the argument that the SOGS provides more liberal estimates than DSM-IV. This argument is misleading for three reasons. First, it implies that DSM-IV estimates are more accurate, i.e., valid, than the SOGS, or that those gamblers identified by DSM-IV are somehow more clinically relevant. In the absence of a gold standard, and in the face of such evidence as the ability of the items on the SOGS to discriminate true positives from false positives, neither implication can be justified.

Second, the emphasis on crude prevalence rates is misplaced (Gambino, 2003b). Crude prevalence rates are always a function of stratum-specific rates, e.g., gender differences, and will always overestimate some stratum-specific rates, e.g., females, and underestimate others, e.g., males. Stratum-specific rates are generally more informative for the purposes of identifying risk determinants, planning interventions such as screening programs, and designing prevention programs (Abramson, 1996).

Finally, stratum-specific rates may be converted into measures of relative risk and attributable risk percent (Shaffer et al., 1997). The use of these measures provides a means of comparing instruments (e.g., the SOGS and DSM-IV) that has the advantage of being independent of crude prevalence rates. For example, if the rates for males and females are 4% and 2%, respectively, using SOGS, but only 2% and 1% using DSM-IV, the relative risks will be two to one for both instruments while attributable risk percent will be $(2 – 1)/2 \times 100 = 50\%$ (Gambino et al., 1993).

The use of lifetime measures. The argument that only lifetime measures are used is no longer relevant; researchers now routinely employ current measures of prevalence, such as 6-month (Abbott & Volberg, 1991), past-year (Welte et al., 2001), and lifetime prevalence rates (Volberg, 1994). This argument was based, in part, on the failure of lifetime measures to discriminate between current cases and those in remission. The additional argument that lifetime measures are of no practical value is based on a misunderstanding. Lifetime measures are of limited use unless tied directly to age-specific strata; otherwise they cannot be properly interpreted (Abramson, 1996). Lifetime measures remain important indicators of the potential burden on the community; for example, with the advent of Internet gambling, former pathological gamblers may be more susceptible to relapse in the context of this medium. Under these conditions, the use of current estimates would clearly underestimate the potential burden in the community. An additional issue, often overlooked, is that sensitivity will decrease and specificity will increase as the time frame for measurement decreases (Gambino, 2005). This serves to mitigate the original argument, based on lifetime measures, that the SOGS generates too many false positives (Culleton, 1989; Dickerson, 1993; Shaffer & Korn, 2002). It should also be emphasized that the original false-positive criticism (Culleton, 1989) rested on an invalid premise and is by extension an invalid argument (Gambino, 1997).

Choosing an instrument. Finally, and we believe most important, the choice of instrument should not be based *solely* on the most recent diagnostic criteria. There are a number of reasons to select a specific research instrument (Gambino, 1997). These include replication,

comparability, knowledge of the properties and performance of the instrument under specific conditions, the goals of the study, the interests of the researcher, or simply the preference of funding sources (Robins, 1995).

Discussion

Validity refers to the usefulness of interpretations of test scores as these are applied for a specific purpose (Messick, 1988). This view is credited to Vernon (1963) and raises an important issue. As Kline observes, "a truly scientific psychometric test would be valid *per se* [author's italics], that is, for all purposes to which the test might legitimately be put" (2000, p. 34). A strict interpretation of the specificity argument states that changing one word or one question creates the need for a new validation study.

This may be true in the technical sense, but has not been found to hold in practice where consistent relations between scores on the SOGS and indicators of enhanced risk have emerged. The consistency and replicability of the observed relationships with different forms of the SOGS indicate that the general construct of pathological gambling as represented by the SOGS and its variants is robust. This implies that the validity of the SOGS is generalizable across situations, settings, samples, variants, and versions. Validity generalization (Schmidt & Hunter, 1998) has received strong endorsement in the most recent revision of the standards for testing as an important measure of support for validity (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999) and is the subject of a recent edited volume (Murphy, 2003). Considering the time, costs, and resources needed to conduct each new validation study, this robustness of the SOGS is a valuable asset.

For example, investigators may take advantage of the robustness of the SOGS to improve future versions by amending those items that show moderate to low levels of discrimination between gamblers in treatment (true positives) and gamblers in the general population (false positives). The relatively high proportions of false positives for the last four items in Table 2 suggest the need to reword these items to make them more specific. For example, the item most frequently endorsed by gamblers in treatment (92%), "gamble more than you intended," was also endorsed by 5.5% of gamblers from the general population. This question might be reworded, following Lesieur's (1984) recommendation on defining chasing, in terms of the frequency of occurrence of this behavior, e.g., more than half the time (positive) versus less than half the time (negative), in order to better discriminate true positives from false positives.

We emphasize that our defense of the SOGS does not imply any argument that the SOGS *must* or *should* be used instead of, or in place of, DSM-IV or other instruments. That would be not only an unrealistic position, but one without merit. The issue that faces the clinician or researcher is "how to choose among the riches" (Robins, 1995, p. 243). The case we have sought to make is that it is premature to reject the SOGS, particularly in view of the projected publication of DSM-V in 2010 or later (Kupfer et al., 2002). To do so would result in the loss of valuable information about the relations we study.

A more productive strategy is to supplement the SOGS (DSM-IV), when feasible (e.g., budget constraints), with a second test, e.g., DSM-IV (SOGS) (e.g., Volberg, 1996; Welte et al., 2001). This has a number of advantages, such as permitting the investigator to obtain

estimates of test accuracy in the form of measures of sensitivity and specificity (Gambino, 1999a). It also provides a bridge between the SOGS, DSM-IV, and the transition to DSM-V by helping to establish a solid foundation of validated knowledge based on multiple tests, i.e., convergent validation. An example is the use of the SOGS together with criteria from DSM-III-R and DSM-IV to develop and validate a new scale for the purposes of measuring the severity of pathological gambling (Koeter, de Fuentes-Merillas, Schippers, & van den Brink, 2003).

We close with three observations. First, "it is important to build on the foundation of work already done" (Volberg, 1999, p. 40). Second, the use of the SOGS has served researchers well in their study of pathological gambling and its correlates; it should continue to do so when applied to those situations in which conditions support its relevance and usefulness, e.g., replicability of previous research based on the SOGS. Since the majority of prior studies have been conducted employing variants of the SOGS, this is a particularly important criterion for choice of instrument.

Our third and final observation is a historical one. The original intent of Lesieur and Blume in development of the SOGS (1987) was its application to the screening of substance abusers for the presence of pathological gambling. The historical, social, and economic factors that resulted in the overwhelming selection of the SOGS as the instrument of choice over the last 18 years could not have been anticipated. With hindsight and evidence in hand, however, it would appear that the choice was clearly a productive one in terms of knowledge gained. We need only point to the many studies employing the SOGS, or one of its variants, that appeared in the final report by the National Research Council on pathological gambling (Committee on the Social and Economic Impact of Pathological Gambling, 1999).

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research

The impact of video lottery game speed on gamblers

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Abstract

Video lotteries seem to be one of the most profitable games for the gambling industry and are reported as the game of choice for many problem gamblers. Their popularity or, in some cases, their addictiveness, might be related to their structural characteristics: reinforcement schedule, lights, appearance, sound, and speed. We investigated the effects of video lottery game speed on concentration, motivation to play, loss of control, and number of games played. Forty-three participants were randomly assigned to either a high-speed (5 seconds) or a low-speed (15 seconds) condition. Results: gamblers in the high-speed condition played more games and underestimated the number of games played more than did participants in the low-speed condition. However, speed did not influence concentration, motivation, or loss of control over time or money. Conclusion: speed has a limited impact on occasional video lottery gamblers. The theoretical and practical implications of speed are discussed in the context of responsible gambling policies.
Key words: video lottery terminal, structural characteristics, speed of the game

Introduction

Video lottery terminals (VLTs) are widely found in many jurisdictions. A substantial proportion of gambling revenues comes from these machines. Their structural characteristics seem to attract people, and, for the majority of excessive gamblers seeking treatment, video lottery is often the preferred game (see Ladouceur, Sylvain, Boutin, & Doucet, 2002). Previous papers have discussed that structural characteristics of electronic gaming machines influence gamblers' behaviours or thoughts (Griffiths 1993, 1999; Ladouceur & Sévigny, 2002; Loba, Stewart, Klein, & Blackburn, 2001) and contribute to the development of problem gambling (Dickerson & Baron, 2000; Griffiths, 1990, 1993, 1999; Nova Scotia Department of Health, 1998). Griffiths (1993) speculated that structural characteristics such as lights, sounds, and colours act as reinforcements and thereby facilitate problem gambling. However, game speed has not often been empirically studied. Blaszczynski, Sharpe, and Walker (2001) conducted a study in venues located in New South Wales, Australia. Variables included players' level of enjoyment and satisfaction, problem gambling, and persistence in the patterns of play (wager size, number of bets, wins, losses, and time played). Gamblers played in their usual venues either on regular machines or on modified machines. Results showed that slowing the speed from 3.5 seconds to 5 seconds did not affect gamblers' behaviours. It was concluded that reducing the speed of the game may not be an effective strategy to minimize harm.

The Alberta Gaming and Liquor Commission (2001) also investigated speed by analyzing machine data. Unfortunately, there was no formal scientific study report completed that is available to the public. However, the Commission's opinion-driven observations are stated

on the Internet as follows:

> In Commission field tests, slowing down speed of play did not appear to affect player behaviour. Players continued to play for the same amount of time and bet the same amount per play as before. However, since each game took longer to play, fewer games were played than before. The Alberta Alcohol and Drug Abuse Commission (AADAC, 2001) believes that slowing down the games by several seconds per game may not accomplish the objective of reducing their attractiveness to the problem gambler. Instead, AADAC believes other responsible gaming features, such as forced interruption of play for a period of time, may be more effective. (chap. 14, p. 10)

More empirical studies are needed to clarify the influence of speed on gamblers. Could speed be detrimental to patrons? According to Blaszczynski, Sharpe, and Walker (2001), faster speeds are more enjoyable. Thus, gamblers' motivation to play might be greater with faster speeds, which could encourage more persistent gambling activity.

For the industry, making the games faster is a way to make more money. If this modification can be seen as a means to increase the number of games played, a faster speed might also affect how people perceive a game. For instance, a faster speed may lead a player to think that the game is more entertaining and exciting than a slower game. A faster speed would then influence the number of reinforcements players are exposed to in the same period. Williamson and Walker (2000) and Walker (2001) showed that players prefer higher frequencies of reinforcement to lower frequencies. Their participants chose to play electronic gambling machines with more lines per game. With a higher speed, patrons will receive more reinforcements per minute than with a slower speed, and this might in turn influence players' perceptions of the game played.

Individuals are frequently influenced by situational conditions when making judgments about time (see, for example, Fraisse, 1984). A faster speed may distort reality in such a way that players would lose track of time or of the number of games played, resulting in higher money losses and lengthier sessions. If a faster speed increases misperceptions about gambling behaviours, it may lead gamblers to lose control. In this study, loss of control is defined as the inability to respect self-imposed time or money limits while playing.

A faster speed may also affect motivation to play. Motivation has been found to be a key determinant of gambling involvement (Chantal, Vallerand, & Vallières, 1995). According to Monahan and Nicki (1999), the excitement and pleasure provided by the characteristics of the game are strong motivational determinants in VLT gambling. The more people like the game, the more motivated they will be to play it again. If a faster speed enhances motivation, it is likely to incite gamblers to play more often and for longer periods of time.

A high speed may also heighten a gambler's concentration, thus leading to excessive gambling habits. The faster the game, the more concentration is needed from the player and the more likely external background stimuli will not be noticed. Concentration is defined as a situation where gamblers focus on the game with such intensity that they do not see or hear what is going on around them in the environment. Diskin and Hodgins (1999) showed that VLT players did not respond quickly to a light flash when playing. This finding could be interpreted as not seeing external stimuli due to the gambler being in a state of high

concentration. Could a fast game speed facilitate concentration and therefore produce a loss of control on limits fixed before playing? Conversely to a fast speed, a slow speed may result in a loss of interest, which in turn could incite players to quit playing sooner. A slow speed may create the impression that the machine cannot become "hot" and will probably pay less. Slower speeds might help players to better estimate gambling variables, such as time spent playing or number of games played.

Since persistence is not the only variable associated with excessive gambling, it would be useful to assess the effect of speed on gamblers' perceptions, motivation to play, concentration, and loss of control. Based on the literature mentioned above, it is hypothesized that a high speed will increase motivation to play, enhance concentration, and result in a greater loss of control and misinterpretation of the number of games played than a slow speed. It is also predicted that gamblers in the high-speed condition will play more games and play for a longer period of time than those in the low-speed condition.

Method

Participants

Participants were recruited through newspaper advertisements in Quebec City. The sample comprised 43 participants over 18 years of age (22 women). They were randomly allocated to the high-speed condition (11 women and 10 men), where a game took 5 seconds, or to the low-speed condition (11 women and 11 men), where a game took 15 seconds. In Quebec, a real game takes about 5 seconds to play. The mean age was 36.8 (ranging from 19 to 69, *SD* = 13.9) for the high-speed group and 41.4 (ranging from 20 to 63, *SD* = 13.1) for the low-speed group. Participants reported playing VLTs from 0 to 24 times in the last 6 months (high-speed group: *M* = 2.6, *SD* = 4.3; low-speed group: *M* = 3.6, *SD* = 7.5). The majority of participants (14 in the low-speed group and 18 in the other) had a score of 0 on the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987), while 6 participants (5 in the low-speed group and 1 in the other) had a score of 1, and 5 participants (3 in the low-speed group and 2 in the other) had a score of 2 (high-speed group: *M* = 0.2, *SD* = 0.6; low-speed group: *M* = 0.5, *SD* = 0.7). Both groups were equivalent with regard to gender ($\chi 2$ (1, 43) = 0.024, $p > .05$), age (t (1, 41) = 1.106, $p > .05$), gambling experience (t (1, 41) = 0.543, $p > .05$), and mean SOGS scores (t (1, 41) = 1.251, $p > .05$).

Procedure

The French version of the SOGS, adapted for telephone surveys (Volberg & Steadman, 1988), was used to assess gambling habits. Participants were invited to the lab and played a game called "The Swinging Bells." Each participant received $10 for participating. The rules of the game were explained and they were allowed 10 practice games. Players received an additional $10 to gamble with. They were instructed that they could stop gambling whenever they decided to and could cash in the credits on their machine, up to a maximum of $50. The VLTs were programmed so that each player experienced the same sequence of wins and losses in both conditions. Participants were informed that, for scientific reasons, the purpose of the study would be communicated to them only after they had completed the questionnaire at the end of the experiment.

Measures

The SOGS is a 20-item scale on which each item is worth 1 point. Respondents who scored 2 or less were not considered to have a gambling problem. Those who scored 3 or 4 were at risk, while those who scored 5 or above were considered as probable pathological gamblers.

Dependent variables

The number of games played and the total time spent gambling were used as behavioural indexes of gambling. These variables were automatically monitored on the VLT.

Estimation of the number of games played and time spent playing was assessed by asking the following questions at the end of the session: "How many games do you think you played?" "How long did you play, in minutes?"

Motivation was assessed using a 10-point Likert-type scale with the question, "To what extent would you be motivated to go elsewhere to play the same game, either today or another day?" Both groups were also questioned as to whether they liked the game or not. Replies varied from "Do not like it at all" to "Like it very much" on a 4-point Likert-type scale.

Concentration was measured using a telephone placed 10 feet from the gambler. The phone rang three times in a row, 10 minutes after the session began. If the gamblers heard all three rings, they were not considered to be concentrated on the game. If they heard only one or two rings, they were considered to be more concentrated on the game. If the gamblers did not hear the phone, they were considered to be in a state of high concentration.

Loss of control was measured by checking if players respected the limits they had set before playing. They were asked about these limits after the session: "Did you fix a time limit before beginning to play?" "Did you fix a monetary limit before beginning to play?"

Players' perceptions about the speed of play were investigated by asking the following two questions: "Would you prefer a slower speed?" "Would you prefer a faster speed?"

Results

Number of games played

An analysis of variance indicated a statistically significant difference between the two conditions for the number of games played (Welch F (1, 27.569) = 8.145, $p < .01$). Participants in the high-speed condition played 2.5 times as many games (M = 251.3, SD = 221.5) as participants in the low-speed condition (M = 100.5, SD = 100.2). However, no difference was found on time spent playing (M = 29 min, SD = 29, in the low-speed group and M = 33 min, SD = 29, in the high-speed group; F (1, 41) = 0.172, $p > .05$). Due to high standard deviations within both variables, we calculated nonparametric statistics (Mann–Whitney U) and the results point in the same direction: U = 145, $p < .05$, for the number of games played and U = 205.50, $p > .05$, for the time spent playing.

Estimation of number of games and time spent playing

An analysis of variance for paired measures (estimated versus real number of games played by each participant) showed that participants in the low-speed condition did not underestimate the number of games played (mean estimate of 70 games, *SD* = 110.02, when they actually played a mean of 103.14 games, *SD* = 101.83; *F* (1, 20) = 1.596, *p* > .05), while participants in the high-speed group did (mean estimate of 97.86 games, *SD* = 106.58, when they actually played a mean of 251.29 games, *SD* = 221.54; *F* (1, 20) = 19.352, *p* < .001). A difference score was computed between the two variables for each group. An analysis of variance showed that participants in the high-speed condition underestimated the number of games played five times more than participants in the low-speed condition (*M* = 33.14, *SD* = 120.21, *n* = 21, for the low-speed group; *M* = 153.43, *SD* = 159.83, *n* = 21, for the high-speed group; *F* (1, 40) = 7.597, *p* < .01). Also, players in neither group incorrectly perceived the length of time played (a mean estimate of 33 min, *SD* = 34.68, *n* = 22, for the low-speed group when they actually played a mean of 29.05 min, *SD* = 28.57; *F*(1, 21) = 2.717, *p* > .05; a mean estimate of 32.55 min, *SD* = 26.8, *n* = 20, for the high-speed group when they actually played a mean of 30.60 min, *SD* = 28.43; *F*(1, 19) = 0.99, *p* > .05). Due to high standard deviations within all variables, we calculated nonparametric statistics (Wilcoxon signed ranks test (*Z*) and Mann–Whitney *U*), and the results point in the same direction as those presented above, except for the low-speed group, where there was a difference between the distribution of the estimated number of games played and of the real number of games played: *Z* = 2.047, *p* = .041.

An analysis of variance for repeated measures showed that participants in the low-speed condition did not underestimate the number of games played (mean estimate of 70 games when they actually played 103 games), while participants in the high-speed group did (mean estimate of 98 games when they actually played 251 games; *F* (1, 20) = 19.352, *p* < .001). They underestimated the number of games played five times more than participants in the low-speed condition (*F* (1, 40) = 7.597, *p* < .01). Also, players in neither group incorrectly perceived the time played (mean estimate of 33 min when they actually played for 30 min, *p* > .10).

Motivation

No difference was found between groups on motivation to play again (a mean of 2.6 out of 10, *SD* = 2.6, in the low-speed group and 2.5 out of 10, *SD* = 2.4, in the high-speed group; *F* (1, 41) = 0.024, *p* > .05). Both groups had similar scores on whether they liked the game or not (*M* = 2.7 out of 4, *SD* = 0.8, for the high-speed group, versus *M* = 2.5, *SD* = 1.1, for the other group; *F* (1, 41) = 0.305, *p* > .05).

Concentration

A chi-square test revealed no difference between groups with respect to concentration ($\chi 2$ (2, 30) = 0.136, *p* = .934). In both groups, the proportion of participants in a high state of concentration (did not hear the phone) reached around 40% (41.2% in the low-speed group versus 38.5% in the high-speed group). The proportion of players who heard all three rings was quite low, around 20% in both groups (17.6% in the low-speed group versus 23.1% in the high-speed group). Finally, 40% of the participants in both groups were in a light state of concentration (heard some rings but not all) that would not cause them to dissociate from

reality (41.2% in the low-speed group versus 38.5% in the high-speed group).

Loss of control

Groups were similar with respect to loss of control. In both groups, all players who had set a time limit respected their limit (7 in the low-speed group and 5 in the high-speed group). In the low-speed group, 66% (6 out of 9 players) respected their money limit compared to 86% (6 out of 7 players) in the high-speed group. A chi-square statistic indicated no significant difference between groups.

Players' perceptions of speed

In both groups, 91% of players did not want a slower game. In the high-speed condition, 33% of players would have preferred the game to go faster as compared to 64% in the low-speed group ($\chi 2$ (1, 43) = 3.949, $p < .05$). It is interesting to see that 36% of players in the low-speed condition and 67% of players in the high-speed group did not wish the game to go faster.

Discussion

Participants in the high-speed condition played 2.5 more games than low-speed participants but underestimated the number of games played five times more. The faster the game, the greater was the difficulty in keeping track of the number of games played. Since participants in both groups played for the same amount of time, the high-speed group wagered more money. Combining the two statistically significant results indicates that a high speed brings higher monetary risks and a greater misperception of the number of games played. Our results are consistent with previous findings highlighting the importance of the structural characteristics of VLTs and their possible negative impact on gamblers' behaviours (Dickerson & Baron, 2000; Griffiths, 1990, 1993, 1999; Ladouceur & Sévigny, 2005). The current findings are also similar to those of the Alberta Gaming and Liquor Commission (2001) field tests.

However, our interpretation differs. According to the Commission field tests, speed does not influence gamblers' behaviours. Since high-speed condition gamblers played more games in both our and their study, we believe that it corresponds to a change in behaviour. Therefore, slowing down the speed of play did have an effect on players' behaviour. It also improved players' perception of the number of games played.

Despite the fact that gamblers played more games in the high-speed condition, these results suggest that a slow speed does not induce gamblers to play longer sessions. This interpretation differs from that of Blaszczynski et al. (2001), who concluded that a faster speed could lead gamblers to spend less time playing and therefore suffer less harm. Our results suggest that speed might not be related to time played. Blaszczynski et al.'s (2001) expected relationship between speed and time played should be further investigated.

In addition to having no effect on time played, speed did not have any impact on concentration, loss of control, motivation, or perception of time. How can we explain the non significant impact of speed on these variables? Firstly, focused attention and concentration due to the high number of games played in a short time span could have been expected to

provide gamblers with an escape from reality (see Diskin & Hodgins, 1999). Concentrated attention was possibly also present in the low-speed group. The measure of concentration was a telephone ring. This might have been a measure for which concentration would have to be very strong for players not to hear the ring. Since the sample was composed of occasional players, some players in both groups might not have concentrated on the game due to their low interest in gambling activity, or the noise produced by the phone ring, or both.

Secondly, speed had no effect on loss of control over time or money. However, few players had set limits: 28% of participants set time limits and 37% set money limits. The Nova Scotia Gaming Corporation (2004) also reported that only a small percentage of VLT gamblers set time limits (13%) and that only 2% of players ever cashed out when the time limit was reached. They also reported that players set a budget before starting to play in only 24% of the times played. Since our participants were occasional gamblers, it may have been easier to respect limits, regardless of the speed of the game. The effect of speed on loss of control should be further investigated with larger samples of regular gamblers, playing games they enjoy, or problem gamblers that might represent a sample of gamblers more susceptible to being influenced by the effect of slower speed.

Thirdly, the estimated number of minutes played was probably close to reality because the time played was not that long: an average of only 30 minutes in both groups. Consequently, it might have been easy to estimate the time played in both conditions.

This study has limitations that should be taken into account in the interpretation of the results. The study was conducted in a laboratory setting with a small sample of non-problem gamblers. Also, the setting did not allow players to drink alcohol.

In conclusion, playing more games or taking more risks and underestimating the number of games played do not necessarily lead to more negative consequences (more time played, loss of control). Although the reduction of speed may help players to take fewer risks, the overall conclusion is that slowing speed down to 15 seconds per game has a limited effect on gamblers. It did not help occasional gamblers to increase control, to respect their money or time limits, or to suffer less harm due to gambling activity. Since responsible gambling policies should promote initiatives that will reduce or eliminate the potential harm associated with gambling (Blaszczynski et al., 2004), slowing down the speed of play does not appear to be a critical feature that should be targeted in prevention strategies. However, the impact of the participants' familiarity with either speed was not measured. Therefore, behaviours observed in this study might prove different in a context where players would, for example, become more familiar with a slower speed. Also, our results do not generalize to other speeds, either faster or slower. If additional research were to find a speed effect on gamblers' behaviours, while controlling for players' familiarity with every speed evaluated, then it could not be ignored that speed could ultimately be regarded as a potential variable that would promote the responsible gambling policies put forth by the Reno Model (Blaszczynski et al., 2004). The critical questions are as follows: To what extent, and for what type of gamblers, is speed a variable? Which level of speed will harm gamblers or help them control their gambling activities? Very little is known about the impact of speed on problem or at-risk gamblers. Further research on regular gamblers should explore these issues. Since gambling-related harm must stem from the time spent gambling or the money lost on gambling or, in most cases, both, then time and money gambled per session should be investigated in natural settings. At present, it is concluded that speed is not a significant

variable to promote harm minimization. Targeting individual factors such as fixing money limits or developing cognitive strategies to stay in control of one's gambling habits might be more appropriate measures for the prevention of excessive gambling habits.

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theoretical discussion paper

Between consumption and investment: A new approach to the study of the motivation to gamble

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Abstract

The purpose of this exploratory research is to present some insight into the general money management strategies of casino gamblers playing table games. This paper introduces a new method of analysis that relies entirely on observations collected in real casinos. Research into money management strategies could tell us a lot about the players' motivation to gamble. Quantitative empirical data support the view that both the hedonic (i.e., need for arousal) and investment (i.e., desire to win money) dimensions of gambling are important for most gamblers. The results also revealed several puzzling issues regarding the investment dimension, e.g., the notion that moderate desire to win money may constitute an aspect of responsible gambling behavior. **Key words**: casino gambling, consumer behavior, money management, self-control

Technical introduction

Even though slot machines constitute the most popular form of gambling, casino table games are still very popular, especially in smaller European casinos. Table games are in many ways more useful for gambling researchers than slot machines. The statistical profile of table games is standardized and well known, while a particular slot machine constitutes more or less a "black box." Additionally, the players' behavior at the table may be easily recorded by hand (using either paper and pencil or a PDA), since the game is slower and the table layout is more visible than the screen of a slot machine.

In typical casinos, cash wagers are not permitted. Players may only play with chips, so they must buy in, i.e., exchange cash for chips. Money may be exchanged for chips at a cashier's desk or directly at the table. The total amount of money exchanged for chips is called the *drop* in casino terminology. The casino's net win from the games is called the *win*. The table game *hold* represents the percentage of the *drop* that is won back by the casino:

$$\text{hold} = \frac{\text{win}}{\text{drop}}$$

Depending on the game, a typical monthly hold falls between 15% and 25%. Since the *house edge* (i.e., statistical advantage) of casino games is much smaller, this value of the hold indicates that the total amount of cash wagered must be several times the total amount of money exchanged for chips. For example, the house advantage in single-zero roulette is about 2.7%; if the roulette hold is equal to 20%, each $1,000 exchanged for chips generates an average turnover of about $7,400 (see Kilby and Fox, 1997, chap. 13, for a detailed

discussion)

Casino managers use the terms *drop*, *win*, and *hold* to refer to aggregated financial variables from the casino viewpoint. But we may also speak of an individual player's drop or hold. If Mr. X exchanges $500 for chips during his visit and before leaving cashes chips totaling $350, his drop is equal to $500 and the casino hold for Mr. X's visit is equal to 30% ($150/ $500). The term *win* is confusing in this case, because it refers to the casino win (or the player's loss). For the purpose of further analysis, the term *player's daily hold* or PHOLD is defined as

PHOLD = 100% – hold.

PHOLD = 0% indicates ruin (the player has lost all of his or her chips), PHOLD = 100% indicates a tie (at the end of the visit the player's final capital is equal to his or her initial capital), and, finally, PHOLD > 100% indicates that the player earned some money during this particular day in the casino. It will be argued later in this paper that daily PHOLD may constitute a very interesting variable in psychological insights into gambling behavior.

Objectives

This study is a byproduct of a larger research project aimed at building the model of casino gambling in the paradigm of contemporary decision sciences. The question of whether the gamblers are playing for money or for fun constitutes one of the most important general problems in gambling research. This paper is a preliminary attempt to address the following issue:

- **Can consumption and other motives of gambling behavior be analytically separated and quantitatively analyzed?**

Method

Quantitative field studies of casino gambling are extremely rare, and the most extensive research project was carried out in the 1980s by Dutch psychologist Willem Wagenaar and reported in the seminal book *Paradoxes of Gambling Behaviour* (1988). Since then, there has not been much progress in this type of research.

The author of this paper cooperated very closely with two gaming operators owning more than half the casinos and slot-machine venues in Poland. Casino operators granted the author convenient access to the casino floor and even limited access to casino surveillance. Polish casinos are small and rely mostly on table games—roulette, blackjack, and poker. Polish gaming law imposes very strict requirements regarding the registration of entries to the casino and the recording of the games. This allows the researcher (at least theoretically) to access a wide variety of very interesting data concerning gambling behavior.

The purpose of this paper is to analyze gambling behavior on a very general level. A particular visit to the casino may be described by a set of several financial variables, with drop and PHOLD being the most important ones. Let us analyze the following theoretical profile of a gambler: Ms. Y, a blackjack player, comes to the casino with $100 designated for the game. She plays slightly better than the typical blackjack player, so the house edge for

her is equal to 2.0%. She starts playing blackjack, consistently wagering $10 on one box. Ms. Y is a *pure consumer* of gambling—playing is fun for her, and she is prepared to pay a reasonable price. She quits the game either when she loses all of her chips or after an hour of play—whichever comes first. During an hour she usually plays about 120 blackjack deals (slightly more than 120 blackjack hands because of occasional splitting). Her general money management strategy may be described by the following algorithm:

Step 1: Exchange $100 for chips.
Step 2: Start blackjack game (bet on one box).
Step 3: Make $10 bet.
Step 4: If (not ruined) and (played less than 120 deals), then go to Step 3.
Step 5: Quit the game.

The average PHOLD for this strategy is 82.8%, which translates to an average loss during the visit equal to $18.20. Ms. Y has a 47% probability of ruin before playing 120 deals. Additionally, 37% of her visits will end with a tie or a net win. Overall, for a very large sample of visits, Ms. Y's PHOLD values will have approximately a ruin-adjusted binomial distribution.

Now suppose that Ms. Y believes (incorrectly) that blackjack is a good way to earn some money and that a wise gambler just has to quit the game at the appropriate moment. So Ms. Y is now a *pure investor*. She will stop the game immediately if the total value of her chips reaches $150; otherwise, she will continue to play until she loses all of her chips. This will modify the algorithm in the following way:

Step 4: If (not ruined) and (have less than $150 in chips), then go to Step 3.

For this strategy, the average PHOLD is 90.9% (average loss of $9.10) and the probability of ruin is now 41%, but the duration of the game is usually much shorter. The large sample of PHOLD values will have antimodal distribution, with values concentrated around either 0% or 150%. Thus, different money management strategies result in radically different distributions of PHOLD.

The analysis procedure outlined above may be easily reversed. If we know the distribution of PHOLD, we may infer the player's motivation to gamble. The only problem is how to obtain these data. It is unlikely that survey research could provide the scientist with reliable information regarding the distribution of a player's wins and losses (because of, for example, frequent overreporting of wins; see Jamieson, Mushquash, & Mazmanian, 2003). These data may be obtained partially through observation and partially from casino databases. With the help of the casino operator, the author was able to collect a small sample of players' results. It should be stressed that processing such information creates very serious ethical, legal, and pragmatic challenges. Assuring anonymity and confidentiality is crucial in such a study. Players' names may be erased and replaced with aliases (e.g., a unique number), but this is still not enough, as some financial data are problematic even without an assignment to a specific person (e.g., high rollers may be identified not only by their names but also by the magnitude and the unique values of their wins or losses). The transfer of data from the casino to the author's database involved a complex multistage procedure. For example, players' aliases and financial records were transferred separately and then matched with each other in an encrypted database. Since gamblers are aware that their behavior is recorded in the casino (this is required by gaming law), in my opinion processing such data

can be defended on ethical grounds, but this problem is of course open to discussion.

Data

Since Polish casinos are small, the number of frequent visitors is very limited. In addition, the whole procedure of data collection and transfer is time consuming. This study was based on observations from a 6-month period. Twenty players visited a small casino more than 26 times (i.e., more than once a week on average)—their numbers of visits ranged from 28 to 107. Additionally, the data for several less frequent players were also available. The term *player* does not always refer to a single individual, as sometimes the drop is assigned to one person, while in fact two people play the game (e.g., a married couple). Players from the sample represent a wide variety of gamblers: starting from recreational visitors whose daily drop is usually less than 300 zlotys (approx. $75 U.S.) and ending with serious high rollers whose daily drop often exceeds 40,000 zlotys (approx. $10,000 U.S.). They usually play American roulette (single-zero version), but also blackjack and so-called Las Vegas poker (a slightly modified Caribbean stud). Because of the high variance of players' results, 30 or even 100 visits are not enough to adequately compare the distribution of PHOLD with any predicted distribution (e.g., binomial). Instead, the research should focus on the distribution of the most salient points of PHOLD, namely ruins and wins, and on the total casino hold for each player.

As explained in the "Method" section, it is problematic to publish the nominal (i.e., in Polish currency) values or drop. For the purposes of this research, it is enough to present the standardized daily drop for each player, i.e., the value of the drop divided by that player's average drop. Thus, e.g., the value 2.5 indicates that during that visit the player's drop was 2.5 times greater than the player's average drop (e.g., 2,500 zloty if his or her average drop is equal to 1,000 zlotys). The standard deviation of the drop also refers to the standardized drop.

Readers should be aware that real casino data are quite difficult to analyze because of several factors. While generally these records are reliable (i.e., there are not many errors, omissions, etc.), some statistics may be biased by several events. First, the casino records include severe outliers, e.g., very large wins. This could sometimes lead to an unusually good player's result, even for frequent visitors. Some fraction of habitual gamblers may be ahead even after a year of gambling. Second, sometimes a large drop is artificially generated by cashing out wins and then buying in during the same visit—this is called a *false drop*. Third, sometimes chips are transferred from one player to another, which may seriously bias PHOLD. For example, some loan sharks lend money in the form of chips instead of cash. These problems do not render the data useless; they only imply some modesty in quantitative inferences. Fortunately, a detailed analysis of records and a good knowledge of the environment (players' behavior, casino operation) can help to handle most of these issues.

The issue of financial gains and losses requires one important addition. In Poland, casino wins are tax exempt. Players who have won in a casino may receive (on demand) a *certificate of win*. The control of certificates by tax authorities is imperfect, as tax inspectors concentrate on particular wins and not on a player's balance during his or her gambling history. As a result, casino gambling may help some people to legalize their gray-market income or simply to launder money. Thus, there are gamblers who lose money in casinos

but simultaneously receive special benefits as a byproduct of their gambling.

Results

The basic quantitative analysis of players' records revealed several puzzling observations:

1. Drop variability
The first striking observation was the high variance of the drop featured by virtually all players. In the subsample of 20 frequent players (more than 26 visits), the player's maximum drop was at least 8 times greater than his or her minimum drop and for some players it was 100 times greater. The standard deviation of the drop varied from 0.61 to 1.41. There are several possible explanations for this observation. First, the high variance of the drop may simply reflect flows in the gambler's disposable income or free time. For example, the same player will generate a smaller drop during a short visit on a weekday than during a long visit on a Saturday night. The second explanation is based on a player's strategy—a gambler may want to exchange only a small fraction of his or her money in the hope of initial wins, but, after a loss, he or she will buy in again, and so on. False drop (see the "Data" section above) may also affect drop variability. Finally, the high variability of the drop may be a result of chasing behavior. The next paragraphs will present a method of resolving this problem.

2. Large differences in total hold
The casino hold differed significantly for frequent players, ranging from as high as 55% to as low as a negative hold of –12%. Random noise is definitely not the only reason for this variability. The hold for many high rollers is usually lower than the hold for recreational players. The turnover of their drop is smaller, and some controversial situations (e.g., placing late roulette bets) are typically resolved in their favor—this lowers the effective house edge against a high roller. The choice of games and strategies (see the discussion of the consumption and investment strategies in the "Method" section) may also strongly affect the expected hold.

3. Large differences in the frequency of wins
For the purposes of this analysis, a daily PHOLD greater than or equal to 100% will be considered a win (exact ties are treated as wins because the player gets the enjoyment for free). Values of PHOLD less than or equal to 10% will be considered a ruin. (The 10% range was employed to incorporate the behavior of players who do not wager their last few chips.) The differences in the frequency of wins are even more pronounced than the differences in hold. The percentage of wins in the subsample of frequent players varied from 21% to 74%. The frequency of ruins ranged from 8% to 61%. Assuming a player's strategy is consistent over visits, the number of visits ending with a win should follow a binomial distribution. For 60 visits of a particular player, the large three standard deviations confidence interval is not greater than 40% (e.g., win frequency ranging from 30% to 70%). Again, there should be something more than random noise to explain the observed differences in the frequency of wins.

Players' statistics revealed that the pure investment model—the gambler is motivated solely by the desire to win money—is implausible. In fact, only one infrequent player meets the criteria for this model; his visits ended with either a substantial gain or total ruin. The series of PHOLD and drop for this pure investor is presented in Table 1. Note that this strategy is in fact financially disastrous, ending with a casino hold of over 40% for this player.

Table 1
A series of standardized drop and PHOLD for a gambler who behaves like a pure investor wanting to win money in casino

Visit	Drop (average drop = 1)	PHOLD
1	0.3	600%
2	1.0	0%
3	0.5	556%
4	1.0	0%
5	1.0	0%
6	0.7	0%
7	1.6	200%
8	1.0	0%
9	1.0	0%
10	1.0	0%
11	1.3	0%
12	0.5	0%
13	2.0	0%

For the vast majority of players, both the hedonic (i.e., pleasurable experience) and the investment (i.e., desire to win money) dimensions of gambling are important. However, there are strong individual differences. Table 2 presents the data for four players labeled *High Roller*, *Investor*, *Social Gambler*, and *Consumer*. The labels *High Roller* and *Consumer* speak for themselves. The investor is a medium player (i.e., placing medium-sized bets) who definitely wants to win some money but also enjoys the atmosphere of the casino—so he or she often takes a break between bets, walks to the bar, etc. Additionally, he or she usually takes certificates on winning. The social gambler is a recreational player who is probably not very rich but likes to play and very much enjoys staying in the casino. However, this type of gambler knows of his or her limited resources and does not play heavily. The last two statistics in Table 2 are very important and require some explanation. The average drop is conditioned on whether the visits ended with a win (PHOLD greater than or equal to 100%) or a loss (PHOLD less than 100%) or, simply speaking, the average drop for the subsample of visits ending with a gain or tie (for convenience, this will be labeled WIN_ADROP) and the average drop for the remaining visits (LOS_ADROP) are considered. In a simple consumption model that assumes single buy-in and playing for fun, the values of WIN_ADROP and LOS_ADROP should be equal, regardless of drop variability. However, a compulsive gambler who always attempts to chase losses will report LOS_ADROP substantially greater than WIN_ADROP. However, this difference may also be caused by a cautious strategy in which the gambler simply does not want to exchange all of his or her money at once. Finally, players who frequently generate false drops may report WIN_ADROP greater than LOS_ADROP.

Table 2
Statistics for four distinct players showing large differences in money management strategies

Statistics (drop is standardized)	Player			
	High roller	Investor	*Social gambler*	Consumer
Visits	63	54	107	57
Casino hold	10%	(7%)	28%	32%
Frequency of wins	67%	65%	38%	21%
Frequency of ruins	14%	17%	49%	60%
SD drop	0.86	0.94	0.69[a]	0.79
Av. drop/wins	0.63	0.64	0.75	1.01
Av. drop/losses	1.74[b]	1.66[b]	1.15[b]	1.00

Note. Parentheses denote negative hold.

[a]The SD drop of the social gambler is significantly lower than the SD drop of the high roller and the investor ($p < .05$). Other comparisons of the SD drop are n.s.

[b]For the high roller, the investor, and the social gambler, Av. drop/losses is significantly greater than Av. drop/wins ($p < .001$).

Of course, there exists a continuum of players between pure investors and pure consumers. Other players' records are similar to those of the four players presented in Table 2, although some of them are biased by outliers (single very large wins or very large drops). The casino hold for the high roller is low because of his or her large drop. The high roller buys in frequently, but this is a result not of chasing but of strategy—this gambler makes very large bets, and exchanging a lot of cash at once is inconvenient. The investor also buys in frequently, but his or her betting pattern generally implies low hold, probably below 10% (in this sample of visits this gambler is even ahead). Of course, the statistics from Table 2 will not demonstrate all differences in money management. In this sample, the investor's statistics are very similar to those of the high roller. However, the high roller's bets are more than 10 times bigger, and he or she plays continuously—thus, the expected hold is greater. For both the high roller and the investor, LOS_ADROP is almost three times higher than WIN_ADROP. The hold for these gamblers is low and the frequency of wins is high, so it is implausible to attribute the high LOS_ADROP to chasing behavior. The detailed analysis of their money management strategies is beyond the scope of this paper, but it should be noted that their high frequency of wins is a result of a strategy that leads to many small wins and occasional large losses. However, this is not a Martingale betting pattern; i.e., it is not one that doubles the bet after each loss.

The consumer's data feature high hold, high probability of ruin, and almost identical values of WIN_ADROP and LOS_ADROP. This indicates heavy—but still controlled—hedonic gambling, as there is no evidence of chasing during the visit. The social gambler falls somewhere in between—he or she maintains spending at a reasonable level, but is not an investor. It seems that problem gambling resulting in loss of control should feature high casino hold, high value of LOS_ADROP, and probably high frequency of ruins. However, it may be difficult to distinguish problematic chasers from some heavy consumers.

Another important observation is the presence of so-called anchors in a player's PHOLD. Anchors are special values that are probably used as stopping signals. If a player's PHOLD

value reaches an anchor, the player may be encouraged to quit the game. Anchors are important, since they provide the player with a reason to stop the game before being ruined. People desperately need *some* reasons for their actions, even if they are implausible and artificially created (cf., Shafir, Simonson, & Tversky, 1993). Table 3 presents the distribution of PHOLD for two players: *Tie Lover* and *High Investor*. The first player has an unusually high number of visits ending with an exact tie; the second player never ended the game and had a PHOLD in the 100% to 250% range. In addition to *relative* anchors (e.g., PHOLD = 100%), players also utilize *nominal* anchors, namely, round numbers. Sometimes a player stops the game if his or her capital reaches a certain round value, e.g., 5,000 zlotys, regardless of the drop.

Table 3
Distribution of PHOLD for two players with clearly visible anchors

PHOLD range	Number of visits	
	Tie lover	High investor
PHOLD £ 10%	25	28
10% < PHOLD < 100%	8	5
PHOLD = 100%	22	1
100% £ PHOLD < 150%	3	—
150% £ PHOLD < 200%	5	—
200% £ PHOLD < 250%	5	—
PHOLD ³ 250%	8	15

The results of this study also revealed an interesting difference between table games and slot machine gambling. For the majority of casino players, visits ending with a win corresponded to a substantially smaller drop than visits ending with a loss. This is exactly opposite to the result obtained by Schellinck and Schrans (2002) in their study of Canadian VLT players. Schellinck and Schrans found out that players tend to switch from one machine to another to reinvest their wins. This is equivalent to false drop in casino table games. Additionally, the average real (i.e., excluding the false drop) hold for VLT players was equal to about 50%, a value much greater than the typical table game hold.

The strategy that results in a high frequency of wins may be psychologically very attractive, as wins are probably more salient in a player's memory than the exact financial balance. Thus, this strategy may lead to a positive evaluation of the gambling experience, despite the incurred financial loss. However, the cognitive distortion caused by a high frequency of wins should not always be treated as pathology. Many socially desirable activities inevitably incorporate serious cognitive biases, e.g., the voter's illusion in voting (Quattrone & Tversky, 1986) or overconfidence in entrepreneurship (Camerer & Lovallo, 2000). If cognitive bias makes people happy and does not result in dangerous or antisocial behavior, it should not be regarded as undesirable.

Conclusions

One may argue that the presented statistics are unimportant artifacts that reflect issues of secondary importance, such as a preference for multiple small buy-ins. All in all, is it all about the money lost, and not the percentages and conditioned drop? In my opinion, these statistics matter, for several reasons. Nominal loss is meaningless if it is not compared to

disposable income. For certain players, losing $50 a day is seriously damaging, while for others spending $1,000 a day in a casino is an insignificant loss. A reasonably low hold indicates that the gambler does not spend much of his or her disposable income on gambling. Frequent buy-ins that lead to high LOS_ADROP look like chasing, but they may constitute—paradoxically—evidence of a self-control strategy, especially if combined with a high frequency of wins and a low hold. My observations from the casino floor indicate that experienced casino gamblers are aware of their limited control, especially the tendency to escalate the size of a bet. They employ several strategies to cope with this problem; e.g., they want larger payoff to be structured, i.e., to contain some high-value chips. These high-value chips are then moved out of sight (e.g., kept in a pocket) in order not to tempt the gambler. The investor presented in Table 2 does not bet on every roulette spin, but spends much time walking on the casino floor, visiting the bar between bets, etc. The strategy to target the PHOLD of 150% described in the "Method" section, while irrational from a statistical viewpoint, leads to a low hold of about 9%. However, if the *target PHOLD* were set to, for example, 250%, and the betting pattern remained the same, the hold would rise to 23%. Thus, gambling in the hope of a win is not particularly dangerous; gambling in the hope of a big win is the real problem. It seems that real problem gambling must incorporate both a desire to win money and a preference for heavy continuous play. But a moderate desire to win some money combined with a preference for slower play may constitute, surprisingly, the least costly way to enjoy gambling, even less than the hedonic consumption of gambling.

There is also another problematic conclusion resulting from this analysis. Recently, Dickerson (2003) proposed a consumer protection model based on "removing the point of sale from the gambling session." However, this strategy may force a greater single buy-in instead of several smaller buy-ins for players who use frequent buy-ins as a self-monitoring strategy. Thus, the model originally developed to protect players may in fact result in greater losses for a certain class of gamblers. The use of precommitment devices is a complex issue (Elster, 2000), and actions that impair control of certain people may be self-control devices in others.

The author acknowledges that this study is only preliminary. The proposed method is pioneering in behavioral gambling research and faces severe pragmatic, ethical, and methodological difficulties. Because of these problems, only a modest amount of (sometimes transformed) quantitative data was presented in this paper. As a result, this paper poses several important questions rather than confirming well-specified hypotheses. The real casino data feature strong random noise and many measurement problems. However, actions speak louder than words, and gambling studies should not rely solely on survey-based research and laboratory experiments.

It also seems that a close examination of the gambling environment is crucial for the gambling researcher. The example of certificates of win in Polish casinos revealed that even knowledge of the performance of tax authorities is important for the behavioral study of gambling. Turner and Fritz (2001) acknowledged the importance of knowledge about casino games, but simultaneously they stated that "casinos don't like people researching on their property." In the author's opinion, this may be caused by the fact that too much attention is paid to the study of problem gambling and too little to the study of gambling behavior in general. Unfortunately, the overemphasis on pathology and the neglect of positive experience are very common in psychological research. Additionally, the problem of cooperation between researchers and the gaming industry resembles the old joke about a man who constantly complained to God about never winning the lottery, and finally God

answered: "Give me a chance. Buy a ticket!"

References

For references, please see "A response to comments" by Bartlomiej Dzik.

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Competing interests: None declared.

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Bartlomiej Dzik, MA, is an economist and PhD candidate in psychology at the Polish Academy of Sciences. His research focuses on issues in individual decision-making, especially problems of self-control and the analysis of gambling behavior in the rational-choice framework. In addition to his current scientific work, he has several years of experience in the Polish civil service as an economic analyst.

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[Editor's note: This correspondent conveniently placed his views after the text on which he wished to comment. We have edited his response for easier reading: (1) by adding "Comment:" and indenting his response, and (2) by deleting the portions on which he did not comment.]

Comments on "Between consumption and investment..."

In typical casinos, cash wagers are not permitted. Players may only play with chips, so they must buy in, i.e., exchange cash for chips. Money may be exchanged for chips at a cashier's desk or directly at the table. The total amount of money exchanged for chips is called the *drop* in casino terminology.

> **Comment**: Drop may or may not be gambled, or risked against the casino. Drop is not, therefore, equivalent to the amount gambled. The amount gambled is called the "handle." In casino table games the handle is typically a much larger number than the drop and may be derived from the expression
>
> Handle = win/(expected value or house advantage).
>
> For example, in double-zero roulette, the house advantage is 5.26%. A $100 win therefore implies a handle, or amount wagered, of 100/0.0526 = $1,901. There is no necessary arithmetic relation between drop, handle, and win, since the percentage of drop that is actually gambled is unknown. Win or gross gaming revenue is equivalent to sales in the income statement of, say, "General Widget": it represents the operator's gross revenue from gaming, from which are deducted taxes, including gaming privilege tax; operating costs; interest expense; depreciation; amortization; and other charges against income. The residue, if any, is profit. From the consumer's point of view, win or gross gaming revenue, not drop or handle, is consumption (consumer spending on gaming).

Depending on the game, a typical monthly hold falls between 15% and 25%. Since the *house edge* (i.e., statistical advantage) of casino games is much smaller, this value of the hold indicates that the total amount of cash wagered must be several times the total amount of money exchanged for chips. For example, the house advantage in single-zero roulette is about 2.7%; if the roulette hold is equal to 20%, each $1,000 exchanged for chips generates an average turnover of about $7,400 (see Kilby & Fox, 1997, chap. 13, for a detailed discussion).

> **Comment**: This is inaccurate but an all too common error. See above. Also, in the US the usual accounting term is “handle,” not “turnover,” which is British usage.

Casino managers use the terms *drop*, *win*, and *hold* to refer to aggregated financial variables from the casino viewpoint. But we may also speak of an individual player's drop or hold. If Mr. X exchanges $500 for chips during his visit and before leaving cashes chips totaling

$350, his drop is equal to $500 and the casino hold for Mr. X's visit is equal to 30% ($150/ $500).

> **Comment**: This also is inaccurate; see above. The author is falling into a common error at the pit boss level of casino management. If a player exchanges $500 for chips and leaves the casino with $350 in cash exchanged for chips, the following has occurred: the casino revenue accounting department recorded a $500 drop and a $150 win. This player spent (lost) $150. Casinos are unconcerned with individual player wins and losses except in the important sense of qualifying the player for comps. The business mission of any casino table game operation is to ensure that the tables are tried enough times to reach statistical average or expected value. If the casino succeeds in this, it will win, over time, the expected value of each game (for example, 5.26% of the handle at roulette, which the casino does not record unless it has installed one of the new computer-controlled tables; drop is a substitute number that functions in table/cage accounting relationships to control table gaming). Whether player X wins or loses is immaterial.

The term *win* is confusing in this case, because it refers to the casino win (or the player's loss). For the purpose of further analysis, the term *player's daily hold* or PHOLD is defined as

PHOLD = 100% – hold.

> **Comment**: Player daily hold cannot be meaningfully related to casino or regulatory agency revenue accounting and hence to the numbers generally used to describe gambling industries. While I understand the measure that the author is trying to develop, it already exists, in very much more detail, in (highly proprietary) casino player databases and customer relationship management (CRM) programs. Harrah's has by far the world's most extensive and advanced database of this kind: it would of course not make these data available to outsiders and conducts analyses of this kind internally as a routine matter, but might be amenable to an approach from qualified academics for some sort of independent blind study intended to identify factors influencing gambling behavior.
>
> A possibly useful concept here is "player bankroll," meaning the wealth the player is prepared to risk against the casino. The player may or may not exchange all of his or her bankroll for chips, either because the casino allows him or her to play cash or play on credit (markers), or because he or she is not inclined to do so. Gambler's ruin occurs when the player bankroll is exhausted. The size of the bankroll makes no difference to player outcomes except in the sense that the player cannot be assured of reaching statistical average at a given game unless he or she tries the table or device enough times. This may take days or weeks at some games. As a practical matter, few players gamble long enough at a table game for the results to reach statistical value (the "odds" or expected value of the table game). Most players stop before this point is reached, with results that are above (they win) or below (they lose) statistical average. The casino, however, will see the expected value of its tables provided they are tried enough times to reach statistical average. Again, as a practical matter, in heavily trafficked casinos this will typically be true for all table games in an accounting period (say,

a month or quarter) with two exceptions: very high stakes baccarat, where the shoe of cards may not be tried enough times to reach statistical average, with consequent wide swings either for or against the casino (or players), and single-deck blackjack, a game that violates the law of independent trials sufficiently that skilled players have an advantage (that is, the game has a negative expected value). Single-deck blackjack is rarely encountered today.

Quantitative field studies of casino gambling are extremely rare.

Comment: This isn't true. All casinos monitor individual player gambling for the purpose of qualifying players for comps, i.e., rating players. Rating players is the most important aspect of CRM and is at the heart of modern casino operations. Casinos have massive and detailed records of individual player activity.

The average PHOLD for this strategy is 82.8%, which translates to an average loss during the visit equal to $18.20. Ms. Y has a 47% probability of ruin before playing 120 deals. Additionally, 37% of her visits will end with a tie or a net win. Overall, for a very large sample of visits, Ms. Y's PHOLD values will have approximately a ruin-adjusted binomial distribution.

Comment: These are the kinds of data maintained in casino CRM files and they cannot be related to the consumption numbers (gross gaming revenues) in corporate or regulatory agency reporting.

Now suppose that Ms. Y believes incorrectly that blackjack is a good way to earn some money...

Comment: ...unless she is an expert card counter and the shoe is not larger than four decks.

The analysis procedure outlined above may be easily reversed. If we know the distribution of PHOLD, we may infer the player's motivation to gamble. The only problem is how to obtain these data. It is unlikely that survey research could provide the scientist with reliable information regarding the distribution of a player's wins and losses...

Comment: Player database files report these data precisely for tens of millions of players over periods of many years.

Since Polish casinos are small, the number of frequent visitors is very limited. In addition, the whole procedure of data collection and transfer is time consuming. This study was based on observations from a 6-month period.

Comment: In pre-computer days, casinos did try to collect these data through observation. For the past 25 years or so, computer monitoring of machine play has eliminated the need for this in machine operations; currently, computer table game control systems are eliminating the need for the manual collection and filing of individual player activity in table gaming.

1. Large differences in total hold

The casino hold differed significantly for frequent players, ranging from as high as 55% to as

low as a negative hold of –12%. Random noise is definitely not the only reason for this variability.

> **Comment**: As noted, the reason for this variation is that within the observation period the player didn't try the device enough times for the result to equal expected value.

The hold for many high rollers is usually lower than the hold for recreational players.

> **Comment**: The reason for this is that high rollers overwhelmingly make more intelligent choices than low rollers.

For the vast majority of players, both the hedonic (i.e., pleasurable experience) and the investment (i.e., desire to win money) dimensions of gambling are important. However, there are strong individual differences. Table 2 presents the data for four players labeled *High Roller*, *Investor*, *Social Gambler*, and *Consumer*. The labels *High Roller* and *Consumer* speak for themselves. The investor is a medium player (i.e., placing medium-sized bets) who definitely wants to win some money but also enjoys the atmosphere of the casino—so he often takes a break between his bets, walks to the bar, etc. Additionally, he usually takes certificates if he wins. The social gambler is a recreational player who is probably not very rich but likes to play and very much enjoys staying in the casino. However, he knows of his limited resources and does not play heavily. The last two statistics in Table 2 are very important and require some explanation. The average drop is conditioned on whether the visits ended with a win (PHOLD greater than or equal to 100%) or a loss (PHOLD less than 100%) or, simply speaking, the average drop for the subsample of visits ending with a gain or tie (for convenience, this will be labeled WIN_ADROP) and the average drop for the remaining visits (LOS_ADROP) are considered. In a simple consumption model that assumes single buy-in and playing for fun, the values of WIN_ADROP and LOS_ADROP should be equal, regardless of drop variability. However, a compulsive gambler who always attempts to chase losses will report LOS_ADROP substantially greater than WIN_ADROP. However, this difference may also be caused by a cautious strategy in which the gambler simply does not want to exchange all of his or her money at once. Finally, players who frequently generate false drops may report WIN_ADROP greater than LOS_ADROP.

> **Comment**: Here you touch on a fundamental distinction among gambling games: different games are associated with or stimulate different gambling behaviors. Take "heavy gambling," which, no matter how defined, is a common parameter in academic gambling studies. In a game of pure chance utilizing a random device, heavy gambling will lead to loss that if sufficiently protracted will equate exactly with the game's a priori expected value. All possible strategies at double-zero roulette will eventually (if the bankroll is sufficient and the wheel is tried enough times for the result to reach statistical average) result in the loss of 5.26% of the amount wagered (i.e., handle, not drop). Craps, slot machines, roulette, and Big Six all fall into this category. Blackjack does not, because the device employed in blackjack, a deck or shoe of cards, is not random in that successive trials violate the law of independent trials unless the deck or shoe is shuffled after each hand. Heavy gambling at blackjack may indicate that the player is an expert counter and is pursuing a profession. Games of mixed chance and skill, where the element of skill is sufficient to give expert players a positive expectation (i.e., the game has negative expected value for a casino), fall into this category. Poker is

the most prominent current example. Expert poker players have positive expectations; consequently, poker supports professional players. This is why poker is never played against the house; casinos would be funding the incomes of expert poker players. When poker is offered commercially, poker operators use other methods of extracting money from the game. Poker rooms in California charge seat rentals, Nevada casino rooms rake the pot (typically 5% of the pot), and so forth. A related category of game used for commercial gambling comprises games of subjective probability: betting on sports events, horse races, and so forth. Such games create markets similar to the markets for currencies or securities and similarly support professional investors (bettors). Professional bettors at games of mixed chance and skill like poker or sports or horse race betting may devote enormous amounts of time to the activity and generate staggering handles. The Internet created conditions in which professional bettors could greatly expand the scope of their operations: in one case, a trading room, similar to a currency trading room, that employed a substantial number of people and highly sophisticated software capable of analyzing a great number of races (to identify undervalued horses) was established in Pacific Asia by a professional horse race bettor; the operation made its entrepreneur financially independent within a few years, at which point he retired. Parenthetically, all gambling games redistribute wealth among their players (commercial games additionally extract a percentage of the wealth of all players collectively and transfer it to the operator in the form of win or gross gaming revenue). Games of mixed chance and skill and games of subjective probability redistribute wealth from inexpert players ("marks") to expert players.

Table 2
Statistics for four distinct players showing large differences in money management strategies

Statistics (drop is standardized)	Player			
	High roller	Investor	*Social gambler*	Consumer
Visits	63	54	107	57
Casino hold	10%	(7%)	28%	32%
Frequency of wins	67%	65%	38%	21%
Frequency of ruins	14%	17%	49%	60%
SD drop	0.86	0.94	0.69[a]	0.79
Av. drop/wins	0.63	0.64	0.75	1.01
Av. drop/losses	1.74[b]	1.66[b]	1.15[b]	1.00

Note. Parentheses denote negative hold.

[a]The SD drop of the social gambler is significantly lower than the SD drop of the high roller and the investor ($p < .05$). Other comparisons of the SD drop are n.s.

[b]For the high roller, the investor, and the social gambler, Av. drop/losses is significantly greater than Av. drop/wins ($p < .001$).

Comment: In games of mixed chance and skill and games of subjective probability these values may differ, depending on the players observed.

For the majority of casino players, visits ending with a win corresponded to a substantially

smaller drop than visits ending with a loss. This is exactly opposite to the result obtained by Schellinck and Schrans (2002) in their study of Canadian VLT players. Schellinck and Schrans found out that players tend to switch from one machine to another to reinvest their wins.

> **Comment**: This is a common reason for switching machines in markets, such as Nevada, that allow operators to set the consumer price of individual machines: players switch machines endeavoring to find the “loosest” or lowest-priced machine.

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theoretical discussion paper

Comments on "Between consumption and investment..."

This is an interesting manuscript that attempts to differentiate the myriad motives underpinning gambling behaviour using an innovative approach to standard questionnaire measures.

The author acknowledges the unreliability of some of the source data and the methodological limitations imposed by the sample selection procedure and size. He admits that more questions (rather than hypotheses testing) have emerged from his efforts.

However, to give the reader a greater understanding of the nature of the sample selected and its representativeness, more detail is required on the inclusion criteria; for example, what procedure was used to select the 20 players in the sample, and why were these and not others who attended the casino approached? Were they consecutive players entering a specific location on the gaming floor or were they targeted according to some characteristic that they displayed? In addition, it is not clear how the data were actually collected. Were the players using loyalty cards or a similar system that allowed expenditure to be related to individual players, or were data derived from observation or provided by the casino operator? The latter two have some concerns regarding reliability and filtering bias (i.e., operators providing select data from individuals).

The primary objective of the study appears to be an attempt to work backwards from behavioural parameters (consumption expressed as a pattern of gambling—stake, hold, drop, and win) to imputing motivation to explain the behaviour—that is, one type of consumption pattern imputing a desire for money as the motivator (gambling to win) and another imputing fun as the motivator. I must admit to my own incapacity to determine motive from overt behavioural patterns. Judging intent and motive from behaviour is difficult and open to the observer's biases; therefore, a description of the criteria used by the observer would assist the reader in evaluating the validity of such judgements and interpretations. It would have been useful to have interviewed or administered a series of items taping subjective motivation and decision-making processes and coupling this to the behavioural data.

Overall, this is an interesting preliminary attempt at a behavioural analysis of consumption patterns that raises interesting points, stimulating further directions for research.

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theoretical discussion paper

A response to comments

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Alex Blaszczynski pointed out the relevant issue of filtering bias when processing real-world data. The data that I researched may not be a perfectly representative sample of Polish casino gamblers, for each casino in Warsaw is different and each caters to slightly different players. Some casinos target young, yuppie-style gamblers, others are favored by older and richer high rollers, etc. However, the purpose of the study was not to estimate any actual statistical distribution of gamblers, such as "20% of the gamblers are money-oriented investors and 80% are arousal-seeking consumers." Instead, I tried to present the different money management strategies found among players.

Some data filtering may bias the research even in an exploratory study, for certain patterns may be entirely excluded from the sample, and other, exotic patterns may be overreported. However, the only criterion for inclusion in my sample was the number of visits during a 6-month period—no additional filtering was applied. On the technical side, the casino staff recorded financial data with paper and pencil. These reports were not initially available in electronic form—this is why coding was so time-consuming and complicated, for one has to split paper reports into names and numbers, code each separately, and then encrypt them for safety reasons. All in all, my research was based on data provided by the casino operator, but I had the opportunity to see the original data source and to check its integrity. In addition, I spent many nights in that casino, observing players' behaviors—their betting patterns, emotional reactions, and verbalizations during the game.

I do agree with Alex's statement that "judging intent and motive from behaviour is difficult and open to the observer's biases." To reduce the risk of overinterpretation, I chose the most commonly recognized motives to gamble: the desire to win money and arousal. I tied them to simple money management statistics like frequency of wins and *hold* percentage. (Hold is a good approximation of the average length of play.) The criteria used to categorize gamblers were simple: short-duration gambling, which involves lesser losses and high frequency of wins, is attributed to orientation toward winning and long duration, while high-turnover gambling is attributed to orientation toward consumption. This is a bit simplistic, but probably not oversimplified, as I do not claim that these two factors explain 100% of a player's motivation. Socialization, for example, may constitute the third factor, which cannot be measured quantitatively. The investor may socialize by taking breaks between his or her bets, while the consumer may socialize during his or her long stretches sitting at the gaming table.

To make inferences from behavioral patterns is difficult, but I still think it is much more reliable than interviews: even if we eliminate all issues with questionnaire design, like order effects, we will still face the fundamental problem of people being unable to provide reliable reports about their mental processes (Nisbett & Wilson, 1977).

Coupling the data from interviews about subjective motives to the observation of behavior patterns would be infinitely useful. However, I do not expect that motivations inferred from behavioral data would correspond with motives declared in interviews. Self-reports of casino gamblers are useful, but retrospective evaluations of a gambling session should not be taken at face value. There is strong evidence that retrospective evaluations are ruled by a very different mechanism than instant evaluations. For example, Kahneman, Wakker, and Sarin (1997) observed that, under certain well-defined conditions, medical treatment that was more painful in an objective sense (it had similar intensity reported in instant evaluation but longer duration) was retrospectively evaluated as less painful. If a similar mechanism applies to the pleasure from gambling, researchers will face the following dilemma: the player may declare, "Today I gambled too much and I regret it," while, in fact, he or she gambled less than usual. When behavioral measure and retrospective self-report contradict each other, which one should we trust?

Eugene Christiansen's comments are clearly made from the viewpoint of casino management and accounting. They constitute a genuine example of how different people—academic researchers, gamblers, and casino managers—may approach the same thing from an entirely different angle. While my primary position is academic research, I spent quite a lot of time analyzing casino data and discussing problems with casino managers of all levels, including casino directors and CEOs of gaming companies. I also know many gamblers, and even occasionally gamble myself. The perspectives taken by researchers, gamblers, and casino managers are so different that they invariably lead to some misunderstandings. Let me illustrate this with an issue raised by Eugene—the role of *hold*, *handle*, *drop*, and *win* in casino gambling.

Some financial statistics that are irrelevant for a casino may prove extremely important for behavioral research and vice versa. Gross gaming revenue is the ultimate variable for casino managers, but it is irrelevant for my study, since my research is focused on the behavior of individuals. Because of the law of large numbers, for the casino "whether player X wins or loses is immaterial." But again, it is not immaterial for player X! When writing, "From the consumer's point of view, win or gross gaming revenue, not drop or handle, is consumption (consumer spending on gaming)," Eugene attempts to frame the individual consumer's point of view as a mirror image of the casino's point of view, but this is misleading with games of chance. We should not equate consumption of gambling with "spending on gambling"—these are very different concepts. We could metaphorically equate consumption of hamburgers with the $2.99 spent in a burger shop, but to be precise, a statement of the form "$10 billion consumption of hamburgers" is only a synecdoche, a shortcut for "people consumed hamburgers worth $10 billion." One unit of consumption is a hamburger, and $2.99 is the *price*. If gamblers consume anything, they consume bets. Therefore, economic studies that quantitatively estimate the utility of gambling assume handle as a measure of consumption (see, for example, Golec & Tamarkin, 1998; Johnson, O'Brien, & Shin 1999). While handle is a measure of the consumption component, it is not the ultimate measure of the entire gambling experience. There is a linear relation between handle and expected losses. If we reduce gambling to consumption, we must end up with a conclusion that the more a gambler loses the happier he or she is, which is clearly false.

From the casino's viewpoint, *win* stands for gaming revenue. If we assumed that the consumption of gambling is parallel to the consumption of hamburgers, we would equate it with the price. But there is a catch: even if casino games have negative expectations, they also have high variance, and a minority of players report positive balances even after many

visits. Does this mean that they pay a negative price or have negative spending? To make things worse, two gamblers playing the same game for the same time could pay a very different price. Should they accuse the casino of price discrimination? Nonprofessional gamblers neither spend nor earn money in a casino—they simply lose or win.

It may prove useful to introduce the following thought experiment: to compare casinos to insurance companies. Technically, insurance is "gambling in disguise." By buying an insurance contract we accept a wager contingent on the future state of the world. If nothing happens, we will lose. If something bad happens, the insurance company will lose. Just as in a casino, wagers with insurance companies have negative expectations. A casino has its house edge; an insurance company has its claims ratio. It is usually assumed that the premiums constitute the price of an insurance contract. But insurance premiums have more in common with drop or handle than with win (casino win would be analogous to the insurance premiums earned minus claims paid).

From the consumer's point of view, casino statistics hardly translate to microeconomic variables like *price* or *spending*. The reason for this is simple, and it is included in the title of my paper. Gambling cannot be reduced to consumption, for it constitutes a genuine amalgam of consumption and investment. Playing at the roulette table has as much in common with eating hamburgers as with stock market day-trading. Gamblers want to win, but winning is negatively correlated with the amount consumed. Therefore, gamblers do not maximize consumption, they try to *optimize between consumption and investment*. This is one of the most subtle optimizations behavioral scientists have ever studied. The casino industry has found it convenient to equate gambling with consumption, because a consumption or an entertainment perspective would destigmatize gambling. However, this policy eventually backfired with the growing demand for consumer protection for gamblers.

I agree about the usefulness of the concept of *player's bankroll*, for it definitely solves many measurement problems outlined in my paper. Unfortunately, this variable cannot be recorded in casino databases unless we x-ray players' pockets and analyze their credit card statements. My analyses were based on the values of drop, because these data are easily available. Note that for a large sample of observations, players' average bankroll may be estimated, at least roughly, from the drop: not by linear transformation, but by positional statistics such as the ninth decile. Moreover, even if data on players' bankroll were available, drop would still remain an interesting variable. This is because of the framing process in a gambler's mind, the so-called mental accounting (Thaler, 1980; Thaler & Johnson, 1990). For example, the size of the bet is affected not only by a total bankroll but also by the amount of chips available to a player—this applies to any bet, not only a maximum bet.

Many of Eugene's comments refer to the distinctions between games of pure chance and games of mixed chance, and skill and how it affects behavioral patterns. I am aware of the existence of professional gamblers, but my study is focused on casual gamblers who play games with negative expectations. In Polish casinos, single-zero roulette is definitely the most popular game. The players presented in my study play mostly or only roulette, so the skill factor does not really matter. I also analyzed quantitatively the betting decisions of many Polish blackjack players (see Dzik, 2003). There were no card-counters among the regular players; there weren't even any regular gamblers who stuck perfectly to basic strategy. Eugene, if I understood him correctly, would put all of my players into the same basket, because he uses a casino perspective with house edge as the ultimate measure of a player's strategic position. But such a perspective seems to miss the point of my study: I was trying to

show that some evident differences in players' statistics could be attributed neither to random noise nor to the types of games they played. A casino focuses on turnover and percentages; an individual player is interested in excitement and monetary wins or losses—these are very different perspectives. If we limit our focus to handle and house edge, we end up treating gamblers like mindless automatons who are programmed to play a predetermined number of standardized bets. Ironically, most laboratory studies of gambling behavior also suffer from this fallacy. Laboratory experiments usually assume the length of play to be an independent (exogenous) variable. There is, say, a fixed number of 20 trials, and player's decisions are tested during each trial. But such an experimental design prohibits the gambler from making the most important strategic decision: the decision to stop playing!

Do gamblers who play a game of pure chance like roulette make meaningless decisions? Of course not: they choose the duration of the game and the size of their bets and these are meaningful choices. Let me explain this with an example. X and Y are equally well off gamblers, and they both play six-deck blackjack betting $10 per hand. X plays a perfect basic strategy game (house edge = 0.4%), while Y make occasional errors, so the house edge for her is 1.0%. On the other hand, X often gets a strong gambling urge and plays from dusk till dawn, making on average 250 bets per night. Y imposed on herself a strict limit of not playing more than 2 hours and firmly sticks to it; she makes, on average, 60 bets per night. X's average loss is $10 per visit, and Y's is only $6. Eventually, the more skilled player incurs greater losses than his less skilled counterpart. To explain the riddle we might say, "player X is more skilled, but player Y is more responsible." But why not say, "player X is more skilled in basic blackjack strategy, but player Y has better skills in self-control"? There are dozens of more exotic examples to illustrate why, even in games of pure chance, players' strategies are sometimes highly meaningful.

Let us recall the algorithmic approach outlined in my paper. A gambler has a bankroll of $500 and makes a $25 bet in roulette. She plays either to win an additional $1,000 or to lose it all. It can easily be proved that her dilemma whether to bet on a sixline (a bet covering 6 numbers) or on a column (a bet covering 12 numbers) is highly meaningful. For her choice of objectives, sixline betting is a less costly strategy, because bets with higher skewness shorten the average duration of the game, thus reducing the handle.

I have to end with the somewhat heretical conclusion that any gambling game is, in fact, a game of mixed chance and skill. The skill to manage time and money is meaningful, and—unlike the skill of overcoming house edge—it refers to every gambler and every gambling game. While gamblers are bound to lose in roulette, their choice of objectives still has enormous impact on how much they lose. I hope everyone agrees that this does matter!

Finally, I will refer to Eugene's comments about casino internal analyses and customer relationship management (CRM) files. When I wrote about the lack of field studies of real gambling, I meant, of course, as published academic papers. Technically, casino CRM systems estimate a player's value in much the same way investors calculate the net present value of a capital investment. I tried to find the motives behind players' decisions; this is a much broader approach. Access to casino CRM files may prove highly useful to academic researchers and it would benefit both sides. An academic approach may enrich the scope of routine casino analyses; for example, it may help to develop tools for the early detection of problem gambling. Both sides must realize, however, that such studies may result in paradigm-breaking conclusions. They may put the entire gaming industry into a new (not necessarily unfavorable) perspective and redefine the framework of problem gambling

research.

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annotated gambling bibliographies

The prevention of pathological gambling: An annotated bibliography

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The preparation of this annotated bibliography was guided by a desire to include all of the problem gambling research articles related to *prevention* that have been published in English. Some exceptions were made for articles published in other languages but for which an English abstract was available that provided sufficient details about the study. All studies were included, regardless of their methodological quality. In some cases, studies utilizing the same treated sample but providing additional results of the study were included.

The annotations are brief and simply provide the reader with the full bibliographic reference, the basic approach that is evaluated in the study, and, when available, information about the results. No effort was made to critically appraise or review the study.

Since the problem gambling research field is a growing area of inquiry, this bibliography will become quickly outdated and will require regular update to remain current.

Prevention is a complex topic that must take into consideration the causes of the problems. As such we not only report papers evaluating prevention programs but also discuss papers that explore the causes of pathological gambling.

These papers on prevention are divided into four categories:

- risk factors,
- programs,
- evaluations of programs, and
- conceptual issues and general information.

Each paper was placed into the category that it best suited.

1. Risk factors

Alberta Alcohol and Drug Abuse Commission. (2002). *Patterns of exposure to risk and protection for substance and gambling use and abuse: Alberta Youth Experience Survey 2002.* Edmonton, AB: Author.

> The Alberta Youth Experience Survey of 2002 provides information on substance and gambling use and abuse among adolescents. The main focus was on risk and protective factors. Three types of prevention programs are discussed: (1) universal—promotes overall health and the prevention or delay of the onset of

risky behaviours among youth; (2) indicated—promotes efforts to reduce behaviours among youth who have begun to gamble; and (3) targeted—promotes efforts directed at those who are at greater risk. The report notes that a greater number of people at low risk may, overall, generate more harm than a smaller number at greater risk. Hence, prevention often focuses on those at lower risk. Along a continuum, the report provides five categories of risk intensity. Based on a questionnaire, 53.7% fell into the lowest-risk category, 36.2% fell into the middle-risk category, and 3.9% fell into the highest-risk category.

Allcock, C., Blaszczynski, A., Dickerson, M., Earl, K., Haw, J., Ladouceur, R., et al. (2002). *Current issues related to identifying the problem gambler in the gambling venue.* Melbourne, Australia: Australian Gaming Council. Available at http://www.austgamingcouncil.org.au/research/files/Current%20Issues%20Related%20to%20Identifying%20the%20Problem%20Gambler%20in%20the%20Gaming%20Venue.pdf

This report contains several discussion papers by leaders in the field. Clear, definite behavioural indicators of harmful gambling can be elusive, so a flexible approach to identification is best. Staff should not diagnose problem gamblers. The most obvious indicator of problem gambling is a patron asking for some form of assistance, such as self-exclusion. Possible indicators include frequent trips to ATMs, especially just before or after midnight when a new accounting day begins; requests to borrow money from staff; disorderly behaviour; inquiries from family members; and long playing sessions.

Barnes, G., Welte, J., Hoffman, J., & Dintcheff, B. (1999). Gambling and alcohol use among youth: Influences of demographic, socialization, and individual factors. *Addictive Behaviors, 24,* 749–767.

Two studies assessed common predictors of alcohol use and gambling among youth in the Buffalo, New York, area with respect to four criteria: (1) sociodemographic, (2) psychological, (3) parental and peer socialization, and (4) other problem behaviours. The authors found that "multivariate analyses of variance revealed that impulsivity, moral disengagement, and delinquency (adolescent or peer delinquency) predicted alcohol consumption and gambling in both studies, even after controlling for demographic factors. Parental monitoring, cigarette use, and illicit drug use predicted alcohol consumption in both studies, but did not predict gambling once the demographic and individual factors were taken into account." Like other studies, this one found higher rates of gambling among males. The authors argue that preventative efforts must go beyond prevalence and associations between variables; they need to explore causal factors, or "predictors," such as impulsivity and moral disengagement.

Bourget, D., Ward, H., & Gagne, P. (2003, December). Characteristics of 75 gambling-related suicides in Quebec. *Psychiatry and the Law (CPA Bulletin),* 17–21.

This study was conducted to describe psychiatric, social, and demographic characteristics of problem gamblers who committed suicide. Seventy-five cases were examined. Over half were married, and one quarter (25.3%) had attempted

suicide in the past. Sixty-four percent had given no warning of suicidal intentions. One quarter were intoxicated with alcohol when committing suicide, and one third had histories of substance abuse. Most had experienced marital and financial losses because of gambling. The authors claim that these findings suggest differences between pathological gamblers and nongamblers who commit suicide. Suicidal intentions and psychiatric issues may be harder to identify. Impulsiveness associated with problem gambling along with substance abuse renders this population at high risk. Low levels of marriage and employment—both considered barriers against suicide—among this group are also worthy of note. The authors recommend that suicide prevention among pathological gamblers receive more study.

Felsher, J., Derevensky, J., & Gupta, R. (2003). Parental influences and social modelling of youth lottery participation. *Journal of Community and Applied Social Psychology, 13,* 361–377.

This study attempted to investigate the relation between youth (10 to 18 years) lottery participation and perceived parental involvement in lottery playing. A strong association was found, with many youth reporting that parents purchase tickets for them. Notably, youth problem gambling was associated with higher perceived parental participation in lotteries. Most participants did not fear legal repercussions when purchasing tickets, despite awareness of legal prohibitions. Lotteries are perceived as innocuous, and prevention must focus on public awareness and education. The authors note that communities would not accept parents purchasing alcohol for their children, yet similar awareness of gambling addiction is lacking. Awareness campaigns must target parents as well as youth, and current legal restrictions on purchases should be strictly enforced.

Felsher, J., Derevensky, J., & Gupta, R. (2004a). Lottery participation by youth with gambling problems: Are lottery tickets a gateway to other gambling venues? *International Gambling Studies, 4,* 109–125.

This study, with 1,072 participants aged 10 to 18, was designed to identify whether lotteries represent a key option for youth with gambling problems. A secondary objective was to identify similarities and differences, among youth with gambling problems, between gambling behaviour associated with lottery tickets and other, "traditional," forms of gambling. Lotteries were favoured by youth with gambling problems. This study found that lottery playing is conducive to pathological behaviours, such as chasing losses, for youth with gambling problems and that lotteries are potentially addictive as well as a gateway to gambling in general. Social approval and accessibility of lotteries, misconceptions about the odds of winning, and parental approval are all potential factors in the onset of lottery playing among youth.

Focal Research Consultants Ltd. (Schrans, T., Schellinck, T., & Walsh, G.). (2001). *Technical Report: 2000 regular VL players follow up*. Halifax, NS: Nova Scotia Department of Health. Available at www.gov.ns.ca/health/downloads/VLPlayers_TechnicalReport.pdf

This is the second phase of a two-part random survey of video lottery terminal players. The study was designed to identify contributing factors to problems and resolution of problems in order to better inform prevention and treatment initiatives. This lengthy (440-page) document covers many issues, from situational factors contributing to problems and motivations for first playing to mitigating factors for stopping or reducing play. Motivations for playing, negative consequences of stopping, spousal support, and a range of other issues are covered.

Gibson, B., & Sanbonmatsu, D. (2004). Optimism, pessimism, and gambling: The downside of optimism. *Personality and Social Psychology Bulletin, 30,* 149–160.

Three studies found that people who were dispositionally optimistic were more likely to expect to win even after having lost money gambling and were less likely than pessimists to reduce their expectations and their betting after poor gaming results. Optimists also reported remembering more near wins. The results suggest that while optimism may be beneficial in many respects, it could be a risk factor for gambling-related harm.

Griffiths, M., & Wood, R. (2000). Risk factors in adolescence: The case of gambling, videogame playing, and the internet. *Journal of Gambling Studies, 16,* 199–225.

Observing that adolescents appear to be at high risk for pathological gambling and that the condition is often associated with other problematic behaviours, this article examines risk factors for adolescent gambling and also for video game playing, as the latter shares many traits with gambling. The effects on youth of technology, notably the Internet and video games, are explored. The authors argue that young people may be more attracted to technologically advanced gambling venues. Access is identified as an important factor. The authors call for early preventative and intervention strategies. Specific proposals include raising the minimum age for all commercial gambling activities to 18, imposing stricter penalties on merchants who sell to underaged buyers, and limiting television gambling advertising to after 9 p.m. Research recommendations are also made.

Gupta, R., & Derevensky, J. (1998). Adolescent gambling behavior—A prevalence study and examination of the correlates associated with problem gambling. *Journal of Gambling Studies, 14*, 319–345.

This study finds that 80.2% of high school students (out of a sample of 817) have gambled in the past year, 35.1% gamble at least once a week, and 4.7% are pathological. Engagement in illegal acts and parents with gambling problems were both risk factors, as was gender, with males gambling more than females. The average age of gambling onset for the problem gamblers was 11.5 years, indicating the need for prevention efforts at the elementary school level. Most adolescents reported gambling at home more than anywhere else. Problem gambling seems associated with psychosocial risk factors applicable to other addictions, suggesting the need for broader conceptions of prevention. At the time of this writing, gambling is the only potentially addictive activity in which young people engage without the type of disapproval and educational campaigns

aimed at other addictive behaviours.

Hardoon, K., & Derevensky, J. (2001). Social influences involved in children's gambling behavior. *Journal of Gambling Studies, 17*, 191–215.

This study was designed to measure the betting behaviour of children and to see whether changes in amounts bet would occur in groups of two or three, and if this was affected by the inclusion in the groups of peers of the same or opposite gender. Children (grades 4 and 6) played a computer-simulated roulette game alone and in groups and were asked to complete a questionnaire addressing their gambling behaviour. Males were found to bet larger amounts than females both alone and in groups. Females were found to bet larger amounts when playing with others of either gender. The authors discuss social learning theory as a premise for the study. The present study is said to be largely preliminary, and more work along the lines of peer influence is required for the development of comprehensive preventative and intervention strategies.

Hardoon, K., Gupta, R., & Derevensky, J. (2004). Psychosocial variables associated with adolescent gambling. *Psychology of Addictive Behaviors, 18,* 170–179.

This article discusses empirical findings concerning psychosocial determinants—social support, substance use, and behaviour and learning problems—associated with adolescent problem gambling. A questionnaire was given to students (grades 7 to 13). The main psychosocial problems associated with problem gambling include poor perceived familial and peer support, problems with substance use, behaviour and family problems, and parents involved with gambling and substance use. Predictors include gender (being male), family and conduct problems, and substance addiction. The finding most relevant to prevention is that at-risk gamblers may have more in common with probable pathological gamblers than otherwise thought.

Jacobs, D. (2000). Juvenile gambling in North America: An analysis of long term trends and future prospects. *Journal of Gambling Studies, 16,* 119–152.

Studies of middle and high schools in North America suggest that two thirds of underage youth have gambled for money within the past year. Serious problems related to gambling are experienced by 2.2 million North Americans aged 12 to 17. Lotteries represent the most common form of gambling among this age group. The number of youth gambling, and the number of those with serious related problems, is on the rise. This study provides a profile of juveniles who reported serious gambling problems. Relevant factors include, but are not limited to, early age of onset for gambling; gender (most problem gamblers are male); parental gambling; urban environments; ethnicity; preference for rapid, continuous, and interactive games; likelihood of selling things, even using lunch money, to generate gambling funds; frequent alcohol and drug use; psychosocial states associated with the reasons given for gambling; and dissociative reactions while gambling. Noting that the age of onset for gambling is likely to decline, the author calls for early prevention efforts at the primary school level.

Joukhador, J., Blaszczynski, A., & Maccallum, F. (2004). Superstitious beliefs in gambling among problem and non-problem gamblers: Preliminary data. *Journal of Gambling Studies, 20,* 171–180.

> This study finds that problem gamblers held more superstitious beliefs about gambling than non-problem gamblers and that these beliefs were associated with gambling intensity. Defined as "a strong conviction based on the erroneous perception of a cause-effect association between two independent events," superstitious beliefs are considered an important factor in the maintenance of gambling behaviour. More research is required to determine whether such beliefs precede problem gambling or are subsequent to gambling behaviour. The authors caution for cultural sensitivity when identifying, and defining, superstition. For example, praying for positive results may be culturally appropriate and hence need not be taken as irrational. Hence, a more sophisticated grasp of the concept of "superstition" is required.

Kaminer, V., & Petry, N. (1999). Alcohol and drug abuse: Gambling behavior in youths: Why we should be concerned. *Psychiatric Services, 50,* 167–168.

> Few psychiatrists have substantial experience dealing with the assessment, treatment, or prevention of pathological gambling. As well, even as gambling opportunities have increased over the last decade, the implications of gambling have not been adequately studied. This is especially true for adolescents and is comparable to the situation 30 years ago with respect to substance abuse. Such lack of attention could lead to greater numbers of pathological gamblers in the next generation. Correlates of problem gambling include poor academic performance, being male, truancy, problematic parental gambling, and delinquency. A systematic effort, involving epidemiological and clinical assessment, treatment with an emphasis on high-risk adolescents, and prevention, is required.

Ladouceur, R. (2004). Perceptions among pathological and non-pathological gamblers. *Addictive Behaviors, 29,* 555–565.

> People's perceptions while gambling on video lottery terminals were evaluated for the purpose of comparing the frequency of erroneous perceptions and gambling-related perceptions, and the degree of conviction with respect to these perceptions, in pathological and nonpathological gamblers. Participants were assessed according to DSM-IV criteria. No significant differences were found in the percentage of erroneous perceptions, but pathological gamblers held more gambling-related perceptions in general and with greater conviction.

Lynch, W., Maciejewski, P., & Potenza, M. (2004). Psychiatric correlates of gambling in adolescents and young adults grouped by age at gambling onset. *Archives of General Psychiatry, 61,* 1116–1122.

> Few studies have investigated the mental health correlates of gambling. While early participation in behaviours with addictive potential has been associated with problems, this has not been comprehensively studied with respect to gambling.

This study offers a direct investigation of a nationally representative sample of adolescent and young adult gamblers grouped by age of onset (before age 18 and adult onset). The results reveal that adolescent gamblers were more prone to drinking and drug use, dependence, or abuse, as well as depression. Early onset adult gamblers were more likely than adult nongamblers to report use of, and dependence on, alcohol and drugs. Adult onset gamblers reported higher rates of alcohol use than adult nongamblers. This study also provides confirmation to other research suggesting that adolescent gambling may be more socially oriented than adult gambling. The authors conclude that adolescent onset gambling is associated with psychiatric disorders, notably those related to substance use, and that more research is needed to better inform treatment and prevention initiatives. The authors note that the psychiatric measures employed were limited to depression and substance use issues and that the questions related to these issues did not make for proper diagnostic criteria. Questions pertaining to possible selection bias are also discussed.

McMillen, J., Marshal, D., & Murphy, L. (2004). *The use of ATMs in ACT gaming venues: An empirical study.* Canberra: The ANU Centre for Gambling Research. Available at http://gambling.anu.edu.au/menu/PDFs/ATMs-FINALReport.pdf

This study finds no strong association between problem gambling and the use of automatic teller machines (ATMs) on site and finds that removal of such machines would represent an undue inconvenience for non-problem gambling patrons. Instead, the authors recommend a daily limit on the amount that can be withdrawn. However, some qualitative evidence, based upon interviews with problem gamblers and their families, was found for the removal of ATMs. The authors grant that the removal of ATMs might benefit a small (3.1%) segment of the sample population. Industry representatives were against such a policy. The study did find a strong relation between problem gambling and the use of note acceptors for electronic gambling machines (EGMs). But the authors claim that removing note acceptors would be impractical, so only a limit on the amounts that can be used this way is recommended (and even this recommendation is made tentatively, pending further study).

Moore, T., & Jadlos, T. (2002). *The etiology of pathological gambling: A study to enhance understanding of causal pathways as a step towards improving prevention and treatment.* Wilsonville, OR: Oregon Gambling Addiction Treatment Foundation. Available at http://www.gamblingaddiction.org/Etiology/Etio02.PDF

This study was designed to increase knowledge about the possible "causal pathways" that lead to pathological gambling. It also tested research methods for large-scale random population studies. The authors suggest that the roles of trauma, abuse, and neglect should be taken into account in prevention initiatives. Prevention measures taken in Oregon are discussed.

Oei, T., & Raylu, N. (2004). Familial influence on offspring gambling: A cognitive mechanism for transmission of gambling behavior in families. *Psychological Medicine, 34,* 1279–1288.

While many factors in the development and maintenance of problem gambling have been identified, familial influence is understudied. This study attempts to identify the influences of parental behaviours and cognitions on the gambling behaviour of offspring. The South Oaks Gambling Screen, the Gambling Related Cognition Scale, and other questionnaires were administered to 189 families. The results suggest that parents, notably fathers, influence the cognitions and behaviours of their children. One interesting finding is as follows: "However, SEM [structural equation modelling] analyses showed that although parental gambling behavior was directly related to offspring gambling behavior, parental cognitions were not related to offspring gambling behavior directly but indirectly via offspring cognitions." These findings suggest that the cognitive mechanism by which attitudes and behaviours are transmitted may, in some ways, be subtle. More study is required. Preventative efforts should target parents' cognitions. Early intervention should focus on the family rather than on the child in isolation.

Potenza, M., Fiellin, D., & Heninger, G. (2002). Gambling—An addictive behavior with health and primary care implications. *Journal of General Internal Medicine, 17,* 721–732.

Little work has been done to study the relation between general health and gambling behaviour, yet there is some evidence that nongambling health problems are associated with problem gambling. This article discusses this relationship with an eye to screening and treatment options for problem and pathological gambling, as well as the relation between problem gambling and substance abuse. The authors suggest that general practitioners can play a role in the identification of pathological gambling. More awareness of the general health correlates associated with certain gambling behaviours could lead to physicians assuming a preventative role.

Raylu, N., & Oei, T. (2004). Role of culture in gambling and problem gambling. *Clinical Psychology Review, 23,* 1087–1114.

The role of culture in gambling and problem gambling has not been addressed properly in the literature. This article discusses these cultural variations and identifies variables pertinent to the initiation and maintenance of gambling behaviour. The few studies available suggest that some cultures are more prone to gambling as well as problem gambling. Familial/genetic factors, along with individual and sociological determinants, should be investigated among different cultural groups in order to develop stronger etiological analyses and culturally sensitive treatment and preventative interventions. An important consideration is the effect of culture upon help seeking. Yet knowledge is lacking. For example, despite anecdotal evidence of high rates of gambling and problem gambling among Asians, this has not been systematically studied. Few studies have looked at problem gambling among ethnic minorities. This article attempts to redress this gap by reviewing available knowledge, gauges the extent to which western studies provide information applicable to other groups, and makes recommendations for further research. The authors note that high rates of problem gambling among certain groups are not reflected in treatment attendance. Culturally relevant, community-based approaches should replace the current overemphasis on hospitals and clinics.

Ricketts, T., & Macaskill, A. (2004). Differentiating normal and problem gambling: A grounded theory approach. *Addiction Research and Theory, 12,* 77–87.

This study follows up on another by the same authors that outlined a theory of problem gambling involving the experiences of males seeking treatment and the prediction of processes that differentiate normal and problem gamblers. This study employs a grounded theory approach and a sample of male high-frequency (but still "normal") gamblers. Arousal and a sense of achievement were associated with gambling of all kinds, whereas the use of gambling to manage negative emotions was associated with problem gambling—notably, problem gamblers seemed to lack alternative emotional outlets. The ability to control gambling behaviour was another important marker, with problem gamblers requiring more "control strategies."

Stinchfield, R. (2000). Gambling and correlates of gambling among Minnesota public school students. *Journal of Gambling Studies, 16,* 153–173.

This study addressed the prevalence of gambling, and variables associated with gambling behaviour, among 78,582 Minnesota public school students in the 9th and 12th grades. Most students had gambled in the past year, though few had gambled frequently or reported gambling-related difficulties. Asian and Caucasian students gambled less often than African Americans, Latinos, and Natives. Age and gender were both significant, as older students and boys gambled more frequently. Gambling frequency was also associated with higher rates of sexual activity, the desire to stop gambling, alcohol use, tobacco use, regret over having bet certain amounts of money, and antisocial behaviour. The author concludes that gambling is probably associated with other risky behaviours and that it may also be a function of adolescent experimentation. The kind of information delivered by this study—involving such a large sample and shedding some light on specific correlates—should help in the creation of targeted prevention efforts.

Vachon, J., Vitaro, F., Wanner, B., & Tremblay, R. (2004). Adolescent gambling: Relationships with parent gambling and parenting practices. *Psychology of Addictive Behaviors, 18,* 398–401.

The additive and interactive links between family risk factors—parental gambling and parenting practices—were examined among a community sample of 938 adolescents who completed the South Oaks Gambling Screen Revised for Adolescents and a questionnaire on parenting practices. Parents completed the standard South Oaks Gambling Screen. Gambling frequency among adolescents was related to gambling frequency and problems among parents, while gambling problems among adolescents were associated only with the severity of fathers' gambling problems. Low levels of parental monitoring were associated with gambling and other difficulties, and inadequate disciplinary practices—referring to inconsistent and harsh attempts to control a child's behaviour—were another factor associated with gambling problems in adolescents. The findings suggest that parenting practices and gambling behaviour should be targeted by prevention strategies.

Vitaro, F., Brendgen, M., Ladouceur, R., & Tremblay, R. (2001). Gambling, delinquency, and drug use during adolescence: Mutual influences and common risk factors. *Journal of Gambling Studies, 17,* 171–190.

Authors' abstract: "The purpose of this study was threefold: (1) to assess the possible mutual influence between gambling, substance use, and delinquency over a two-year period during mid adolescence, (2) to test whether variables that are usually predictive of delinquency and substance use also predict gambling, and (3) to test whether the links between the three problem behaviors could be, at least partially, accounted for by common antecedent factors (impulsivity, parental supervision, and deviant friends) assessed during early adolescence. Seven hundred and seventeen boys participated in the study. Impulsivity, parental supervision, and friends' deviancy were collected when participants were 13 and 14 years of age. Gambling, substance use, and delinquency were collected through self-reports at ages 16 and 17 years. The results showed no influence or modest influence of problem behaviors on each other from age 16 to age 17 years, once current links and auto-correlations were accounted for. Conversely, the cross-sectional links between the three problem behaviors at each age were moderately high. Impulsivity, low parental supervision, and deviant friends were predictively related to each problem. Finally, a significant, although modest, portion of the covariance between the three problem behaviors was accounted for by these three predictors. The present findings contradict previous findings about the influence of gambling on other problem behaviors and support the notion of a 'general problem behavior syndrome' fed by generic risk factors." The findings suggest that gambling behaviour should not be targeted in isolation. The authors recommend early efforts to reduce impulsive-disruptive behaviours, which in turn could be buttressed by improvement of parental supervision and association with friends who are less deviant.

Welte, J., Barnes, G., Wieczorek, W., Tidwell, M., & Parker, J. (2004). Risk factors for pathological gambling. *Addictive Behaviors, 29,* 323–335.

This study finds casino gambling, and engagement in many forms of gambling, to be associated with gambling pathology. Cards, bingo, and lotteries are associated with moderately high risk. Alcohol abuse, minority (African, Hispanic, Asian), and low socioeconomic status were each associated with pathological gambling. When other variables were adjusted for, gender was not a significant predictor.

Winters, K., & Anderson, N. (2000). Gambling involvement and drug use among adolescents. *Journal of Gambling Studies, 16,* 175–198.

This article discusses the association between gambling and drug use among youth. Such knowledge is key to understanding the origins and course of adolescent gambling. Though many risk factors seem to run across both behaviour domains, more knowledge is needed about which factors are common and which are specific to problem gambling. Comparisons of consequences are made, and the implications of co-occurrence are discussed. In many respects, knowledge of the nature and consequences of problem gambling is less developed than that of substance abuse, a situation that must be rectified if better

prevention and intervention strategies are to be developed.

2. Programs

Aboriginal Responsible Gambling Strategy. (2002). *A self-help guide to gambling responsibly*. Toronto: Ontario Ministry of Health.

The Ontario Ministry of Health funded a special program for Ontario's Métis designed to meet the needs of this community. This 17-page brochure is written in a personable style and contains one first-person account of problems with gambling. Issues pertaining to language (problem/pathological gambler) are discussed briefly for the purpose of demystification. Readers are directed to ask themselves relevant questions about their gambling, with risk factors identified. The pamphlet winds down on a positive note, with messages pertaining to overall healthy approaches to life and alternatives to gambling.

Alberta Alcohol and Drug Abuse Commission. (1999). *Playing with fire: Aboriginal adolescent gambling*. Edmonton, AB: Author.

This video explores problem gambling, risk factors, and consequences through an aboriginal teen's story. Testimonies from gamblers are also provided.

Alberta Alcohol and Drug Abuse Commission. (2001). *Your best bet: When young people gamble. An early intervention resource.* Edmonton, AB: Author.

This gambling education curriculum is designed to function within health, life skills, mathematics, or language arts classes. Background information is provided, and an addiction model of problem gambling is employed. Misconceptions and risk factors are discussed.

Byrne, G. (2001). *The Free Yourself Program*. Warrandyte, Australia: Rebound Consulting Pty. Ltd. Available at http://www.freeyourself.com.au/freeyourselfprogram.html

In their words: "The 'Free Yourself Program' is a positive, holistic, pro-active and very effective approach to help people to deal with their Gambling Addiction. It represents a much-needed 'new model' of gambling addiction therapy where the main responsibility is given back to the person directly affected by the addiction to work on changing their 'attitude' and their 'behaviour.' Most importantly, it provides strategies that people can use 'in the moment' when the urge to go gambling threatens to become overpowering. People weren't born addicted, but became so over time. FYP shows how the addiction process can be reversed and eliminated."

Docherty, C., Frost, A., Transom, A., & Cundall, L. (2004). *Youth education project (When is it not a game?).* Auckland, New Zealand: Problem Gambling Foundation of New Zealand. Available at http://www.cgs.co.nz/files/YEP%20Report.pdf

When the national pilot Youth Education Project delivered the gambling resource,

When is it not a game?, it was found that youth are experiencing gambling-related effects and that they have some knowledge of the issue. The resource offers a "strengths-based" approach with an emphasis on youth development, conveying information about the effects of gambling in order to enable young people to make informed decisions.

Game Planit Interactive Corp. http://www.gameplanit.com

In their words: "Game Planit is the leading authority on consumer (player) protection policies, strategies, information, products and services, for *all* stakeholders with an interest in regulated gaming … Product Safety & Game Evaluation Services are also part of Game Planit's comprehensive array of products and services. This services [*sic*] allows various stakeholders to fulfill their duty-of-care obligations to implement product safety warnings and other needed protective measures. Overall, Game Planit is forging the *Standards of Excellence for Player Protection* by providing all stakeholders with the highest possible prevention and problem gambling solutions based on innovation and empirical data into problem gambling risk factors from the most recent and leading-edge research into the games and problem gambling." This site features Safe@play (see Horton, Harrigan, Horbay, & Turner, 2001), other products, workshops, and facts about gambling and odds, as well as relevant contacts.

Glass, L. (2002). *Gambling education: Some strategies for South Australian schools.* Adelaide, Australia: South Australia Department of Human Services. Available at https://www.library.health.sa.gov.au/Portals/0/gambling-education-some-strategies-for-south-australian-schools.pdf

This report examines state, national, and international preventative strategies along with opportunities to develop gambling education programs in South Australian schools. Such education is geared to informing students about the potential effects of gambling and to assist them in making healthy choices. The author points out that adult problem gambling often begins as early as the age of 10, rates of problem gambling among youth are higher than among adults, and gambling among youth is associated with other risky behaviours. The author also notes that gambling education in schools may in fact increase gambling rates by generating curiosity. This article discusses prospects, and limits, of school-based interventions. As knowledge alone is not sufficient to alter gambling behaviour, this report proposes a constructivist learning theory approach that emphasizes the active agency of people in the learning process. Recommendations are divided into those applicable to schools and those falling outside the purview of educational institutions. Community-based recommendations involve changing perceptions of gambling, developing a measure of safe gambling, and educating retailers about laws governing sales to minors. School-based recommendations include educating teachers and creating a Project Officer post to oversee this report's recommendations.

Government and Public Awareness Task Group of NPNU Consortium. (2000). *Harm reduction information kit: For professionals working with at-risk populations.* Edmonton: Alberta Non-Prescription Needle Use Consortium (NPNU). Available at http://www.hivedmonton.com/textsite/graphs/hrk_english.pdf

This information kit discusses the principles of harm reduction, with practical advice on issues ranging from substance abuse to problem gambling.

Griffiths, M., Scarfe, A., & Bellringer, P. (1999). Brief report: The UK National Telephone Gambling Helpline—Results on the first year of operation. *Journal of Gambling Studies, 15,* 83–90.

This article discusses the U.K.'s national gambling helpline in the first year of its operation: November 1997 to October 1998. Of 1729 calls, 51% were from problem gamblers, 90% of whom were male, and 26% of inquiries were from relatives of problem gamblers. Professionals dealing with problem gamblers represented 13% of calls. Fruit machine gambling presented itself as the most problematic of gambling behaviours, especially for adolescents and women. The authors presented their findings because there had been no prevalence studies of adult gambling in the U.K., and there was little knowledge about which types of gambling cause the most problems. Health-related consequences of problem gambling, including depression, anxiety, and suicidal ideation, were identified by a significant minority of callers. The authors advise that excessive gambling be identified as a serious health issue and point out that while general practitioners routinely ask patients about smoking and drinking, gambling is rarely discussed.

Know the Odds Inc. (2001). *You figure it out—Problem gambling today*. Auburn, Australia: Author. Available from http://www.knowodds.org/yfio.html

In their words: "The kit comprises video, software and notes and is suitable for use in secondary schools. The purpose of the kit is to educate students to: prevent them becoming problem gamblers; and understand problem gambling in others." The education kit is planned around a 20-minute video involving young people discussing issues related to gambling and interviewing an expert, while the software is geared to teaching students (even those with little aptitude for math) about the law of averages and how this works against problem gamblers.

Le groupe Jeunesse. (2001). *The count me out (Moi, je passe) awareness program for the prevention of gambling dependency.* Montreal, QC: Le groupe Jeunesse.

This is a bilingual (French and English) program designed for grade 3 through the end of high school. Knowledge about gambling, inaccurate cognitions, attitudes, and behaviours are all targeted. Risk and protective factors are explained.

Macdonald, J., & Somerset M. (2003, May). *Minimizing risk through preventative skills development.* Paper presented at the 12th international conference on gambling and risk taking, Vancouver, BC.

The authors discuss school-based problem gambling prevention programs and contrast them with their own: "Youth making choices: Coping and critical thinking." An important feature of this program is that it relies on more than mere risk avoidance messages in favour of a more client-centred approach. The course is designed to promote coping skills, awareness of randomness, self-monitoring, and critical thinking. The program comprises seven lessons with three

guiding principles: "Learning and using more coping skills and stepwise planning to solve stressful problems; Knowing all the ways in which problem gambling can harm you and learning how to check your thoughts, feelings and behaviour for signs of the onset of problem gambling or other problematic behaviours; Understanding that winning and losing are random events and why most people hold erroneous beliefs about their chances of winning."

Marotta, J., & Hynes, J. (2003). *Problem gambling prevention resource guide for prevention professionals*. Salem, OR: Oregon Department of Human Services. Available at http://www.gamblingaddiction.org/Prevent/PreventGuide.pdf

This guide was designed to provide professionals with information about the relationship between problem gambling and other problematic behaviours. As well, it discusses evidence-based prevention measures for addictions and those specific to gambling. The authors note that empirical knowledge of preventative initiatives for gambling is scant. A public health model is employed, focussing on the interaction of three correlates: host (the individual), agent (gambling), and environment (social and physical context). Risk and protective factors, based largely upon Dickson, Derevensky, and Gupta, (2002), are discussed. The report discusses ways in which existing prevention programs for substance abuse can be integrated with gambling initiatives; here, common risk factors are emphasized.

Minnesota Institute of Public Health (2000). *Deal me in: Gambling trigger video and posters.* (Available from the Minnesota Institute of Public Health).

The video is designed to raise student awareness of the negative consequences of gambling. Information on the signs of problem gambling is provided. Erroneous beliefs that often accompany gambling are identified and dispelled. The posters and pamphlets are aimed not only at youth but also at women and seniors.

North American Training Institute (2003). *Kids don't gamble…Wanna bet?* (Available from Manisses Communication Group, Inc., http://www.manisses.com/bookstore/bookstore/write-ups/wanna_bet.html, and North American Training Institute, http://www.nati.org/products/?mode=desc&ID=28).

This is a curriculum aimed at children in grades 3 through 8. Younger children are exposed to a puppet show, while children in grades 6 through 8 witness the experiences of a peer. Probability and problem gambling are explained. Warning signs are identified.

Responsible Gambling Council. (n.d.). *It's only a game: A quick guide to low-risk gambling*. Toronto: Responsible Gambling Council. Available at http://www.responsiblegambling.org/articles/generalBrochure.pdf

This short pamphlet offers the Ontario Gambling Helpline's telephone number and is offered as a general information resource. Tips are given for low-risk gambling, and major signs of potential problem gambling are identified. The document is very easy to read.

Responsible Gambling Council. (n.d.). *It's only a game: An older person's guide to low-risk gambling*. Toronto: Responsible Gambling Council. Available at http://www.responsiblegambling.org/articles/olderAdults.pdf

This short pamphlet offers the Ontario Gambling Helpline's telephone number and targets seniors. Tips are given for low-risk gambling, such as betting only money that has been set aside for that purpose, and "signs of trouble" are listed. The document is very easy to read.

Responsible Gambling Council. (n.d.). *Why it's important to talk to your teens about gambling—and how to do it.* Toronto: Responsible Gambling Council. Available at http://www.responsiblegambling.org/articles/teensBrochure.pdf

As the title suggests, this pamphlet offers advice on how to bring up the topic of gambling with teenaged children. Questions answered include, "How do I protect them?" (e.g., explaining the risks) and "What do they need to know?" (e.g., gambling is not a way to make money, and the house is destined to win in the long run).

Saskatchewan Health. (n.d.). *Gambling: Reducing the risks.* (Available from Saskatchewan Health, (306) 787-7239).

This educational resource, pilot tested by teachers in urban and rural schools, contains separate sections designed for grades 6 through 9. It is designed to educate both teachers and students and is complemented with video education. Odds and problem gambling are explained. Sound advice, such as not to borrow money in order to gamble, is provided. There is a strong emphasis on life experience; e.g., the "gambles" people take in real life (such as starting a business) are contrasted with gaming. The student information packages contain useful items such as a brief article on high rates of gambling among youth.

Takushi, R., Neighbors, C., Larimer, M., Lostutter, T., Cronce, J., & Marlatt, G. (2004). Indicated prevention of problem gambling among college students. *Journal of Gambling Studies, 20,* 83–93.

The authors state that little is known about how best to prevent serious gambling problems among college students who exhibit moderate problems. This article provides a qualitative description of an indicated prevention intervention for college students. Such interventions are designed to identify those who demonstrate moderate problems and to prevent the onset of more serious ones. The intervention is based partly upon strategies with proven effectiveness in the alcohol field—brief motivation enhancement strategies and broad-spectrum skills training—and also on aspects of gambling treatment. The results suggest that this approach generated positive responses from students, who felt they had received some benefit from the intervention. The authors caution that these results require more research for confirmation.

Ursel, B., & Morgan, D. (2004). A brochure on Internet awareness and prevention. *Journal of Gambling Issues, 11*. Available at

http://www.camh.net/egambling/issue11/jgi_11_ursel.html

The Internet is the greatest area of current growth in gambling and poses unique risks associated with isolation. This article comments on a brochure created by the Regina Committee on Problem Gambling to address and reduce these risks. It can be found at http://www.cmhask.com/gambling/InternetGambling.pdf.

3. Evaluations of programs

Abbott, M., Volberg, R., Bellringer, M., & Reith, G. (2004). *A review of research on aspects of problem gambling: Final report.* Auckland, New Zealand: Auckland University of Technology. Available at http://www.rigt.org.uk/downloads/Auckland_report.pdf

This report was designed as a critical review of gambling research with the objective of clarifying certain issues and establishing future research priorities. Issues under consideration included risk factors, treatment interventions, and public education. The authors conclude that the focus of formal treatment on severe cases has meant that prevention efforts are poorly developed—even though the latter would be beneficial to far more individuals. Prevention programs targeting youth are most acceptable to stakeholders. Experience with campaigns pertaining to tobacco and alcohol suggests that similar campaigns could be effective for gambling, for both youth and adults. So far, exclusion programs have received more research attention than any other preventative strategy (difficulties with implementation are discussed). Hence, the effectiveness of other options presents itself as a research priority. One recent innovation, problem gambling information kiosks inside gambling establishments, is identified as highly promising, notably because it involves cooperation between gaming operators and practitioners. Prevention efforts are often undermined by well-financed industry advertising campaigns.

Benhsain, K., Taillefer, A., & Ladouceur, R. (2004). Awareness of independence of events and erroneous perceptions while gambling. *Addictive Behaviors, 29,* 399–404.

Building upon studies that have found that individuals who are knowledgeable about the nature of randomness will nonetheless display erroneous beliefs pertaining to odds and random sequences while gambling, this study assessed the effect of reminders of event independence during a game. The findings suggest not only that such reminders are effective at a cognitive level but that they decrease the motivation to continue playing. Noting that "illusions of control" are created by the games themselves, the authors suggest that appropriate prompts could provide a significant corrective.

Blaszczynski, A., Ladouceur, R., & Nower, L. (2004). *Self exclusion: A gateway to treatment*. Melbourne, Australia: Australian Gaming Council. Available at http://www.austgamingcouncil.org.au/research/files/Self%20Exclusion%20A%20Gateway%20to%20Treatment.pdf

Self-exclusion is the most commonly used strategy by casinos, clubs, and hotels

to assist problem gamblers. Principles guiding this procedure include, but are not limited to, the following: many gamble to excess and have trouble controlling their gambling, the gaming industry has a responsibility to provide safe gambling environments that minimize effects on those with problems, and individuals also bear some responsibility. This paper was written to inform concerned parties about how best to assist those with gambling problems. It builds on previous research designed to identify behaviours that may indicate problem gambling, noting that the gaming industry provides an important link to treatment providers. Barriers to the effectiveness of self-exclusion programs—such as the lack of integration with other interventions, the perceived conflict of interest between gaining revenue and excluding gamblers, and the punitive nature of limiting a gambler's behaviour—are identified. The authors propose an alternative model of self-exclusion, one that shifts from a punitive approach to rehabilitation (resumption of control over gambling behaviour) and reduces perceptions of conflict of interest by increasing transparency. Self-exclusion should be operated by "independent educators."

Blaszczynski, A., Sharpe, L., & Walker, M. (2001). *The assessment of the impact of the reconfiguration on electronic gaming machines as harm minimisation strategies for problem gambling.* Sydney, Australia: University of Sydney Gambling Research Unit. Available at http://www.psych.usyd.edu.au/gambling/GIO_report.pdf

In 2000, the New South Wales Liquor Administration Board recommended modifications to electronic gaming machines for the purposes of harm reduction: no more high-value note acceptors, slower game speeds, and maximum bets limited to $1 (from $10, on a trial basis). This study was meant to assess these initiatives and to identify any (negative) unintended effects. This study focussed on four issues: player satisfaction, player behaviour, player expenditure, and problem gamblers' perceptions of the effects the initiatives had upon their problem gambling. Little evidence was found that reconfiguring bill acceptors would help problem gamblers. Reduction of reel spin time may even exacerbate problems for some. Some preliminary evidence was found for the effectiveness of reduced bet size as a harm reduction strategy.

Breen, H., Buultjens, J., & Hing, N. (2003). *The perceived efficacy of responsible gambling strategies in Queensland hotels, casinos and licensed clubs*. Brisbane, Australia: Research & Community Engagement Division of QLD Treasury.

In May 2002, Queensland introduced its "Responsible Gambling Code of Practice." The Code covered six themes: provision of information, interaction with customers and community, exclusion provisions, physical environments, financial transactions, and advertising and promotions. This study gauges the extent to which these harm reduction principles have been implemented in casinos, hotels, and clubs. Managers' and employees' opinions of the code and the efficacy of the six responsible gambling practices were also solicited. Some practices were found to be more feasible for implementation than others, though levels of implementation were not consistent among different venues, and other factors, such as number of gaming machines, managers' attitudes, and region, were also linked to compliance. Some practices, e.g., physical layout, were considered more effective by managers than others, such as information provision, were.

The authors note that "responsible gambling" is still poorly defined, though the trend is in the direction of placing responsibility on gambling providers and regulators rather than gamblers. Small venues and venues in remote areas are less likely to comply with regulations, and managers and staff in small venues are less likely to view the regulations in positive terms. The Code can be found in this document. In all, 18 recommendations are made. These include finding ways to enforce compliance more effectively, making gambling support services more proactive, and training staff more frequently in responsible gambling.

Delfabbro, P. (2004). The stubborn logic of regular gamblers: Obstacles and dilemmas in cognitive gambling research. *Journal of Gambling Studies, 20,* 1–21.

Gambling research has consistently confirmed the fact that gamblers tend to misrepresent the odds in gambling activities and hold many irrational beliefs. It would thus seem that providing accurate information in gambling venues or on certain machines would be a strong preventative tactic. However, the false beliefs of gamblers do not appear to function at the purely cognitive level, can result from deliberate distortion, and may even be hard to "falsify"—gambling-related cognitions often rely upon circular reasoning. Different aspects of these belief systems are explored to help guide more effective consumer information initiatives. The "illusion of control" involves the overestimation of contingency between actions and outcomes. The "availability heuristic" involves the greater likelihood of remembering wins than losses. The "gambler's fallacy" involves the attribution of association between unrelated events (a sequence of "tails" is thought to increase the likelihood of "heads"). "Attributional biases" refer to taking credit for wins by reference to one's skill (or other "internal" traits) while blaming losses on external factors. The author cautions that many cognitive phenomena are rooted in behavioural realities, suggesting that they be addressed at that level. The author also suggests that it may be more useful to educate in a preemptive fashion, before the gambling behaviour and the ensuing mystification can set in.

Ferland, F., Ladouceur, R., & Vitaro, F. (2002). Prevention of problem gambling: Modifying misconceptions and increasing knowledge. *Journal of Gambling Studies, 18,* 19–29.

Given research that demonstrates the high levels of involvement in gambling among youth, along with the irrational beliefs that often accompany these activities, this study tested a video designed to educate and dispel misconceptions on 424 seventh and eight grade students. The authors argue that the delivery of information is an effective preventative tool. This study targeted false conceptual links between independent events. A video format—designed to amuse and interest students—was used partly because a purely cognitive form of communication may be questionable in its effectiveness. This study suggests that the video is a meaningful resource, and its effectiveness would be enhanced if teachers played a complementary role.

Govoni, R., Frisch, G., & Johnson, D. (2001). *A community effort: Ideas to action—Understanding and preventing problem gambling in seniors.* Windsor, ON: Problem Gambling Research Group, University of Windsor.

While seniors have much time and motivation to gamble, their resources are often limited and they tend to lack the means to recover from financial strain. This report outlines the testing of a community-based prevention program for seniors. The authors found that two thirds of seniors gamble, 1.7% of those surveyed experienced major financial losses due to gambling, and problem gambling affects more than just money. The authors found that a prevention program for seniors should not be limited to senior service providers and that the whole community must be engaged. "Syntegration" is the name given to the process employed in this strategy and involves bringing together people from many backgrounds. Proposals include responsible gambling as the basis of outreach, "multiple strategies for multiple targets," "seniors helping seniors," and "media blitz."

Hing, N. (2003). *An assessment of member awareness, perceived adequacy and perceived effectiveness of responsible gambling strategies in Sydney clubs.* Lismore, Australia: Centre for Gambling Education and Research, Southern Cross University. Available at http://cger.scu.edu.au/pdfs/hing_2003.pdf

Following the enactment of responsible gambling legislation in 2000, this report assesses the awareness of Sydney club members of responsible gambling strategies and their perceptions of the strategies' adequacy and effectiveness. The study also assessed perceptions of efficacy according to type of gambler, based upon games of choice, gender, age, and potential for gambling problems. High levels of awareness were found with respect to responsible gambling signage and information measures, including those related to problem gambling, though respondents were somewhat skeptical about the likelihood of these measures promoting responsible gambling. However, other measures—such as prevention of minors and intoxicated people from entering, refusal by clubs to extend credit or cash advances, payout of big wins by cheque instead of cash, and self-exclusion—were perceived as likely to promote responsible gambling. In areas such as self-exclusion policy, local counselling services, and measures taken to help people keep track of time while playing poker machines, awareness was low. It is notable, for example, that while many patrons identified self-exclusion as potentially helpful, awareness of the existence of such policies was not high. The findings also suggest that restrictions on minors entering clubs were not always enforced. Problem and at-risk gamblers were more aware of responsible gambling measures than non-problem gamblers. Gender was not a significant indicator of awareness.

Horton, K., Harrigan, K., Horbay, R., & Turner, N. (2001). *The effectiveness of interactive problem gambling awareness and prevention programs*. Toronto: Ontario Problem Gambling Research Centre. Available at http://www.gamblingresearch.org/contentdetail.sz?cid=2371&pageid=1192&r=s

The Safe@play Risk Quiz is an on-line self-assessment tool that can be placed on video lottery terminals, video kiosks in gambling venues, and interactive slot machines. It is designed to provide users with an awareness of risk factors for problem gambling and to enable them to assume control of their gambling. This study was designed to provide an initial evaluation—306 university undergraduates were involved—and results suggest that the quiz was effective in

alerting people to their risk factors, though awareness generated by the quiz tends to diminish over time. The authors note that these students were exposed to the quiz only briefly—they were not regular gamblers—and that people who used this tool more regularly at casinos would conceivably show stronger and more lasting effects. This should be tested in a real casino setting.

Independent Pricing and Regulatory Tribunal of New South Wales. (2004). *Gambling: Promoting a culture of responsibility*. Sydney, Australia: Author. Available at http://www.ipart.nsw.gov.au/files/Gambling04.pdf

This report reviews the effectiveness of gambling harm reduction measures with respect to their effects on the community and on gamblers. Indirect effects—related to employment, support for community projects, and other issues—were also considered. The report calls for an integrated framework for responsible gambling designed to promote a "culture of responsibility," wherein consumers have sufficient information upon which to base their gambling decisions. Measures designed to protect gamblers should take into account consequences for recreational gamblers and the gambling industry. A system of accreditation for counselling services is also called for.

Ladouceur, R., Boutin, C., Doucet, C., Dumont, M., Provencher, M., & Giroux, I. (2004). Awareness promotion about excessive gambling among video lottery retailers. *Journal of Gambling Studies, 20,* 181–185.

The authors describe "responsible gambling" as policies and practices designed to prevent and reduce harms associated with gambling and argue for harm reduction approaches similar to what has long been practised with respect to drugs and alcohol: reducing excess rather than aiming only for abstinence. This article describes and evaluates "As luck would have it," an awareness program for video lottery retailers in the province of Quebec. The 2-hour workshop was designed to educate retailers about excessive gambling, with answers to the following questions: "1. What is chance and randomness? 2. Is there a link between misunderstanding the concept of chance and excessive gambling? 3. How does one recognise the symptoms of this disorder? 4. How should retailers intervene if they decide to do so?" Retailers who completed the workshop acquired a better grasp of problem gambling, could recognize symptoms, and felt better equipped to intervene when appropriate. Follow-up found that these retailers were considerably more likely to approach problem gamblers and talk about how to help than those who had not completed the workshop. The authors emphasize that retailers and the gambling industry in general often show a willingness to promote responsible gambling.

Ladouceur, R., Ferland, F., & Fournier, P. (2003). Correction of erroneous perceptions regarding the notions of chance and randomness in gambling among primary school students. *American Journal of Health Education, 34* (5), 5–10.

This study finds that when a program designed to correct misconceptions about chance and randomness among primary school students was applied by a specialist in the psychology of gambling, it was more effective than when applied

by a teacher. The results have serious implications for the implementation of such programs at primary schools and for the role of teachers in the process.

Ladouceur, R., Jacques, C., Giroux, I., Ferland, F., & Leblond, J. (2000). Analysis of a casino's self-exclusion program. *Journal of Gambling Studies, 16,* 453–460.

Self-exclusion is an attractive self-control procedure for people who have trouble controlling their gambling but are as yet unprepared to seek professional help. Yet these programs have not been studied. This article discusses characteristics of people who opted to have themselves barred from a Canadian casino with respect to sociodemographics, gambling pathology, gambling habits, and past experience with self-exclusion. Ninety-five percent met the criteria for severe pathological gambling, and none did for non-problem gambling. Thirty percent stopped gambling entirely after enrolling in the program. Participants were concerned with the weakness of detection efforts, reporting that it was easy to gain access to the casino without being identified. Some suggested that the procedure should be available by mail order so that reentering the casino would not be necessary. Seventy percent of respondents enrolled on their own initiative, without pressure from a "significant other," helping to explain the high abstinence rate. The authors argue that, from a preventative perspective, such programs could be offered to those at risk of becoming pathological gamblers. Risky behaviours could be described in pamphlets made available to casino patrons. Other recommendations for such programs and for future research are made.

Ladouceur, R., & Sévigny, S. (2003). Video lottery terminal warning messages and the persistence to gamble. *Gambling Research, 15* (1), 45–50.

This study was designed to determine whether messages on a video lottery terminal screen, and breaks, would influence gambling behaviour. The messages were about illusions of control and the realities of chance. Players were assigned randomly to three scenarios: no interruption, breaks, and messages. Both breaks and messages, on their own, were associated with fewer games played. Theoretical issues pertaining to these results, in the context of responsible gambling, are discussed.

Ladouceur, R., & Sévigny, S. (2005). Structural characteristics of video lotteries: Effects of a stopping device on illusion of control and gambling persistence. *Journal of Gambling Studies, 21,* 117–131.

A video lottery terminal stopping device was tested in two studies to gauge its effects on thinking and behaviour. Players had the ability to stop the reels from spinning. The first study involved illusions of control. Players were inclined to believe that symbols would differ with the timing of stoppage, that they might be able to control outcomes, that skill could be a factor, and that a stopping device could improve their chances of winning. The second study involved gambling behaviour itself, and it was found that the device was conducive to more games being played per session. The results are discussed in terms of their implications for responsible gambling policy.

Ladouceur, R., Vezina, L., Jacques, C., & Ferland, F. (2000). Does a brochure about pathological gambling provide new information? *Journal of Gambling Studies, 16,* 103–107.

This study was designed to determine whether a brochure on pathological gambling would provide new knowledge and information to the public. One hundred fifteen people were chosen randomly at malls and parks and then assigned to control and experimental groups. The findings suggest that the brochure provided new information about problem gambling, risky behaviours, and help available. The authors point out that the information contained in brochures is rarely evaluated. This study may stimulate others in the field to evaluate their material before distribution, thereby strengthening preventative and educational efforts. Future studies should also assess whether the effects of such materials are enduring.

Lavoie, M., & Ladouceur, R. (2004). Prevention of gambling among youth: Increasing knowledge and modifying attitudes toward gambling. *Electronic Journal of Gambling Issues, 10*. Available at http://www.camh.net/egambling/archive/pdf/EJGI-issue10/EJGI-Issue10-lavoie-ladouceur.pdf

Gambling has been identified as popular among youth. With the increase in young people gambling, the likelihood of irrational thoughts and behaviours associated with gambling increases as well. A video designed to increase gambling-related knowledge and to dispel misconceptions was viewed by 273 French-speaking students in grades 5 and 6. The results suggest that the video was successful on both counts. The authors point out that 7- and 11-year-old children are at a developmental stage where the illusion of control over chance events is likely to figure prominently and that the cognitive therapeutic approach suggests that loss of control in gambling results from such misconceptions. This study suggests that a video alone can be just as effective as a video combined with discussion, though the authors grant that discussion may improve the durability of the changes. Further research should include grade 4 students and also consider the long-term effects of such interventions on knowledge and attitudes.

Loba, P., Stewart, S., Klein, R., & Blackburn, J. (2001). Manipulations of the features of standard video lottery terminal games: Effects in pathological and non-pathological gamblers. *Journal of Gambling Studies, 17,* 297–320.

This study was conducted to identify game features of video lottery terminals (VLTs) that inhibit abuse by pathological gamblers yet have little effect on the behaviour of nonpathological players. The study involved a video poker game as well as a spinning reels game. The study investigated three approaches: a counter that showed how much money had been spent, a VLT spinning reels game that did not enable players to stop the reel by touching the screen, and the manipulation of sensory features (speed and sound). The results suggest that sensory manipulation delivered the most significant reaction differences between pathological and nonpathological gamblers. As well, running totals of money (instead of credits) spent could reduce the desire to play among pathological gamblers. These findings support the notion that structural characteristics—such

as sound and payout intervals—are significant. The authors offer possible reasons for their results yet caution that these findings should be replicated in more natural settings before harm reduction recommendations are made.

Lostutter, T., Larimer, M., & Takushi, R. (2002). Measuring gambling outcomes among college students. *Journal of Gambling Studies, 18,* 339–360.

This study introduces and validates three new gambling outcome measures: the Gambling Quantity and Perceived Norms Scale (GQPN), the Gambling Problem Index (GPI), and the Gambling Readiness to Change Questionnaire (GRTC). The questionnaires, along with other measures, were completed by 560 undergraduate college students. The new measures, two of which are modelled upon measures used in alcohol studies, displayed good reliability and convergent validity. The measures deal separately with gambling quantity, related consequences, and motivation to change and represent in the authors' view an advance on currently available instruments in terms of their applicability to the development of effective prevention and treatment interventions. The authors note, for example, that in secondary prevention, overlooking someone's readiness to change can be counterproductive.

Macdonald, J., Turner, N., & Somerset M. (2003). *Life skills, mathematical reasoning and critical thinking: Curriculum for the prevention of problem gambling.* Toronto: Ontario Problem Gambling Research Centre. Available at http://www.opgrc.org/contentdetail.sz?cid=138

The subject of this report is the development and evaluation of a school-based prevention curriculum for problem gambling. The focus was on subclinical youth. Knowledge of random events, coping skills, and self-monitoring skills were addressed. The authors find that cognitive issues are more easily transmitted than those pertaining to attitude and behaviour. Randomness, and even knowledge of coping skills, can be more easily taught, whereas the acquisition of coping resources and the intricacies of self-monitoring would require a more developed program. Of note is the experiential aspect of self-monitoring. In the authors' words: "Self-monitoring or meta-questioning … replaces the traditional risk avoidance messages with questions which address the experience of the participant.… Engaging in self-monitoring addresses the onset of problem gambling by allowing a person to recognise the onset of gambling problem and taking action to reduce involvement or the problematic thoughts associated with gambling."

Najavits, L., Grymala, L., & George, B. (2003). Can advertising increase awareness of problem gambling? A statewide survey of impact. *Psychology of Addictive Behaviors, 17*, 324–327.

In order to gauge the effects of an advertising campaign (billboards, brochures, posters, newspaper ads, pens, and T-shirts) meant to raise awareness of problem gambling, 800 adults in Indiana were surveyed randomly. Pre- and postcampaign surveys indicated that the campaign had had little effect and that few were exposed to it. Among different approaches, billboards and slogans

seemed most effective. The authors suggest that more powerful media, such as television, may be more effective, as would a focus on high-risk groups.

Napolitano, F. (2003). The self-exclusion program: Legal and clinical considerations. *Journal of Gambling Studies, 19,* 303–315.

This article discusses some of the difficulties with self-exclusion programs. For example, legal enforceability is tenuous. The author argues that such programs inappropriately shift the emphasis from the psychological problem of the addicted gambler to gambling itself. The author compares such confusion to the war on drugs, of which he is also critical.

O'Neil, M., Whetton, S., Dolman, B., Herbert, M., Giannopoulos, V., O'Neil, D., et al. (2003). *Evaluation of self-exclusion programs: Part A—Evaluation of self-exclusion programs in Victoria* and *Part B—Summary of self-exclusion programs in Australian states and territories.* Victoria, Australia: Gambling Research Panel—South Australian Centre for Economic Studies. Available at http://www.justice.vic.gov.au/CA2569020010922A/page/Gaming+and+Racing-Research-Self-exclusion?OpenDocument&1=0-Gaming+and+Racing~&2=0-Research~&3=0-Self-exclusion~

This two-part study is both evaluative and descriptive. Part A evaluates self-exclusion programs in Victoria clubs, pubs, and casinos. It also discusses the literature and theoretical issues pertaining to self-exclusion. Part B describes the many self-exclusion programs in Australian states and territories, though some evaluation is offered. In Part A, interviews with self-excluded individuals indicate a lack of confidence in the system: identification and detection failures are common. Surveys of venues suggest that the programs have had little or no significant effect on problem gambling. The authors recommend investigation of a new system of uniform identification that would restrict access to gaming areas. The definition of self-exclusion should be broadened to include a range of behaviours. Low utilization rates for self-exclusion indicate that other strategies are also needed. Financial resources should be increased, and relevant technologies should be improved. In Part B, the authors find that self-exclusion programs are not homogeneous throughout Australia and differ in many respects, such as the duration of exclusion and the method by which a person must initiate the process. Common features include, but are not limited to, the use of a "deed" of self-exclusion, a list of undertakings by patrons, and an understanding that the venue has no legal obligation. Data management and monitoring procedures are inadequate. Evaluation of effectiveness is also lacking.

Riley-Smith, B., & Binder, J. (2003). *Testing of harm minimisation messages for gaming machines*. Sydney, Australia: NSW Department of Gaming and Racing. Available at http://www.dgr.nsw.gov.au/pdfs/rr_riley_binder.pdf

This qualitative study was designed to evaluate gamblers' reactions, while playing poker machines, to 10 different harm reduction messages. For both regular and problem gamblers, the following messages were effective in producing more responsible gambling behaviour: *Have you spent more money on gambling than*

you intended? Are you gambling longer than planned? Have you felt bad or guilty about your gambling? Shortcomings and potentials of this type of strategy are discussed.

Schrans, T., Grace, J., & Schellinck, T. (2004). *2003 NS VL responsible gaming features evaluation.* Halifax, NS: Nova Scotia Gaming Corporation. Available at http://www.gamingcorp.ns.ca/responsible/pbrgf.htm

This study was designed to help the Nova Scotia Gaming Corporation evaluate a second series of modified responsible gaming features (RGFs) implemented for video lottery terminals in Nova Scotia. RGFs are designed to produce reality checks and breaks in play and to promote responsible gambling. Main changes to the RGFs included, but were not limited to, options to set play time limits, a "pop-up" message every 30 minutes, a response requirement for on-screen pop-up messages, changes to make time of day more prominent, and replacement of references to credits with cash amounts. The methodology is described by the authors: "An 'in vivo' live market test was conducted using a Pre Post return-to-sample methodology with a Test and Control Market comparison. In total, 329 Regular VL Players participated in all phases of the study conducted over a six-month period (October 2003 to April 2004): Test Market (South Shore: n=168) and Control Market (Valley: n=161). Pre Survey benchmarks were obtained in each market (Total: n=409; Test Market (South Shore): n=206, Control Market (Valley): n=203). The new RGFs were introduced on selected terminals in the Test Market area only (PS5 terminals). A Post Survey was conducted approximately four months following the introduction of new terminals with approximately 81% of players in each market completing the Post Survey measure." The findings suggest that money budgeting is a more promising feature than time budgeting.

Tse, S., Brown, R., & Adams, P. (2003). *Assessment of the research on technical modifications to electronic gaming machines in NSW, Australia.* Sydney, Australia: NSW Department of Gaming and Racing. http://www.dgr.nsw.gov.au/pdfs/rr_chal.pdf

This report reviews two research reports that investigated the effects, on players and on gaming revenue, of proposed technical changes to the operation of gambling machines. The authors concluded that reducing the maximum bet size could be a sound harm reduction strategy. Reconfiguring bill collectors is also a promising idea, but only if proximity to automatic teller machines is taken into account. Reel spin modifications showed less potential.

Turner, N.E., Wiebe, J., Falkowski-Ham, A., Kelly, J., & Skinner, W. (2005). Public awareness of responsible gambling and gambling behaviours in Ontario. *International Gambling Studies, 5,* 95–112.

This article reports the findings of a general population survey of knowledge of responsible gambling. It includes a preliminary measure of public awareness of information related to the definition of responsible gambling, symptoms of problem gambling, and awareness of the availability of services. One particularly interesting finding was that people who gamble on lotteries and slot machines are

more likely to report being aware of services.

Williams, R. (2002). *Prevention of problem gambling—A school-based intervention.* Edmonton, AB: Alberta Gaming Research Institute. Available at www.uofaweb.ualberta.ca/abgaminginstitute/pdfs/Williams_prevention.pdf

This study was conducted to design, implement, and evaluate a school-based problem gambling prevention program. The study was guided by other programs as well as research on what has been shown to be effective. The curriculum had five sessions: "1. Information concerning the nature of gambling and problem gambling. 2. Exercises to make students less susceptible to the cognitive errors often underlying gambling fallacies. 3. Information on the true odds involved in gambling activities and exercises on how to calculate these odds. 4. Teaching and rehearsal of generic decision-making and social problem-solving skills. 5. Teaching and rehearsal of adaptive coping skills." The author points out that systematic school-based programs are wanting, and evaluations remain contentious. In this program, format was also taken into account: it was designed to be entertaining, emphasized "skill learning" and the application of knowledge, and focussed on the social environment of students. Two sites were chosen: the Calgary High School System and Aboriginal high schools in Southern Alberta. The latter site experienced low enrolment and poor attendance. At the Calgary site, results of the program were promising with respect to knowledge, attitudes, and gambling activity. Short-term results, however, were more significant than long-term results on some measures. The implications of this are discussed.

4. Conceptual issues and general information

Adams, P. (2004). Minimising the impact of gambling in the subtle degradation of democratic systems. *Journal of Gambling Issues, 11.* Available at http://www.camh.net/egambling/issue11/jgi_11_adams.html

This article deals with the ways in which gambling can undermine democratic participation and democratic culture itself. Gambling can undermine social and economic institutions, as well as a society's political processes. Notably in jurisdictions where gambling is rampant, alliances can form between the gambling industry and sections of government. Given that their economic interests converge, the temptation to permit gambling despite the wishes of a community will loom. Globalization is another factor, permitting the gambling industry to act in force upon smaller or more vulnerable communities. But this paper has another focus: with so many individuals at least partly beholden to gambling revenues (or having some relation with those who are), the ability (or willingness) of these people to participate in a democratic critique of gambling can be compromised. This article addresses subtle questions concerning the psychosocial dimensions of democratic culture and their relations to economic power. Certain influences are hard to identify and to report. People working in universities, government departments, community organizations, and other areas can thus be affected. Any effort to minimize gambling-related harm must take this into account. The author calls for independent monitoring of people with public duties who have relationships to the beneficiaries of gambling profits, as well as for an international charter to address this matter. Specific recommendations are

given for various sectors, such as universities and the media.

Alberta Gaming Research Institute. (2004–present). *Research Reveals….* Newsletter. Available at http://www.abgaminginstitute.ualberta.ca/newsletter.cfm

This is "an update on gambling research in Alberta." Often, prevention is the theme. See, for example, the November 2004 issue (below).

Alberta Gaming Research Institute. (2004, November). The development of empirically-derived "low-risk" gambling guidelines: An interview with Dr. Shawn Currie. *Research Reveals…, 4* (1). Available at http://www.abgaminginstitute.ualberta.ca/pdfs/RR-Issue1-vol4-2004.pdf

Given that there is no scientifically developed definition "that provides clear limits on exactly how the risks associated with gambling can be significantly lowered," Dr. Shawn Currie, a clinical psychologist at the Addiction Centre in Calgary, has embarked upon a study called "An empirical approach to developing low-risk gambling guidelines." Currently there are no clear definitions of "safe" or "responsible" gambling. Conversely, for drinking there are clear limits for frequency and quantity. The aim of Dr. Currie's work is to set clear "threshold" limits on gambling frequency, duration, and expenditure in order to better identify high-risk gambling behaviour. With the endorsement of gambling experts, such guidelines could be disseminated to the general public. Dr. Currie acknowledges that there is no such thing as risk-free gambling and that the thresholds could vary according to demographics (e.g., gender is a factor in similar thresholds for alcohol consumption). Evidence suggests that guidelines work, as in the case of one study where problem gamblers were given a strict monetary limit (5% of income). One of the most significant findings so far in Dr. Currie's study is that gambling expenditures exceeding 5% of income represent a serious risk factor.

American Gaming Association (AGA). (2002). *AGA Responsible Gaming Quarterly Archive*. Available at http://www.americangaming.org/rgq/rgq_archive.cfm

This link provides access to articles appearing in the "AGA Responsible Gaming Quarterly" in 2002. Responsible gambling and prevention are major themes.

Arnold, G., Collins, P., Eadington, W., Remmers, P., & Ricketts, T. (2003). *Towards a strategy for dealing with problem gambling*. London, U.K.: Gambling Industry Charitable Trust. Available at http://www.gict.org.uk/reports_towards_a_strategy.asp

This is a general report, with the authors pointing out that only recently has problem gambling been identified as a serious concern. The U.K. is behind on this count compared to many nations, notably in terms of funding, and this report draws upon the experience of other nations (especially English-speaking countries). The authors point out that treatment and prevention measures are too new to have been properly assessed. Priority should be given to a telephone help-line. Education efforts should inform the public about the workings of commercial gambling, the serious problems that gambling can cause for a small minority, the indicators of problem gambling, and the types of help available. The

authors note that many gamblers who may not suffer from real addiction nonetheless suffer some difficulties and could benefit from educational efforts.

Bellringer, M., Perese, L., Rossen, F., Tse, S., Adams, P., Brown, R., et al. (2003). *Supporting the wellbeing of young people in relation to gambling in New Zealand*. Auckland, New Zealand: Problem Gambling Foundation of New Zealand. Available at http://www.responsiblegambling.org/articles/supporting_the_wellbeing_of_young_people.pdf

This report describes the measures taken to reduce harm related to problem gambling among New Zealand youth and offers many suggestions for improvement. At the time of writing, New Zealand gambling legislation did not represent an integrated agenda. The authors note that this generation (aged 12 to 25) is growing up in an environment of legalized (and normalized) gambling and hence faces new difficulties, partly due to overly positive perceptions of gambling and its implications. The authors offer a "strengths-based" approach that focuses on an individual's positive attributes. Other highlights are as follows: adults should be equipped with the necessary knowledge of gambling's negative potential; legislation should be geared to harm minimization; Maori, Pacific, and Asian concerns must be addressed; and knowledge should be built upon information and research. Many issues, including protective and risk factors, are discussed.

Black, R., & Ramsay, H. (2003). The ethics of gambling: Guidelines for players and commercial providers. *International Gambling Studies, 3,* 199–215.

Discussions of gambling issues tend to focus upon social impact rather than ethics. This paper offers an alternative, philosophical, perspective on the ethical issues related to the provision of gambling services. Rather than moralistic, the authors suggest a "moral realist" approach—taking facts and concrete issues into account. If gambling is not necessarily wrong, it still requires an ethical foundation guiding gamblers and providers. The gaming industry will, however, need to alter the ways in which it perceives itself. Currently, whatever ethical discourse exists tends to be in the tradition of public preaching that was practised a century ago. The authors invoke Kant and Aristotle, with questions pertaining to fulfillment and rationality of choices. Is it possible to use gambling as a humanly fulfilling experience? This and other questions are explored. Gambling that took itself seriously along these lines could undo harm and make a serous contribution to the common good.

Blaszczynski, A. (2002). *Harm minimization strategies in gambling—An overview of international initiatives and interventions*. Melbourne, Australia: Australian Gaming Council. Available at http://www.austgamingcouncil.org.au/research/files/International%20Harm%20minimization%20AGC%20draft%20080301.pdf

This report is an overview of harm reduction strategies in several nations. The author points out that there is still little consensus as to what harm reduction means, though an operational definition is provided. Parallels with substance

abuse are discussed. Primary, secondary, and tertiary prevention are defined and discussed in terms of their principles and effectiveness.

Blaszczynski, A., Ladouceur, R., & Shaffer, H. (2004). A science-based framework for responsible gambling: The Reno model. *Journal of Gambling Studies, 20,* 301–317.

This article identifies key principles that should guide a "strategic framework, or blueprint for action" in order to better organize efforts to reduce gambling-related problems. Industry operators, health care providers, social scientists, community groups, relevant government agencies, and other interested parties should join together, essentially forming a coalition geared to reducing or eliminating gambling-related harm while maximizing its benefits. The strategic framework should be based upon empirical, rather than anecdotal, evidence, thereby focussing effectively on vulnerable community members while at the same time avoiding unintended effects upon the majority of harm-free recreational gamblers. While different stakeholders (such as industry operators and health service providers) often define responsible gambling from different perspectives, governments bear the final responsibility for legislative and regulatory initiatives. Currently, however, community pressure often leads to restriction or elimination of gambling venues without scientifically based evidence of harm reduction. The two main barriers to the implementation and evaluation of responsible gambling strategies—lack of conceptual clarity and absence of consensus—should be overcome through empirically and theoretically sound knowledge. For example, specifically focussed psychometric prevalence estimates currently fail to distinguish between subgroups within the problem gambling population (e.g., pathological), making for a lack of clarity, while there is also very little consensus on what constitutes responsible gambling. Five principles are laid out: (1) Key stakeholders will commit to reducing the incidence and prevalence of gambling-related harm. (2) They will work collaboratively to evaluate policies. (3) They will work collaboratively to identify short- and long-range priorities. (4) They will rely on scientific research. (5) Once established, the "action plan" will be subject to ongoing scientific evaluation. The authors argue for the establishment of a global body representing everyone associated with the gambling industry.

Chevalier, S., Geoffrion, C., Allard, D., & Audet, C. (2002). *Motivations for gambling as tools for prevention and treatment of pathological gambling.* Quebec, QC: Institut national de santé publique de Québec.

The researchers discuss the beneficial aspects of gambling with the goal of using some of these for improving treatment of problem gambling. The authors argue that understanding precisely what gambling does for people can help to provide focus for attempts to develop substitute activities that may deliver similar benefits. For example, some gamble for socialization, to "experience emotions," or to donate to charities. Despite the title, this report has far more to do with treatment than prevention.

Connecticut Council on Problem Gambling (1998–2001). *Prevention of problem gambling: A monthly newsletter on problem gambling prevention information, research, and initiative.* Available at http://www.ccpg.org/prevention_newsletters.asp

This monthly newsletter covered issues pertaining to the prevention of problem gambling and is still available on-line.

Derevensky, J., & Gupta, R. (2000). Prevalence estimates of adolescent gambling: A comparison of the SOGS-RA, DSM-IV-J, and the GA 20 Questions. *Journal of Gambling Studies, 16,* 227–251.

Gambling levels among children and adolescents are growing at an unprecedented rate, and high levels of problem gambling among youth have been identified. The strengths and weaknesses of various screening instruments, along with some of the modifications made for addressing youth, are discussed. In this study, 980 adolescents were administered three gambling screens: the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA), the DSM-IV-J, and the GA 20 Questions. The two professionally devised screens delivered problem/pathological gambling rates of 5.3% (SOGS-RA) and 3.4% (DSM-IV-J), and the GA 20 Questions identified 6%. The authors discuss qualitative issues, such as higher correlation between scales for males than for females, and the items best reflecting the differences between those reporting mild to moderate gambling problems and those reporting serious problems. Comparison of the three screens revealed fairly high agreement and verify the contention that more youth (notably males) report serious gambling problems than adults. More research is needed to identify characteristics that differentiate between male and female youth problem gamblers, and more attention should be paid to the fact that there may be different types of problem gamblers. The authors point out that problem gambling rates hinge upon definitions of the issues and that the instruments under study may not provide a "gold standard." The latter would be invaluable for the development of education and prevention efforts.

Derevensky, J., & Gupta, R. (2004). Adolescents with gambling problems: A synopsis of our current knowledge. *Electronic Journal of Gambling Issues, 10.* Available at http://www.camh.net/egambling/issue10/ejgi_10_derevensky_gupta.html

A significant minority of adolescents who gamble have serious gambling problems, and this article reviews current empirical knowledge of problem gambling among youth. Emphasis is given to the work of Henry Lesieur (to whom this issue is dedicated). While this article provides little new information, it is, as the title suggests, a synopsis (and very thorough). Risk factors and correlates are discussed, and a list of the most important factors and issues is provided. Treatment issues are also covered. The authors point out that knowledge of gambling prevention is still embryonic and that the field must consistently borrow knowledge from the more developed field of substance abuse. A short, yet erudite, account of the abstinence versus harm reduction controversy is provided. The authors point out that even if knowledge of gambling prevention is still wanting, adaptations of theories governing adolescent risk behaviour can provide a useful starting point. The authors also point out that today's youth will soon be adults, with the implication that efforts targeting the young may be a very important aspect of prevention.

Derevensky, J., Gupta, R., Dickson, L., & Deguire, A. (2001). *Prevention efforts toward minimizing gambling problems*. Washington, DC: National Council for Problem

Gambling, Center for Mental Health Services (CMHS), and the Substance Abuse and Mental Health Services Administration (SAMHSA).

This report discusses many issues pertinent to prevention. Much of the conceptual framework is explicated below under Dickson, Derevensky, & Gupta (2002). The theoretical underpinnings of current youth gambling treatment are discussed. The abstinence versus harm reduction controversy is covered comprehensively. The report also provides a review of available prevention programs. Emphasis is placed on viewing risky behaviours on a continuum of harm.

Derevensky, J., Gupta, R., & Winters, K. (2003). Prevalence rates of youth gambling problems: Are the current rates inflated? *Journal of Gambling Studies, 19,* 405–425.

This article points to inconsistencies in prevalence estimates of problem gambling among youth and tackles the question of whether these rates have been inflated. Screening tools, instruments, and definitions of youth problem gambling all require greater scientific scrutiny. Risk factors must be understood more fully. Better screening, prevention, and treatment initiatives will hinge upon the development of such knowledge. Despite uncertainty about the prevalence of gambling problems among youth, there is good evidence that this group is at high risk. Given that it normally takes years for gambling to reach pathological levels, early intervention could offset many problems.

Dickson, L., Derevensky, J., & Gupta, R. (2002). The prevention of gambling problems in youth: A conceptual framework. *Journal of Gambling Studies, 18,* 97–159.

This article tackles the question of whether and to what extent prevention programs for alcohol, tobacco, and illicit drug abuse can provide elements that could be applied effectively to similar measures for gambling among youth. Though awareness of the need to educate children about the dangers of gambling has increased, empirical knowledge of how to prevent problem gambling among adolescents is wanting. Various addictions share common risk and protective factors, suggesting the need for a general model. The authors argue for the applicability of a general adolescent risk-taking model. The authors argue that research on resiliency during adolescence should guide preventative efforts, given that gambling is a socially acceptable activity. Resiliency literature suggests that some are more immune to stress, deprivation, and adversity, rendering them less vulnerable to compulsions and addictions than others in similar situations. The authors argue that children are not born resilient, so that the environmental risk and protective factors should be identified (though they do not dismiss biochemical and genetic components). Psychological, family, and peer factors are discussed.

Dickson, L., Derevensky, J., & Gupta, R. (2004a). Harm reduction for the prevention of youth gambling problems: Lessons learned from adolescent high-risk behavior prevention programs. *Journal of Adolescent Research, 19,* 233–263.

While harm reduction has become a favoured approach to adolescent substance

abuse, its application to the treatment and prevention of problem gambling among youth is still largely unexamined. This study was designed to assess harm reduction as a preventative paradigm, for gambling and also for other potentially risky behaviours. From the abstract: "The authors use a universal, selective, and indicative prevention framework to present current prevention initiatives that have emerged from the harm reduction health paradigm for adolescent substance and alcohol abuse. The risk-protective factor model is used as a conceptual basis for designing youth problem gambling harm reduction prevention programs. This framework illustrates the developmental appropriateness of the harm reduction approach for youth. Implications drawn from this conceptual examination of harm reduction as a prevention approach to adolescent problem gambling provide valuable information for treatment providers as well." A harm reduction approach would be guided by certain principles: value neutrality with respect to gambling (and other risky behaviours); humanism, in short meaning that the adolescent is treated with respect and is expected to behave much like an adult; acknowledging the adolescent's active role in preventative measures; and integrating other approaches. Harm is perceived as falling upon a continuum, with people at the extreme of uncontrolled behaviour being possibly inappropriate candidates for harm reduction strategies.

Dickson, L., Derevensky, J., & Gupta, R. (2004b). Youth gambling problems: A harm reduction prevention model. *Addiction Research and Theory, 12*, 305–316.

The authors discuss harm reduction in relation to the prevention of youth gambling problems, noting that its use has already been established in the substance abuse field. For a conceptual basis, see Dickson, Derevensky, and Gupta (2004a) above.

Dyall, L. (2004). Why is wearing glasses useful in New Zealand? *Journal of Gambling Issues, 12*. Available at http://www.camh.net/egambling/issue12/jgi_12_dyall.html

This article was prepared in support of the development of a public health approach to gambling and its related harms in New Zealand. Supporting the ideas presented at the Auckland (2003) conference, Gambling Through a Public Health Lens, the author argues that issues can be observed through many "prisms." The Maori perspective on gambling is the "lens" guiding this article, which argues for a public health approach appropriate for this aboriginal tribe. Focussing on family networks, tribal communities, and tribal groups, the author suggests that the Maori may eventually lend assistance in the reduction of gambling-related harm, through the maintenance of cultural traditions, to other ethnic communities both in New Zealand and elsewhere. The paper discusses gambling in its connection to the Maori's experience with colonialization, as well as how the Maori currently perceive gambling revenues through their ownership (or partial ownership) of gambling venues as a means of achieving some economic independence.

Eadington, W. (2003). Measuring costs from permitted gambling: Concepts and categories in evaluating gambling's consequences. *Journal of Gambling Studies, 19,* 185–213.

The author critiques the methods of determining costs and benefits that guide policies targeting legalized gambling. The author makes a distinction between narrow, economic evaluations and a broader conception of "harm." The types of policies implemented by governments will be greatly affected by which of these perceptions is prevalent. Many attempts to assess "social costs" are seriously flawed, as they gloss over the complexities of this question. The author suggests that casino customers who wish to wager more than a small amount be required to obtain a gambling licence, which could be revoked under certain conditions. Above all, the author argues that society should attain a greater awareness of the personal and social costs associated with gambling.

Evans, C., Kemish, K., & Turnbull, O. (2004). Paradoxical effects of education on the Iowa Gambling Task. *Brain and Cognition, 54,* 240–244.

The Iowa Gambling Task (IGT) was designed to measure emotion-based learning systems, or "intuition." This important study provides evidence that education may in fact undermine emotion-based learning, or at least its role in decision making. Better educated individuals may hence perform poorly on the IGT. In a "real-money" version of the Task, less educated individuals outperformed university-educated people in some categories, while in others there was no significant variation. The role of education in the maintenance of false beliefs is one explanation.

Evans, R. (2003). Some theoretical models and constructs generic to substance abuse prevention programs for adolescents: Possible relevance and limitations for problem gambling. *Journal of Gambling Studies, 19,* 287–301.

The author claims that most gambling prevention programs have not been based on theoretical models. This article describes in a historical context various psychosocial models for the prevention of substance abuse among adolescents with an eye to how they may apply to problem gambling within that group. These include social inoculation, reasoned action, planned behaviour, and problem behaviour theory. Differences between gambling and substance use are discussed; for example, unlike alcohol and drug use, gambling does not present immediately recognized adverse effects. The author points out, however, that even though gambling is a "drugless" addiction, gamblers' self-descriptions of their experiences often resemble those of chemical-dependent individuals. The author concludes that substance abuse prevention research directed at adolescents presents theoretical frameworks that could be useful to the prevention of pathological gambling.

Felsher, J., Derevensky, J., & Gupta, R. (2004b). Lottery playing amongst youth: Implications for prevention and social policy. *Journal of Gambling Studies, 20*, 127–153.

This study finds that while many gambling venues are difficult for underage people to access, many retailers willingly break the law by selling scratch tickets to children as young as 11. Advertising for lotteries has become more aggressive and is deceptive about the odds of winning, and children who buy tickets tend to

be poorly informed about their chances of winning. Many youth do not perceive scratch tickets or lottery draws as "gambling." Since it is a myth that current legal statutes have presented a serious deterrent to underage gambling, greater social awareness of this fact along with more conscientious law enforcement is recommended. Widespread prevention programs should begin at the elementary school level.

Fisher, S. (2000a). Developing the DSM-IV-DSM-IV criteria to identify adolescent problem gambling in non-clinical populations. *Journal of Gambling Studies, 16,* 253–273.

This article discusses a revised version of the DSM-IV-J criteria for youth—the DSM-IV-MR-J—along with psychometric findings stemming from its use in a prevalence study of adolescent gambling. The author claims that current and emerging screening instruments for problem gambling among youth require more testing and development in order to establish an accepted "gold standard." The revised instrument addresses the appropriateness of "yes–no" responses outside of clinical situations and seems to discriminate efficiently between problem and non-problem fruit machine gamblers aged 12 to 15. Yet more stringent testing is needed. Currently, it is questionable whether various cultural, social, psychological, and environmental factors are properly accounted for.

Fisher, S. (2000b). Measuring the prevalence of sector-specific problem gambling: A study of casino patrons. *Journal of Gambling Studies, 16,* 25–51.

Face-to-face interviews with 1,105 patrons from 40 casinos in the U.K. were conducted in order to measure the prevalence of problem gambling within a specific sector of the gambling industry. This study lent support to earlier work suggesting that casinos in the U.K. could be sustained by regular gamblers among whom high rates of problem gambling could be found (7% of casino patrons accounted for 63% of visits). Evidence was also produced for the relevance of demographic factors to the choice of gambling venue. The author calls for more sector-specific prevalence studies as a means to identify more problem gamblers and to provide better knowledge of relevant demographic characteristics. Such knowledge could help to yield better prevention and treatment interventions. Asians, for example, were overrepresented among problem gamblers in this study, as were people with substance addictions and those who started gambling at earlier ages.

Gardner, L., Kalt, J., & Spilde, K. (2005). *Cabazon, the Indian Gaming Regulatory Act, and the socioeconomic consequences of American Indian governmental gaming—A ten year review/annotated bibliography: The social and economic impacts of Indian and other gaming.* Cambridge, MA: The Harvard Project on American Indian Economic Development, John F. Kennedy School of Government, Harvard University. Available at http://www.ksg.harvard.edu/hpaied/pubs/documents/AmericanIndiansonReservationsADatabookofSocioeconomicChange.pdf

This annotated bibliography provides an impressive list of titles dealing with the social and economic effects of gambling.

Gilliland, J. (2003). Putting gambling in its place: A geographical study of VLT accessibility and play by Montreal youth. *Youth Gambling International, 3* (3), 1–2. Available at http://www.education.mcgill.ca/gambling/en/PDF/Newsletter/Fall2003.pdf

> Video lottery terminals (VLTs) are widely available in Montreal, and some critics claim that these machines are in fact aimed at vulnerable populations (youth, the poor), though this remains unverified. This article discusses preliminary results of a project still under way attempting to determine whether placement of VLTs and socioeconomic environment influence youth gambling behaviour. VLTs are found to be heavily concentrated near secondary schools. If preliminary findings hold up, this research will conclude that the social environments conducive to problem gambling among youth have been intensified in recent years and that lottery sites should be restricted with respect to their proximity to schools.

Griffiths, M. (1999). Gambling technologies: Prospects for problem gambling. *Journal of Gambling Studies, 15,* 265–283.

> Noting a long-standing link between technology and gambling practices, the author discusses the potential of newer gambling technologies to generate more problem gambling. Internet gambling is identified as an area of future concern.

Hardoon, K., & Derevensky, J. (2002). Child and adolescent gambling behavior: Current knowledge. *Clinical Child Psychology and Psychiatry, 7,* 263–281.

> Evidence suggests that underage youth participate in both legal and illegal types of gambling, with 4% to 8% reporting serious problems with gambling and another 10% to 15% at risk. Gambling is the addictive behaviour in which children and adolescents engage with the greatest frequency. This article represents a synopsis of available knowledge. Current theories of gambling behaviour and addiction are discussed, along with risk and protective factors. The authors point out that the early onset of gambling, unique in our time to this generation of youth, renders the need for prevention programs more pressing. Coping skills, problem solving, and gambling awareness should be taught at primary and secondary schools.

Hardoon, K., Derevensky, J., & Gupta, R. (2003). Empirical measures vs. perceived gambling severity among youth: Why adolescent problem gamblers fail to seek treatment. *Addictive Behaviors, 28,* 933–946.

> This study finds that youth who qualify as problem or pathological gamblers according to accepted gambling screens are likely not to perceive themselves as such. Though it is possible that the screens overestimate problem gambling prevalence, the authors consider at least one of the screens (DSM-IV-J) quite conservative and hence conclude that it is more likely that youth with gambling problems tend to underestimate severity. The authors note, for example, that unlike adults, youth often do not have jobs to lose: youth tend not to seek help until their problems have become overwhelming.

Hing, N. (2003). Principles, processes and practices in responsible provision of

gambling: A conceptual discussion. *Gaming Research and Review Journal, 7* (1), 33–48

The author offers a definition and conceptual framework for responsible gambling based upon three "central constructs" from the corporate literature. Responsible gambling provision is "the congruence between the socially responsible principles, socially responsive processes, and socially desirable practices that gambling operators pursue and those expected by their stakeholders in managing the social impacts of gambling." The author discusses this framework and its potential research applications.

Hirsch, P. (2000). *Seniors and gambling: Exploring the issues.* Edmonton, AB: Alberta Alcohol and Drug Abuse Commission.

Seniors represent a fast-growing segment of Canada's population, and there is anecdotal evidence that more of them are gambling. Given the lack of solid information about gambling among seniors, the Alberta Alcohol and Drug Abuse Commission conducted a preliminary investigation of this issue. The focus was on gambling attitudes and behaviours and the effectiveness of intervention and preventative initiatives. Bingo, lotteries, and casino games were the most common activities, with women overrepresented in bingo. One important reason seniors gamble is to socialize, with loneliness as a major inducement. Problem gamblers among this group were more likely to believe that many seniors had problems with gambling. Some seniors suggested that the availability of alternative activities would help to reduce problem gambling. The author concludes that most Alberta seniors are well adjusted and healthy with respect to gambling. Yet some problems exist, and these are two of the author's recommendations: existing problem gambling awareness campaigns should contain messages aimed at seniors, and these should target "key influencers" such as clergy, family, and physicians, and the ability of seniors to help each other should be enhanced.

International Centre for Youth Gambling Problems and High-Risk Behaviors. (2001–present). *Youth Gambling International Newsletter.* Available at http://www.education.mcgill.ca/gambling/en/newsletter.htm

This quarterly on-line newsletter is distributed by Youth Gambling International and should be of interest to anyone involved in the prevention of gambling problems among youth (see, for example, the Winter 2002 issue of the newsletter, or, in this bibliography, Gilliland (2003)). In their words: "Prevention—The Centre develops prevention programs and coordinates prevention efforts on an international level. We are also supporting the development of social policy guidelines with respect to advertising and working on developing a public health framework. Information Dissemination & Library Services—The Centre operates an online database and central clearinghouse, and disseminates research and treatment information on youth gambling, co-occurring addictive disorders, and youth risk-taking behaviours. We also publish a quarterly online newsletter, Youth Gambling International (YGI), and an online monthly news update, YGI Flash, which is currently distributed to over 1000 individuals and organizations."

Katzman, M. (2002). *When the stakes are high—Gambling and schools*. Halifax, NS: Addiction Prevention and Treatment Services, Capital Health. Available at www.cdha.nshealth.ca/programsandservices/addictionprevention/gamblingPolicy.pdf

This Nova Scotia report was written to inform decisions regarding school-based gambling policies. Issues covered include the extent and effects of adolescent gambling, ways in which schools may be aggravating the situation, actions schools can take to reduce gambling-related harm, and the main issues to consider. The author points out that schools often raise funds through activities such as bingo and that at the very least students should be aware of facts of gambling. For example, a "50/50 Draw" may be taken to entail a 50% chance of winning. As well, in a controlled classroom environment, students are largely protected and the consequences of losing are minimal, yet they may not appreciate the fact that similar games in other settings pose significant risks. As well, adults need to consider how their behaviour will affect the perception of youths. A comprehensive approach, with six categories, is suggested: (1) information and awareness; (2) education and skill development; (3) alternative activities; (4) community development, capacity building, and institutional change; (5) public social policy; and (6) intervention strategies aimed at high-risk individuals.

Kelly, J., Skinner, W., Wiebe, J., Turner, N., Noonan, G., & Falkowski-Ham, A. (2001). *Project Weathervane: Measuring gambling behaviours, knowledge and attitudes in Ontario.* Toronto: Responsible Gambling Council and Centre for Addiction and Mental Health.

The behaviour, knowledge, and attitudes of Ontario adults are studied with an eye to informing public awareness and prevention campaigns. Overall, awareness of the need for such strategies is increasing. The report addresses issues such as the illusion of control and predictability, and found that misconceptions along these lines were quite common—above all, knowledge of probability was associated (though not too strongly) with responsible gambling practices. As well, it was found that 60.2% of people surveyed had never heard the term "responsible gambling" and that most respondents had a poor grasp of the signs of problem gambling.

Korn, D. (2000). Expansion of gambling in Canada: Implications for health and social policy. *Canadian Medical Association Journal, 163,* 61–64.

The recent rise in legalized gambling, due to the government's need for revenue, is a public health issue involving gambling addiction, family dysfunction, and youth gambling. Overall gambling prevalence is low, but rising, and the prevalence of gambling among youth is a serious concern. New technologies such as video lottery terminals have been associated with gambling problems and addiction. Internet gambling is another new concern. This article recommends the adoption of a public health approach to the issue, with five specific suggestions: (1) balance the public interest with respect to revenue generation and gambling-related harm, (2) monitor gambling advertising, (3) gauge the impact on quality of life, (4) develop a research agenda, and (5) adopt a harm reduction approach.

Korn, D., Gibbins, R., & Azmier, J. (2003). Framing a public policy towards a public health paradigm for gambling. *Journal of Gambling Studies, 19*, 235–256.

The authors argue for public policy on gambling based upon a public health perspective. The ways in which policy debates are currently framed do not take into account the broader social and economic effects of gambling, which a public health frame is designed to consider. Though economic and political interests pose obstacles to the adoption of this alternative paradigm, and cultural attitudes are also resistant, research can overcome these challenges as it has with other issues, such as smoking and product liability. Traditional gambling frames include the following: "gambling is a matter of individual freedom," "gambling is a recreational activity," "gambling is an important tool for economic development," and "gambling addiction is an individual rather than a social pathology." Different frames need not be mutually exclusive, and no combination need be exhaustive. But a public health frame is best suited to prevention and harm reduction. The authors argue that the ideology of individual rights may account for the framework that offers the strongest resistance to a public health perspective.

Korn, D., & Shaffer, H. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies, 15,* 289–365.

The recent rise in legalized gambling has been accompanied by an increase in problem and pathological gambling among adults, and gambling-related problems among youth are also a serious concern. Yet gambling-related problems have received little attention in terms of their impact on health. This article was written with four goals: (1) raise awareness among health professionals; (2) place gambling within a public health framework; (3) identify major public health issues related to gambling; and (4) propose an agenda for policy, prevention, and treatment based upon the Ottawa Charter for Health Promotion. Unlike a narrow clinical model, a public health perspective is multifaceted and better equipped to address preventative issues. The authors argue for a broader conception of "health" involving a range of socially based criteria. Significant theoretical constructs, such as the human ecology paradigm, are discussed, along with the differences and similarities between problem gambling and substance addiction. Key proposals include suggestions for educational initiatives and healthy gambling guidelines comparable to those already in place for alcohol.

Ladouceur, R., Ferland, F., Coté, M., & Vitaro, F. (2004). Teachers' knowledge and training needs regarding youth gambling. *School Psychology International, 25,* 472–479*.*

This study was designed to gauge teachers' understanding of youth problem gambling and to assess their interest in applying prevention programs. While teachers were found to have a good grasp of youth gambling problems and were interested in learning more, they were not ready to spend time on gambling prevention.

Ladouceur, R., Vitaro, F., & Coté, M. (2001). Parents' attitudes, knowledge, and

behavior toward youth gambling: A five-year follow-up. *Journal of Gambling Studies, 17,* 101–116.

Based on two telephone surveys of parents of 5- to 17-year-old children in the Quebec City area, one in 1995 and one in 2000, parents' attitudes, knowledge, and behaviour regarding youth gambling were compared. Several changes were found on all three counts. Parents perceived the age of onset of gambling behaviour more correctly (though they still underestimated it), were more satisfied with government limits on access to gambling, and were more knowledgeable about the legal status of lottery ticket sales. Conversely, a larger percentage of parents did not associate youth gambling with some of its correlates (such as parental gambling problems and friendship with gamblers). Though public education was likely responsible for the observed improvements, inconsistent results suggest that further education efforts are required. The results of this study shed light upon which aspects of parenting were amenable to public information and which were more resistant, knowledge that should assist in the development of future preventative and educational measures.

Law, M. (2004). *From patron care to consumer protection: Poker machines in Tasmania*. Hobart, Tasmania: Anglicare Tasmania. Available at http://www.anglicare-tas.org.au/pdfs/pokercare.pdf

One in 10 poker machine players experience some problems. Just as there are strategies in place to minimize harm associated with alcohol and other drugs, the gaming industry should also be regulated in an appropriate fashion. Treatment and referral present too narrow a focus—the identifiable problem gambler—whereas all consumers of poker machines should be taken into account in the provision of safe gambling environments. Strategies to protect the gambling consumer can be called "patron care." This involves harm reduction rather than prohibition, as well as the acknowledgement that harmful consequences are not limited to pathological gamblers and can occur on occasion with recreational gamblers as well. Such difficulties can affect not only the gambler but the gambler's family and larger community. Research has shown that the public perception is that governments that make money from gambling also have a duty of care. Currently, the Tasmanian gaming industry focuses on those who have already developed problems and who are willing to seek help. This must be revised. Certain strategies—such as warnings on gambling products, regional caps on the number of machines per population, and a $50 limit on note acceptors—are recommended for investigation as to their effectiveness. Other proposals are recommended for immediate enactment. These include slower game speeds, legal limits on the amount that can be bet per game, and independent investigation of several current practices.

Leeds, Grenville & Lanark District Health Unit. (2005). *A public health perspective on gambling in Ontario.* Author. Available at http://www.healthunit.org/adults/php_gambling.htm

This paper provides information on recent gambling research, with an emphasis on youth gambling. Facts about gambling in Ontario, from demographics to legal issues, are provided. A separate section is devoted to a general discussion of

prevention programs for youth. A public health approach is advocated.

Messerlian, C., Derevensky, J., & Gupta, R. (2004). A public health perspective for youth gambling. *International Gambling Studies 4,* 147–160.

Gambling problems among youth are increasing at alarming rates worldwide. This represents a public health concern. A conceptual framework is needed. This article discusses such a framework, a theoretical model designed to assist in the development, implementation, and evaluation of a multilevel health promotion and prevention strategy. Problem gambling is "socially invisible," and many are unaware of its seriousness as it relates to youth. Noting that problem gambling is governed by complex and interacting determinants, the authors argue that gambling expansion and the related problems must be viewed socially, politically, and economically. They recommend a population approach that would "shift the distribution of all risk factors in a favourable direction." Unlike the medical approach, this approach would address the problem at its roots and has more preemptive merit. Though overall gambling levels may not be an absolute determinant for problem gambling, they must still be taken into account. The authors suggest developing personal skills (of youth, parents, and professionals), strengthening community capacity, encouraging supportive environments (in a larger sense, involving issues not directly related to gambling), recommending health-oriented public policy, and reorienting health services.

Messerlian, C., Derevensky, J., & Gupta, R. (2005). Youth gambling problems: A public health perspective. *Health Promotion International, 20,* 69–79.

Problem gambling has only recently been identified as a major public health issue, with an emerging awareness that adolescents and young adults may represent the highest risk in this area. Initiatives targeting youth are only now receiving scrutiny. The Ottawa Charter of Health Promotion provides a framework for a prevention model and "framework for action" to address and understand the issue of youth gambling problems from a population-based viewpoint: "This framework applies denormalization, protection, prevention, and harm-reduction principles to youth gambling problems and describes primary, secondary and tertiary prevention objectives." This article describes a "Youth Gambling Risk Prevention Model," which identifies youth gambling behaviour along a continuum of risk, with appropriate interventions for different levels of risk. The authors note that while knowledge of youth gambling is still limited, more developed knowledge of substance abuse can be used in this area. A population-based approach involves a broader focus upon the social, rather than an individualistic medical, framework.

New Zealand Ministry of Health (2004). *Preventing and minimising gambling harm: Strategic plan 2004–2010, Needs assessment, Proposed three-year funding plan, Proposed problem gambling levy rates*. Wellington, New Zealand: Author. Available at http://www.moh.govt.nz/moh.nsf/0/CA598932BB52A37DCC256E610016B0AE/$File/ProblemGamblingConsultation.pdf

In 2004, the New Zealand Ministry of Health assumed responsibility for the

funding and coordination of problem gambling services with a mandate to prevent and minimize gambling-related harm. The Ministry asked for feedback on four documents: (1) Strategic plan for preventing and minimising gambling harm: 2004–2010, (2) Problem gambling needs assessment, (3) Proposed three-year funding plan, and (4) Proposed problem gambling levy rates. Primary prevention is described as a largely preemptive measure with an emphasis on positive health promotion. Secondary prevention addresses problems in their early stages. Tertiary prevention addresses the full-blown harms associated with problem gambling. Supply reduction strategies, demand reduction strategies, and problem limitation strategies are all discussed. Guiding principles include a "whole-government (multi-faceted) approach," cultural relevance, reduction of health inequalities, and addressing harm on a continuum.

Noonan, G., Turner, N., & Macdonald, J. (1999). *Gambling and problem gambling amongst students in grades 5 to 11*. Toronto: Problem Gambling Service and Addiction Research Foundation, Divisions of Centre for Addiction and Mental Health. Available at http://www.responsiblegambling.org/articles/Gambling_and_problem_gambling_amongst_students_in_grades_5_to_11.pdf

This study finds fairly high levels of gambling among students, with rates increasing with each grade level. Over 22% of students reported buying lottery tickets or similar products despite legal restrictions on sales to minors, and almost 50% engage in some form of gambling. Problem gambling behaviours among some students were also evident, with games of skill and betting on sports events demonstrating stronger associations with problem gambling (except for younger students, for whom lottery purchases showed such a correlation). The authors note that today's children are among the first to grow up in an environment wherein gambling is a common and accepted activity and that problem gambling rates among youth are much higher than among adults. A key issue is the possibility of many children developing into adult problem gamblers. Prevention efforts should target the distorted ideas about winning that are often associated with problem gambling. While the nature of random events must be understood, the authors point out that cognitive education is insufficient and that emotional issues must be addressed.

North American Training Institute. (Current). http://www.nati.org

This Web site provides information on all relevant aspects of responsible gambling. Accessible options include "prevention tools," "responsible gaming," and "educator tools." Special attention is given to information for teens and seniors. In their own words: "Providing gambling addiction clinical coursework, youth gambling prevention programs, and responsible gaming services for over a decade."

Nowatzki, N., & Williams, R. (2002). Casino self-exclusion programmes: A review of the issues. *International Gambling Studies, 2,* 3–25.

Authors' abstract: "Casino self-exclusion is a procedure by which individuals can have themselves banned from entering a casino. One of the purposes of this

paper is to present information about the availability and features of these programmes. A second purpose is to make recommendations about how to best operate them based on cross-jurisdictional analysis and lessons from the addiction literature. The first section of the paper describes the typical casino self-exclusion programme, outlining the features common to most policies. The second section provides a detailed overview of the programmes operating in Canada in order to give the reader an appreciation of the procedural variations that exist. The third section discusses the effectiveness of self-exclusion programmes. Finally, the fourth section contains recommendations on ways to improve effectiveness. When properly implemented, self-exclusion can be a valuable tool in helping to curb problem gambling."

Petry, N., Armentano, C., Kuoch, T., Norinth, T., & Smith, L. (2003). Gambling participation and problems among South East Asian refugees to the United States. *Psychiatric Services, 54,* 1142–1148.

This study was conducted to investigate rates of gambling and problem gambling among South East Asian refugees. No other known study has done so. The South Oaks Gambling Screen was administered to 96 immigrants from Laos, Cambodia, and Vietnam. They were also asked to provide demographic information and data on recent gambling behaviour. Fifty-nine percent registered for lifetime prevalence of pathological gambling. The authors note that these rates of pathological gambling are 10 to 25 times as high as that found in the general population (higher, for example, than for substance abusers). While country of origin did not figure in rates of problem gambling, being male, divorced, and young were strong predictors. The findings indicate that more should be known about the social, cultural, and environmental issues associated with gambling in this group. Prevention and intervention strategies must be ethnically sensitive.

Pitcher, A. (1999). Responsible promotion of gaming and dealing with problem gamblers. *Journal of Gambling Studies, 15,* 149–159.

The Chief Executive of Christchurch Casino in New Zealand discusses the importance of responsible gambling. Casinos especially are the targets of media and political attention. The author argues that governments could do more to fulfill their obligations and that casinos have good economic reasons to be responsive to community concerns. In fact, casinos are compatible with public health. Greed, vanity, and envy make all people latent problem gamblers, and this is not the fault of casinos. Casinos did not cause problem gambling. Instead, their high profile drew attention to an already existing problem. Sound community relations are in a casino's interests, and hence the interests of this industry converge with those of the public.

Quinn, F. (2001). First do no harm: What could be done by casinos to limit pathological gambling. *Managerial and Decision Economics, 22,* 133–142.

Casinos could curtail pathological gambling by limiting their own contributions to its development. The sizes of jackpots and length of play could be limited. As

well, limiting access and decreasing arousal, having less variability in games, and offering fewer inducements to play are all reasonable strategies. An external regulatory agency may be required to this end. Despite resistance, casinos may benefit in the long run, partly because their advertising and capital expenditures would be smaller.

Raeburn, John. (2004). An international charter for gambling: The Auckland Conference and beyond. *Journal of Gambling Issues, 12*. Available at http://www.camh.net/egambling/issue12/jgi_12_raeburn.html

Claiming to be the first international conference devoted exclusively to the idea of public health in gambling, the Auckland Conference also had an objective: an International Charter for Gambling designed to raise awareness of governments worldwide of their responsibility to exercise a duty of care toward their citizens with respect to gambling. Most governments that permit gambling are actively involved in its promotion and development. They are hence responsible for much of the harm associated with this activity. These governments profit from gambling, which serves as an alternative to higher taxes. Despite the political expediency of this approach to revenue generation, governments tend to be part of the problem, the public health and societal dimensions of gambling need to be addressed, and those concerned should have an established mechanism by which to convey their views on the ways in which governments should address gambling-related matters. The proposed Charter would enforce government accountability. The author grants, however, that in the current political climate it would be difficult to take such a Charter to world bodies such as the United Nations and the World Health Organization. The proposed Charter would be guided by seven principles: (1) enjoyment of gambling and freedom from harm, (2) government duty of care and protection, (3) community empowerment, (4) informed consent and education, (5) protection of populations from negative effects of gambling, (6) access to care and effective resources for those affected by problem gambling, and (7) the right to abstain or limit consumption.

Roney, C., & Trick, L. (2003). Grouping and gambling: A Gestalt approach to understanding the gambler's fallacy. *Canadian Journal of Experimental Psychology, 57,* 69–75.

The gambler's fallacy, the mistaken belief that independent events such as the results of a coin toss are influenced by recent outcomes (for example, that "tails" is more likely to turn up after several "heads"), is studied under two conditions: a clinical trial following a run of several heads or tails was grouped with the prior sequence as part of "Block 1," and the trial was grouped as the start of a new sequence, as the start of "Block 2." In the former case, the gambler's fallacy was evident, but not in the latter. These findings suggest that the standard "judgment approach," involving education on the nature of random sequences, may not yield the desired results. Conversely, a Gestalt approach, wherein people are taught to reframe the sequence in such a way that the following event is perceived as a new starting point rather than as a continuation of the prior sequence, may prove more effective. The authors caution that their findings are preliminary and that more study is required.

Shaffer, H. (2003). A public health perspective on gambling: The four principles. *AGA Responsible Gaming Lecture Series, 2* (1), 1–27. Available at http://www.americangaming.org/assets/files/LectureSHAFFERfnl.pdf

The author identifies four principles upon which a public health perspective should be based: (1) Scientific research should form the basis of public health knowledge. (2) Such knowledge should be derived from population-based observations. (3) Health initiatives should be proactive. (4) A balanced perspective, incorporating harms as well as benefits of gambling, is required. The author discusses four "opposite" principles and their implications in order to firmly validate his own position.

Shaffer, H. (2004). The road less travelled: Moving from distribution to determinants in the study of gambling epidemiology. *Canadian Journal of Psychiatry, 49,* 504–516.

The author argues that it is time to put less emphasis on general population-prevalence data and instead focus upon the risk and protective factors associated with the onset of gambling disorders. Little is known about incidence among vulnerable and resilient populations. Yet prevalence studies should focus upon groups with increased vulnerability (such as adolescents and substance abusers). More focus should be directed at onset and determinants of problem gambling. But before we can travel down this road, current diagnostic screens, theoretical constructs, and epidemiological tools require revision. Primary and secondary prevention options are discussed with an eye to how they could be improved once research has taken this direction. Matching specific efforts to specific populations will be key.

Shaffer, H., Forman, D., Scanlan, K., & Smith, F. (2000). Awareness of gambling-related problems, policies and educational programs among high school and college administrators. *Journal of Gambling Studies, 16,* 93–101.

A survey of high school and college representatives in Massachusetts found that educators were largely unaware of the prevalence of gambling-related problems among youth. A survey instrument designed to evaluate policies and training programs was employed. Both high schools and colleges were found to lack policies and regulations pertaining to gambling and to provide few channels for students and faculty to educate themselves on the potential hazards. The authors suggest that it is unlikely that the educators under study are equipped to engage in meaningful detection and preventative efforts.

Shaffer, H., & Korn, D. (2002). Gambling and related mental disorders: A public health analysis. *Annual Review of Public Health, 23,* 171–212

The authors apply a public health perspective (see Korn & Shaffer, 1999; Shaffer, 2003) to the prevalence of gambling and related mental disorders. Effects on public health are discussed in psychological, economic, and social terms, with harms and benefits taken into account. Vulnerable groups are examined. The public health "paradigm" implies a broad approach to prevention, the latter being promoted as a "community priority." Harm reduction should focus more on people

with subclinical levels of gambling problems.

Shaffer, H., LaBrie, R., & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors, 18*, 40–48.

Exposure and adaptation models offer divergent, even conflicting, viewpoints on the relation between addictions and environmental influence. Exposure theory identifies certain influences as "toxins," with the corollary that an institution such as a casino would have a direct effect upon the frequency of problem gambling. Conversely, adaptation theory grants this premise only for the short term, proposing that individuals should eventually become resistant to the aggravating agent. This article discusses a public health regional exposure model (REM) designed to acquire empirical evidence for both perspectives. Modified to address gambling, the REM is able to quantify social constructs by means of standard indices of regional social exposure. Given that gambling studies is a new field, the numerous sources of gambling exposure are hard to identify and measure, and this article makes use of some knowledge already available in the substance abuse field. The methodology section discusses the ways in which exposure can be calculated. Themes discussed include dose, potency, and duration. Limitations, such as the time sensitivity of REM calculations, are also discussed. Adaptation theory is treated as relevant to understanding the prevention of gambling problems.

Smeaton, M., Poole, A., Chevis, A., & Carr, J. (2004). *Study into underage access to online gambling and betting sites*. London: GamCare. Available at http://www.gamcare.org.uk/pdfs/StudyReportFinal.pdf

The authors of this U.K. study note that debit cards are available to minors, sometimes as young as 11. This makes Internet and other remote forms of gambling among youth a serious concern. Age verification procedures are inconsistent and inadequate. Of 37 sites tested, only 7 blocked an underage volunteer posing as a player (and claiming to be 21).

Smith, G., & Wynne, H. (2004). *VLT gambling in Alberta: A preliminary analysis.* Edmonton, AB: Alberta Gaming Research Institute.

This comprehensive report covers its topic at many levels and even contains a 27-page literature review. A main rationale for the study is that video lottery terminal (VLT) gambling is still a novelty, so its implications are still poorly understood. This is largely a social impact study, though information provided about the demographic characteristics of VLT players (both problem gambler and non-problem gambler) is very pertinent to the theme of prevention.

Stinchfield, R. (2002). A comparison of gambling by Minnesota public school students in 1992, 1995, and 1998. *Journal of Gambling Studies, 17*, 273–296.

Rates of gambling among Minnesota public school students in the 9th and 12th grades were compared for 1992, 1995, and 1998. While fewer students gambled

in 1998 than in the other years, the number of 12th-grade students who had gambled frequently had increased slightly. Participation in the lottery among 9th-grade students declined, though it increased among 12th-graders. The authors note that illegal ticket playing among youth is cause for concern and that the generation under investigation is the first to be exposed to widespread access to legal gambling venues and advertising. Fewer students gambling overall suggests that prevention efforts may be working, though other explanations are possible. Yet more youth are gambling frequently. Prevention efforts targeted at specific types of youth are needed, and some may require more intensive efforts as they may already be overinvolved in gambling. Schools are a good place for the enactment of such measures.

Strong, D., Breen, R., Lesieur, H., & LeJuez, C. (2003). Using the Rasch model to evaluate the South Oaks Gambling Screen for use with nonpathological gamblers. *Addictive Behaviors, 28*, 1465–1472.

While the South Oaks Gambling Screen (SOGS) may be effective in identifying pathological gamblers, this study found it to be less effective in determining the degrees of severity among those who may be at risk yet do not meet the criteria for full-blown pathology. Notably, the SOGS relies upon informants identifying a sufficient number of items, without consideration of the type of problem within each category. Investigators used a logistic item response model, Rasch, to identify levels of problem gambling severity reflected in each item. Items best suited to identify those at risk involve financial difficulty, and this study supports the movement toward a harm-based conception of problem gambling, which treats the issue on a continuum, rather than a strict conception of pathology such as that offered by DSM-IV.

Tse, S., Wong, J., & Kim, H. (2004). A public health approach for Asian people with problem gambling in foreign countries. *Journal of Gambling Issues, 12*. Available at http://www.camh.net/egambling/issue12/jgi_12_tse.html

Asians make up the fastest growing ethnic group in New Zealand, due largely to the increase in Asian immigration to English-speaking countries in general. Recent research and news articles give credence to anecdotal accounts of high levels of gambling among Asian people. The article treats problem gambling among Asians in social terms, with an emphasis on the difficulties associated with adjusting to life in a new country. Public health involves more than biological and behavioural considerations. Access to health care and social services along with socioeconomic issues such as income and employment are all pertinent to a public health approach to gambling. This article presents five principles, based on a public health perspective, for an effective strategy for preventing gambling-related harm among Asian populations: (1) "Acknowledging similarities and differences within Asian populations": while acknowledging that "Asian" makes a useful umbrella, the author cautions against overlooking the differences between, for example, immigrants from Japan and the Philippines. (2) "Ensuring that approaches are evidence-based": a comprehensive typology of different forms of evidence is provided. (3) "Treating Asian problem gambling in an acculturation framework": this refers to issues pertaining to people (notably immigrants) coming into contact with different cultures and trying to adjust to the ensuing realities. (4)

"Addressing the issue of shame associated with problem gambling": themes such as "keeping face" tend to be family related among Asians, and the shame associated with problem gambling can be aggravated by issues specific to immigration. (5) Targeting at-risk subgroups: the author discusses subgroups within the Asian community at greater risk of developing gambling problems.

Tu'itahi, S., Guttenbeil-Po'uhila, Y., & Hand, J. (2004). Gambling issues for Tongan people in Auckland, Aotearoa-New Zealand. *Journal of Gambling Issues, 12*. Available at http://www.camh.net/egambling/issue12/jgi_12_tuitahi.html

This article discusses a research project, conducted by the Auckland Regional Public Health Service, on gambling issues among the Tongan people in Auckland, New Zealand. Low socioeconomic status and low education levels, both indicators of gambling prevalence in the region, figure significantly among the Tongans. Another rationale for studying the Tongan community was the lack of knowledge about gambling in that community and the potential for comparison with the Samoan community, which had already been studied. The article outlines progress made at the time of writing and preliminary findings. Fifty interviews had been conducted, and the data were still under analysis, though anecdotal evidence that gambling is a serious health issue within this community had been confirmed. The stated research goals for this project were as follows: (1) "To explore the relevant issues for Tongan people in Auckland which contribute to the risk of developing addiction to gambling and problem gambling"; (2) "To identify the effects of gambling on Tongan people in Auckland"; (3) "To provide relevant information to health providers and planners in the planning and implementation of culturally appropriate strategies against problem gambling for Tongan people in New Zealand."

Turner, N., & Horbay, R. (2004). How do slot machines and other electronic gambling machines actually work? *Journal of Gambling Issues, 11*. Available at http://www.camh.net/egambling/issue11/jgi_11_turner_horbay.html

Electronic gaming machines (EGMs) are now available in many venues, and they seem to generate many myths. This is partly because of the absence of accurate information and partly because of the way the machines are designed. This article was written to demystify the machines and to dispel some myths, with counsellors and prevention workers as the main target audience. The paper discusses the ways in which EGMs can effectively simulate randomness in payouts. The paper describes the problems with human reasoning responsible for certain myths (most of which are due to misunderstanding the independent nature of random events) and provides a technical account of how the machines function. There is even a list of questions and answers. It is important to note that payment is *not determined* by how recently a machine has paid out. As well, reasoning that may work with cards (a number that has not come up recently may be due) does not apply to EGMs. Such information is important to the creation of effective prevention programs.

Volberg, R. (2002). *Gambling and problem gambling among adolescents in Nevada*. Carson City, NV: Nevada Department of Human Resources. Available at http://www.hr.state.nv.us/directors/NV_Adult_Report_final.pdf

This report presents the findings of a statewide survey of gambling and related problems in Nevada. Some demographic information was found. For example, while whites and Hispanics were likely to identify "entertainment" as a reason for gambling, blacks were more likely to play in order to win money. Hispanic nongamblers were most likely to refrain from gambling for moral reasons. The author recommends extending healthcare insurance coverage to problem gambling, promoting responsible gambling policies, and providing more money for public education and prevention. Public education should target the increasing number of gambling venues, from grocery stores to Laundromats (where gaming machines may be located). Prevention should focus on those at greatest risk—including youth and certain minorities—who may be more responsive to such efforts than full-blown pathological gamblers.

Wiebe, J., & Falkowski-Ham, A. (2003). *Understanding the audience: The key to preventing youth gambling problems.* Toronto: Responsible Gambling Council of Ontario. Available at http://www.responsiblegambling.org/articles/understanding_the_audience_youth_2003.pdf

This study was designed to assist in the development of problem gambling prevention strategies for youth between the ages of 9 and 16. In a quest to learn about the early development of gambling-related attitudes, beliefs, and behaviours, the authors focus upon the general lifestyles of young people along with issues such as attitudes toward responsible and problem gambling, the language they employ to address these issues, and their reactions to gambling advertisements. Methodology involved three phases: (1) building upon a YTV (a Canadian children's television channel) report on youth lifestyle; (2) focus groups designed to assess linguistic, experiential, and cognitive issues; and (3) quantitative analysis of the findings from Phase 2. Key findings include the following: youth attribute different meanings to betting and gambling, with the latter perceived in more negative terms; Internet gambling among youth is on the rise, and a serious concern; over 4% of youth in this study reported problems related to gambling, including fights and loss of money; fewer than 25% of youth consider gambling cool, though youth who perceive themselves as either leaders or risk-takers are more likely to gamble; though youth understand that they are likely to lose on scratch or lottery tickets, their understanding of probability is wanting; most youth realize that gambling can lead to difficulties and understand that behaviours such as borrowing money to gamble are problematic; parental behaviours and attitudes are highly influential; and far more young people have seen advertisements promoting gambling than ads addressing problem or responsible gambling. The authors claim that their findings highlight the importance of prevention strategies aimed at younger ages. They identify understanding the language of the target group as key.

Wynne Resources. (1999). *Problem gambling public awareness campaigns in North America*. Toronto: Ontario Substance Abuse Bureau.

This study conducted for the Ontario Substance Abuse Bureau examines problem gambling public awareness campaigns throughout North America with the objective of informing the implementation of a campaign for Ontario. While many organizations and representatives were contacted, no formal evidence of

effectiveness was provided. Instead, generic indicators—such as requests for information from the public—are taken by many representatives as evidence that awareness must be on the rise. There was at the time of this report no consensus of which approaches were most effective. This report makes six recommendations: (1) coordinate efforts among different regions and concerned parties for information sharing, and develop other means of accumulating knowledge; (2) implement a strategic plan with a clear statement of purpose, within an overall prevention program; (3) select specific promotional activities and media; (4) identify target groups; (5) involve other stakeholders beyond the Bureau; and (6) evaluate the campaign's effectiveness.

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annotated gambling bibliographies

Mutual aid: An annotated bibliography

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A quick scan of this annotated bibliography brings home one point: Gamblers Anonymous (GA) has not received much scholarly attention in recent years. As well, the bulk of the literature we have annotated deals mainly with other issues and not directly with GA. Attention to GA peaked from the mid-1980s to 1994, with authors such as Lesieur, Brown, Browne, Turner, and Saunders making significant contributions. For a summary of GA-related literature, the reader could turn to Ferentzy and Skinner (2003). Because little is known about GA, even though it serves as an adjunct to most formal treatment programs, the authors call for a more serious look at this mutual aid fellowship. It was back in 1993 that Walker pointed out that given its cost effectiveness, GA would likely figure prominently over the long run regardless of reservations some may have about its effectiveness. So far, Walker's prediction has stood the test of time. This alone suggests that a better understanding of GA's workings is a research priority. As well, Ferentzy, Skinner, and Antze (2004) in a more recent study have found much of the available information to be dated. Whereas GA has earned a reputation, for example, as male dominated and less focused upon the 12 Steps than Alcoholics Anonymous (AA), these authors have found that this reputation, while still partly valid, is less warranted than it once was. In short, the most up to date study available suggests that GA is in transition and that much of the little available knowledge at our disposal may be suspect. Many of the following annotations should therefore be read with caution, as they may not accurately reflect current reality.

A., Paul, Esq. (1988). Recovery, reinstatement, serenity: The personal account of a compulsive gambler. *Journal of Gambling Behavior, 4,* 312–315.

> This is an anonymous account of a successful individual who committed crimes, received legal sanction, and lost his career due to gambling. He recounts the way GA helped him recover both his life and his professional standing. In court, some jurors felt that this man was too intelligent to really have been a compulsive gambler.

Abt, V., & McGurrin, M. C. (1991). The politics of problem gambling: Issues in the professionalization of addiction counseling. In W. R. Eadington & J. A. Cornelius (Eds.), *Gambling and public policy: International perspectives* (pp. 657–659). Reno, NV: University of Nevada.

> This is a socioethical critique of the "addictions culture" that has helped to foster GA and gambling treatment, as well as the entire self-help movement and the addiction treatment industry. The authors argue that it is futile (through treatment) to focus on one addict at a time and that this in fact hides the social reality behind the addiction phenomenon. GA is discussed in terms of its AA roots, as well as the extra lengths to which GA (due to the seeming absence of physical

determinants and consequences) had to go in order to establish compulsive gambling as a legitimate ailment. The authors see GA's rapport with certain professionals and institutions as symbiotic, a "mutually validating" process that serves each party's interests. The article advocates personal responsibility, for which the authors see medical models such as the one applied to compulsive gambling as an abdication.

Adkins, B. J. (1988). Discharge planning with pathological gamblers: An ongoing process. *Journal of Gambling Behavior, 4,* 208–218.

The author discusses the aftercare needs of gamblers, stating that while GA and Gam-Anon are often sufficient for the maintenance of abstinence, other aspects of a client's life (ranging from depression to housing and employment) require professional involvement.

Allock, C. C. (1986). Pathological gambling. *Australian and New Zealand Journal of Psychiatry, 20,* 259–265.

In this overview of psychiatric treatments for pathological gambling, the author concludes that behavioural interventions are the most successful. In a brief discussion of GA, it is mentioned that only 10% of newcomers remain with the fellowship for the long term. The author acknowledges, however, that GA accepts anyone who walks through the door and probably receives many of the most troubled cases. The author also mentions that even one GA meeting may benefit a compulsive gambler, so dropouts need not be classified as cases of pure failure.

Becoña, E., Labrador, F., Echeburua, E., Ochoa, E., & Vallejo, M. A. (1995). Slot machine gambling in Spain: An important and new social problem. *Journal of Gambling Studies, 11,* 265–286.

This discussion of the gambling situation in Spain mentions how, in that country, GA is less influential than other mutual aid programs sponsored through the healthcare system. Despite some differences, these organizations use similar therapeutic principles to those of GA.

Bellringer, P. (1999). *Understanding problem gamblers.* London, New York: Free Association Books.

This book discusses problem gambling and its solutions in many aspects, from the onset and nature of the affliction to the family's role. The one chapter devoted to self-help groups focuses on GA and Gam-Anon. GA's history and the 12 Step program are discussed. The author endorses GA as a good means to abstinence and believes lifetime membership to be beneficial. He does say that for some gamblers GA is not enough and has reservations about the view that lifelong abstinence is necessary for all problem gamblers.

Berger, H. L. (1988). Compulsive gamblers: Relationships between their games of choice and their personalities. In W. R. Eadington (Ed.), *Gambling research:*

***Proceedings of the Seventh International Conference on Gambling and Risk Taking: Vol. 5* (pp. 159–179). Reno, NV: University of Nevada.**

> True to its title, this article discusses the types of personalities associated with different gambling activities pursued by problem gamblers. Common attributes, such as propensities to deny reality or to blame others for it, are also addressed. The author claims that card players and casino players are particularly averse to GA attendance.

Blackman, S., Simone, R. V., Thoms, D. R., & Blackman, S. (1989). The Gamblers Treatment Clinic of St. Vincent's North Richmond Community Mental Health Center: Characteristics of clients and outcome of treatment. *The International Journal of the Addictions*, *24,* 29–37.

> A treatment program had some success, but GA involvement at termination of treatment had little identifiable bearing on gambling behaviour at termination. The authors suggest that a comparison should be made of these clients and those for whom GA provides a successful alternative.

Blaszczynski, A. P. (2000). Pathways to pathological gambling: Identifying typologies. *The Electronic Journal of Gambling Issues: eGambling, 1*. Available at http://www.camh.net/egambling/issue1/feature/index.html

> The author divides problem gamblers into three types: those whose problems are rooted in biology, those whose problems are rooted in emotional vulnerability, and those who are essentially "normal" save for the gambling behaviour itself. The author recommends GA for the third group only.

Blaszczynski, A. P., & McConaghy, N. (1994). Criminal offenses in Gamblers Anonymous and hospital treated pathological gamblers. *Journal of Gambling Studies, 10,* 99–127.

> Finding no significant difference between the type and frequency of criminal activity among GA members and pathological gamblers who received hospital-based behavioural treatment, the authors discuss the role of pathological gambling itself in the commission of nonviolent crimes against property due to financial difficulties.

Blume, S. B. (1986). Treatment for the addictions: Alcoholism, drug dependence and compulsive gambling in a psychiatric setting—South Oaks Hospital, Amityville, New York. *Journal of Substance Abuse Treatment, 3*, 131–133.

> In this brief description of a treatment program, the author emphasizes the common features of compulsive gambling, alcoholism, and drug dependence. The author also mentions loss of control, chronicity, progression, and "the utility of the disease concept" and refers to addictions as "family diseases" that can be addressed through combinations of professional and self-help approaches. AA, GA, Cocaine Anonymous, Narcotics Anonymous, and other self-help meetings are held on site.

Boston, M. D., Taber, J. I., Harris, R. L., Whitman, G. W., & Lougaris, I. A. (1988). Selective perception in the diagnosis and treatment of addictive disorders. In W. R. Eadington (Ed.), *Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking, Vol. 5* (pp. 78–94). Reno, NV: University of Nevada.

> This article was written to help move addiction treatment away from "a narrow focus on specific addictions" and toward a perspective that takes into account a broader range of potential concurrent addictions. The authors mention, for example, that the inclusion of Narcotics Anonymous and GA in addition to AA as part of a new program delivered promising results. The authors do not see addiction as a mere symptom of neurosis but argue that a holistic addiction concept would better serve the needs of many clients.

Brown, R. I. F. (1985). The effectiveness of Gamblers Anonymous. In W. R. Eadington (Ed.)*, The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 258–284). Reno, NV: University of Nevada.

> Primarily, this article discusses the difficulties associated with evaluating GA's effectiveness. At the time of writing, the author could claim that studies on GA's effectiveness as a therapy were "unknown." Listing obstacles such as the tradition of anonymity, the author points out that hard comparisons with other treatment options would be imprudent given the lack of reliable data.

Brown, R. I. F. (1986). Dropouts and continuers in Gamblers Anonymous: Life-context and other factors. *Journal of Gambling Behavior, 2,* 130–140.

> Perhaps the first serious attempt to examine GA's effectiveness, this article explores the reasons many drop out of the GA program. Controlling for arguably unrelated issues such as "external practical considerations" that may lead newer members to leave GA, the study attempts to gauge the appeal and effectiveness of GA and to determine the types of gamblers for whom it is best suited. Reasons for leaving include an immature character (those who are completely elated and full of unrealistic expectations at their first meeting leave more often than newcomers with a more "sober" attitude), as well as the apparent ability to abstain without GA or simply to gamble more moderately. Dropouts in general were also in less financial trouble than "continuers."

Brown, R. I. F. (1987a). Dropouts and continuers in Gamblers Anonymous: Part 2. Analysis of free-style accounts of experiences with GA. *Journal of Gambling Behavior, 3,* 68–79.

> Freestyle accounts suggest that one main difference among GA dropouts and those who pursue the program is the propensity of dropouts to perceive themselves as less troubled than longer-term GA members. Dropouts are said overall to have made more "self-positive" statements. The author speculates that this may vindicate GA's belief that gamblers must hit bottom before embarking upon serious recovery. But other possible explanations are given. It is speculated that many GA members may even look down at those with less dramatic stories

to tell, and also that some embellish their own past troubles in order to make the newcomer feel at ease.

Brown, R. I. F. (1987b). Dropouts and continuers in Gamblers Anonymous: Part 3: Some possible specific reasons for dropout. *Journal of Gambling Behavior, 3,* 137–152.

The author continues his study of these matters and finds that, though dropouts and continuers share many complaints about GA, some notable differences could be identified. These include a greater perception among dropouts that GA members are too harsh in their treatment of those who slip, more reservations about the GA handbook, and skepticism regarding the call for complete abstinence. Dropouts were also less likely to have socialized with other GA members.

Brown, R. I. F. (1987c). Dropouts and continuers in Gamblers Anonymous: Part 4. Evaluation and summary. *Journal of Gambling Behavior, 3,* 202–210.

The author suggests that, overall, GA may be best suited for gamblers whose problems have become most severe, and less so for gamblers who try to stop before their gambling has reached critical stages. Though often effective in helping gamblers achieve abstinence, GA is perhaps less helpful after a relapse has occurred and hence possibly best suited for those who relapse infrequently or not at all. Yet among those who dropped out, many believed that their GA experience continued to be helpful and spoke highly of the organization. The author cautions against generalizing from this sample, which relied on one meeting only.

Brown, R. I. F. (1987d). Pathological gambling and associated patterns of crime: Comparisons with alcohol and other drug addictions. *Journal of Gambling Behavior, 3,* 96–114.

GA members are compared to the general population and to various types of substance addicts in order to gauge the extent and nature of crimes associated with compulsive gambling. It was found that gamblers are prone to committing nonviolent crimes for financial reasons, much like heroin addicts. It is speculated that violent crime committed by gamblers is often unrelated to gambling and associated with concurrent alcohol abuse. Most criminal activity is said to be a product of gambling, with only a small portion of problem gamblers having been criminals prior to the onset of gambling pathology. Beyond purely financial motives, the author speculates that long-term gambling can be conducive to a progressive "moral slippage" due to circumstances associated with the activity.

Browne, B. R. (1991). The selective adaptation of the Alcoholics Anonymous program by Gamblers Anonymous. *Journal of Gambling Studies, 7,* 187–206.

Observations of AA and GA meetings indicate that GA differs from AA in several respects, including a lesser focus on the 12 Steps, on spirituality, and on the whole "self" as an issue to be tackled in recovery. Despite many similarities, such

as the principle of anonymity, the adherence to the disease conception, and the insistence on abstinence, GA is said to differ on three counts: organization, ideas about how to address addiction, and the overall consciousness of members. The author also mentions that GA's pragmatic approach, which focuses primarily on gambling and its consequences rather than self-centredness and other issues addressed by AA, may render it less helpful as an overall therapy. The "12 step consciousness" often found among AA members is in the author's view most often seen in GA members affiliated with other 12 Step fellowships. The author claims that GA's negation of inner searching may alienate women and minorities.

Browne, B. R. (1994). Really not God: Secularization and pragmatism in Gamblers Anonymous. *Journal of Gambling Studies, 10,* 247–260.

The author claims that GA is largely a 12 Step fellowship in name only, as it has progressively become more secular and pragmatic in orientation. GA's principles, practices, and evolution are discussed, along with a few possible reasons for its turning away from God. One reason given is ethnic composition. Jews and Italians are said to visit GA in large numbers. Jewish culture is uncomfortable with what may appear to be Christian ideas about God inherited from AA, as well as being averse to proselytizing. Italians, though often religious, also tend to be skeptical of what may resemble church authority.

Canadian Foundation of Compulsive Gambling (Ontario). (1996). *Vision of and role in the Province of Ontario's comprehensive strategy for combating problem and compulsive gambling.* Toronto: Ontario Ministry of Health, Substance Abuse Bureau.

This document addresses many pertinent issues ranging from demography to law. GA's 12 Step approach is hailed as the most successful (and cost effective) treatment for gambling problems, though inpatient options are recommended for those in crisis. An increase in problem gambling rates is predicted, and the Foundation recommends that GA and Gam-Anon be assisted in every way possible to form more chapters. The foundation also promises to assist GA members dealing with legal issues. Estimating that one third of compulsive gamblers have substance abuse issues, the authors recommend integrated interventions.

Castellani, B. (2000). *Pathological gambling: The making of a medical problem.* Albany, NY: State University of New York Press.

This book discusses the emergence of a disease conception of problem gambling by focusing on an early-1980s court case involving the misdeeds of a problem gambler through the relevant discursive practices of diverging interests including legal and medical and those of the gambling industry. One chapter is devoted to GA.

Ciarrocchi, J. W., & Manor, T. (1988). Profile of compulsive gamblers in treatment: Update and comparisons. In W. R. Eadington (Ed.), *Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking, Vol. 5* (pp. 1–25). Reno, NV: University of Nevada.

This study of hospitalized compulsive gamblers finds both similarities and differences between this group and GA members as reported in other studies. Similarities include ethnic composition and suicidal history. Differences include higher rates among hospitalized gamblers of criminal history, parental alcoholism, and parental compulsive gambling. The authors note that, while the hospitalized group is more "distressed and dysfunctional" overall, this could in part be because GA samples are based mainly on gamblers well into recovery. Still, the authors caution that the disparate backgrounds of the two groups suggest that the hospitalized group represents a type of problem gambler that requires special types of intervention.

Ciarrocchi, J. W., & Reinert, D. F. (1993). Family environment and length of recovery for married male members of Gamblers Anonymous and female members of GamAnon. *Journal of Gambling Studies, 9,* 341–351.

This study suggests that long-term abstinence through GA leads to an improved satisfaction with family environment for the recovering gambler, but that the gambler's spouse in Gam-Anon does not enjoy the same benefit.

Collins, A. F. (1996). The pathological gambler and the government of gambling. *History of the Human Sciences, 9* (3), 69–94.

This U.K.-focused historical account of legislation and attitudes surrounding gambling describes the figure of the pathological gambler as a product of the legalization of gambling and of changing perceptions. Past laws and attitudes were prohibitive to the medicalization of problem gambling, a "space" for which has recently been provided. GA's role in this process is discussed, notably with respect to how gamblers themselves helped to construct their own behaviour as pathological.

Cooper, G. A. (2001). *Online assistance for problem gamblers: An examination of participant characteristics and the role of stigma.* Unpublished Dissertation, OISE, University of Toronto.

This document discusses on-line support for individuals with gambling problems. Noting that professional treatment and mutual aid approaches seem to reach only a small percentage of those in need, the author discusses how many gamblers use on-line help out fear of stigma and how people who have jumped this hurdle are then more likely to seek face-to-face assistance. It is suggested that on-line help is especially useful to problem gamblers contemplating, but not quite ready for, a serious lifestyle change. Some of the relevant literature on GA is discussed, as are other fellowships such as AA and Narcotics Anonymous. The author is critical of GA's intolerance of other recovery options and refers to texts suggesting that GA may be poorly suited to women and minorities. Rather than dismiss GA, the author believes that many options should be available and that safe and perfectly anonymous on-line interaction may be a good start, especially for those less likely to fit into available modalities.

Cordone, A. C. (1985). Two hats but only one head: The dual role of a peer counselor.

In W. R. Eadington (Ed.), *The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 236–240). Reno, NV: University of Nevada.

In discussing his role as a peer counsellor at a treatment program for compulsive gamblers, the author (a GA member) discusses many of the issues pertinent to the distinction between peer and professional intervention. Identification is key, but so is his own insight into the dishonesty of many clients: he mentions that it is hard "to con a con artist" (something one is just as likely to hear from AA and Narcotics Anonymous members). Considering GA essential to recovery from compulsive gambling, he mentions how that fellowship can be helpful with issues such as money management. Like other GA members, he also understands the sensitive nature of this task: putting too much financial pressure on gamblers can cause them to view their gambling problem as a money problem. The many tensions between the author's two worlds—formal treatment and GA—are colourfully discussed.

Cromer, G. (1978). Gamblers Anonymous in Israel: A participant observation study of a self-help group. *International Journal of the Addictions, 13,* 1069–1077.

While pointing out that GA got started in Israel in 1976, this article is not about the specifics related to that country. Arguing that "status degradation" is more important to GA involvement than the loss of money, the author sees the GA program as an example of differential association. One learns to be deviant in association with others who reject society's norms and unlearns it with the help of those who have reformed (or wish to reform). This is not, in the author's view, unique to GA or even to mutual aid groups in general, but occurs in all instances of "transformative labeling." The old identity must first be destroyed, one must be subject to the influence of peers, and the new identity requires time-consuming "ritual involvement."

Custer, R. (1982a). Gambling and addiction. In R. J. Craig & S. L. Baker (Eds.), *Drug dependent patients: Treatment and research* (pp. 367–381). Springfield, IL: Charles C. Thomas.

The author provides a brief overview of compulsive gambling. In the discussion of GA, seven reasons are given for its success: GA "(a) undercuts denial, projection, and rationalization, (b) identifies the serious implications of gambling, (c) demands honesty and responsibility, (d) identifies and corrects character problems, (e) gives affection, personal concern, and support, (f) develops substitutes for the void left by the cessation of gambling, and (g) is non judgmental." The author considers GA the best solution to compulsive gambling.

Custer, R. (1982b). An overview of compulsive gambling. In P. A. Carone, S. F. Yolles, S. N. Kieffer, & L. W. Krinsky (Eds.), *Addictive disorders update: Alcoholism/drug abuse/gambling.* New York, London: Human Sciences Press, Inc.

The author briefly discusses the causes, phases, and treatment of compulsive gambling and mentions that GA is effective because it challenges the gambler's

dishonesty regarding the nature and consequences of his or her condition. It is also mentioned that, at the time of writing, only 4% of GA members were women. This chapter is followed by another with no stated author as it contains the personal accounts of three GA members followed by a panel discussion chaired by Dr. Custer involving experts as well as GA members.

Custer, R., & Milt, H. (1985). *When luck runs out: Help for compulsive gamblers.* New York, Oxford: Facts on File Publications.

Compulsive gambling is defined and then discussed in terms of causes, phases, diagnosis, and treatment. GA is highly endorsed, though mention is made of how subjects with serious difficulties such as suicidal tendencies require professional intervention (at least in the beginning). Similarities between AA and GA members—such as desperation, disease progression, and the activities of choice functioning as compensations for low self-esteem—are mentioned as reasons for similar (though not identical) treatment modalities.

Estes, K., & Brubaker, M. (1994). *Deadly odds: Recovery from compulsive gambling*. New York: Fireside/Parkside.

This is a 12 Step–oriented self-help manual that strongly endorses GA. Topics covered include various types of gambling, women's issues, and the GA program. The book relies heavily on personal stories.

Ferentzy, P., & Skinner, W. (2003). Gamblers Anonymous: A critical review of the literature. *Electronic Journal of Gambling Issues, 9.* Available at http://www.camh.net/egambling/issue9/research/ferentszy/

Authors' abstract: "This study surveys existing literature on Gamblers Anonymous (GA) and issues that help to contextualize our understanding of this mutual aid association. While GA has been the subject of investigation by social scientists, it is still understudied, with a notable shortage of research on issues facing women and ethnic minorities. A need exists for large-scale assessments of GA's effectiveness, more detailed accounts of GA beliefs and practices, increased knowledge of the ways in which GA attendance interacts with both formal treatment and attendance at other mutual aid organizations, and a better understanding of the profiles of gamblers best (and least) suited to GA, along with a clearer grasp of what GA was able to offer those gamblers that it seems to have helped. This assessment of the current state of knowledge underscores the embryonic state of our collective inquiry into the nature of GA, and the authors emphasize that significant advances have been made. Notably, important targets for study are being identified."

Ferentzy, P., Skinner, W., & Antze, P. (2004). *Exploring mutual aid pathways to recovery from gambling problems*. Toronto: Ontario Problem Gambling Research Centre. Available at http://www.gamblingresearch.org/download.sz/115-Ferentzy%20Final%20report%20PDF.pdf?docid=5990

Authors' abstract: "This ethnographic study, involving participant observation at

Gamblers Anonymous (GA) and Narcotics Anonymous (NA) meetings and interviews with subjects from both fellowships in the Toronto area, was designed to provide a more in-depth and empirically grounded account of GA's recovery culture than what has been available so far. A secondary aim was to develop a better understanding of NA beliefs and practices and their use as a resource by problem gamblers with substance abuse issues. Not only has GA been understudied, with the literature providing more evaluation than description, this study has revealed that the little available information on GA is now largely dated. GA has earned a reputation for being an almost exclusively male fellowship, pragmatically focused on abstinence from gambling and on debts at the expense of discussions of emotional issues, and as a 12 Step fellowship in name only where the spiritual side of things is mostly ignored. Yet today in the Toronto area, the percentage of women in GA may be as high as 20 percent and rising, discussions of feelings and 'life issues' are actively encouraged, and members have become far more focused on the 12 Steps than in the past. Possible reasons for these changes—which seem to be taking place in GA throughout North America—are discussed, along with GA's culture of recovery and its unique (among 12 Steps fellowships) emphasis on the virtue of patience. Our impression of NA as a potential resource for problem gamblers with substance abuse problems is also discussed."

Frank, M. L., Lester, D., & Wexler, A. (1991). Suicidal behavior among members of Gamblers Anonymous. *Journal of Gambling Studies, 7,* 249–254.

This survey of GA members suggests that histories of suicide attempts and suicidal ideation are linked to the severity of gambling problems, starting gambling early in life, and parental substance abuse.

Franklin, J., & Ciarrocchi, J. (1987). The team approach: Developing an experiential knowledge base for the treatment of the pathological gambler. *Journal of Gambling Behavior, 3*, 60–67.

The authors discuss a "learning model" for the development of treatment programs. Rather than simply imitate or ignore 12 Step approaches, it is suggested that mental health professionals and peer counsellors learn from each other and cooperate. Successful adaptation of—and cooperation with—AA is discussed with an eye to achieving similar integration with GA and its members. Recovering problem gamblers are said, for instance, to be adept at detecting dishonesty in newcomers to treatment and capable of establishing trust, thereby reducing resistance to treatment efforts. Professional approaches, however, are said to make possible therapeutic advances that GA could not accomplish on its own.

Franklin, J., Darvas, S., Robertson, R., & Knox, J. (1982). Therapeutic teamwork at the Johns Hopkins Compulsive Gambling Counseling Center. In W. R. Eadington (Ed.), *The gambling papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 3* (pp. 109–116). Reno, NV: University of Nevada.

The role of peer counsellors drawn from GA is discussed. The authors mention

that peer counsellors, because of empathy and identification, are especially important during the initial phases of treatment.

G. A. Publishing Company (GAPC). (1964a). *Gamblers Anonymous*. Los Angeles: Author.

An early attempt by GA to produce a major text, this book discusses GA history and the program at length. While still in use, this book has largely been supplanted by the more recent *GA: A new beginning* (GAISO, 1989; see below).

GAPC. (1964b). *The GA group.* Los Angeles: Author.

This document describes the format and service structure of GA groups.

Gam-Anon International Service Office, Inc. (1986). *Gam-A-Teen.* Whitestone, NY: Author.

This is a GA-sanctioned pamphlet describing the program for children and family members of compulsive gamblers.

Gam-Anon International Service Office for Gam-Anon Family Groups. (1988). *The Gam-Anon way of life*. Whitestone, NY: Author.

This is a GA-sanctioned pamphlet describing the Gam-Anon program for spouses, other relatives, and friends of compulsive gamblers.

Gamblers Anonymous International Service Office (GAISO). (1989). *GA: A new beginning.* Los Angeles: Author.

Other versions of this text have appeared under the title *Sharing recovery through Gamblers Anonymous.* Next to the "Combo Book" (GAISO, 1999), this is probably the most important GA publication. It outlines the fellowship's history and the recovery program and also discusses Gam-Anon.

GAISO. (1999)*. Gamblers Anonymous.* Los Angeles: Author.

This is a pamphlet describing the GA program, with a few words on the organization itself and its history. This is the first document one is likely to see at a GA meeting, and members read from it during the first part of the meeting. It is known as the "Combo Book."

Gamblers Anonymous National Service Office (GANSO). (1978). *The pressure group meeting handbook.* Los Angeles: Author.

The "pressure group" is designed to enable gamblers to get honest with their spouses about their condition and its ramifications and to deal with financial and other matters. This document describes the process.

Getty, H. A., Watson, J., & Frisch, G. R. (2000). A comparison of depression and styles

of coping in male and female GA members and controls. *Journal of Gambling Studies, 16*, 377–391.

This study finds that GA members have higher depression rates and poorer coping skills than controls. Female GA members reported higher rates of depression than male members. Therapeutic suggestions are made.

Heineman, M. (1987). A comparison: The treatment of wives of alcoholics with the treatment of wives of pathological gamblers. *Journal of Gambling Behavior, 3*, 27–40.

The author discusses how the wives of pathological gamblers in recovery face difficulties that rarely burden the wives of alcoholics. These include financial problems such as the need to deal with debts they have cosigned. With husbands attending GA meetings and often working more than one job to repay debts, wives of gamblers are generally in greater need of social and treatment networks. The author considers Gam-Anon the best option, yet claims that there are not enough of these groups available and that professional help is also scant.

Heineman, M. (1992). *Losing your shirt: Recovery for compulsive gamblers and their families.* Minneapolis, MN: CompCare.

This is a self-help book for gamblers and their families with an entire chapter devoted to the 12 Steps. GA and Gam-Anon are discussed at length, and personal stories are provided. Co-occurring disorders are also addressed.

Horodecki, I. (1992). The treatment model of the Guidance Center for Gamblers and Their Relatives in Vienna/Austria. *Journal of Gambling Studies, 8,* 115–129.

The first GA group in Vienna was formed in 1982. GA soon developed into a "guidance centre" for gamblers and their relatives funded partly by the state. The author discusses the treatment program, essentially a blend of applications based upon conceptions of neurosis as well as a pure addiction model. Clients receive formal therapy but also partake in group activities where only clients and no professionals are present.

Hudak, C. J., Varghese, R., & Politzer, R. M. (1989). Family, marital, and occupational satisfaction for recovering pathological gamblers. *Journal of Gambling Behavior, 5,* 201–210.

A study at a private gambling treatment centre found that job satisfaction was more likely to reduce the chances of relapse than positive feelings pertaining to marital and family issues. GA meetings were an important adjunct to the program, which had recovering gamblers on staff. The authors argue that, regardless of whether recovery leads to benefits such as job satisfaction or vice versa, "multi-interventive" services should be offered to gamblers in recovery so that many issues can be addressed simultaneously.

Humphreys, K., & Ribisl, K. M. (1999). The case for a partnership with self-help groups. *Public Health Reports, 114,* 322–329.

This article discusses many reasons for professionals to cooperate with mutual aid societies. Since such societies are free, they can help alleviate disparities in access to health care rooted in economic disparity. Such cooperation would also enhance interaction between professionals and their communities at large. Major issues discussed include cost effectiveness, mutual identification, and choice (for example, people with drinking problems could choose between AA and a mutual aid group emphasizing moderation, such as Moderation Management).

Jacobs, D. F. (1985). Research findings comparing gamblers in treatment with recovering Gamblers Anonymous members: Implications for rehabilitation planning. In W. R. Eadington (Ed.)*, The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 101–108). Reno, NV: University of Nevada.

The author compares the attitudes toward recovery of gamblers currently in treatment and gamblers in GA. The latter group was more focused on life and recovery issues while the former was still more occupied with simply maintaining abstinence. GA members were more likely to claim to have found activities to replace gambling and less likely to favour hospital treatment. Hospitalized gamblers were likely to view GA as important to their long-term recovery.

Johnson, E. E., & Nora, R. M. (1992). Does spousal participation in Gamblers Anonymous benefit compulsive gamblers? *Psychological Reports, 71*, 914.

This study suggests that spousal involvement in GA may contribute to longer periods of abstinence, yet the authors caution that their findings at this point are not statistically significant.

Kramer, A. S. (1988). A preliminary report on the relapse phenomenon among male pathological gamblers. In W. R. Eadington (Ed.), *Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking, Vol. 5* (pp. 26–31). Reno, NV: University of Nevada.

Based on the testimonies of gamblers known to the researcher through outpatient treatment (most of whom were experienced GA members), this brief report discusses some of the issues pertinent to the onset and aftermath of relapse. It is mentioned that little work has been done on how relapsers respond to, and feel about, facing their GA peers after a fall.

Lehmkuhl, V. (1982). Reflections of a peer counselor on professional treatment of pathological gambling. In W. R. Eadington (Ed.), *The gambling papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 3* (pp. 140–147). Reno, NV: University of Nevada.

A peer counsellor and GA member discusses his original antipathy to professional treatment and his subsequent change of heart. Noting that GA members in his vicinity also tend to mistrust professionals, the author also tells how he and other gamblers affiliated with the same treatment centre helped to change the attitudes of many in GA toward the facility. The author advocates

cooperation between GA and professionals, noting that GA need not be "the sole answer."

Lesieur, H. R. (1984). *The chase: Career of the compulsive gambler.* Rochester, NY: Schenkman.

Based on a central theme in the lives of compulsive gamblers—the chase, trying desperately to regain money one has lost, a compulsion to "get even"—this book addresses a range of pertinent themes from the relation between pathological gambling and crime to abstinence-relapse cycles and recovery. With colourful description well grounded in facts, the author also tries to bring the reader right into the gambler's world and to allow the reader see things through the gambler's eyes. GA is often discussed in positive terms. For example, the author credits GA with helping to dispel the once prevalent notion that pathological gamblers have masochistic personalities.

Lesieur, H. R. (1986). *Understanding compulsive gambling (Rev. ed.).* Center City, MN: Hazelden Educational Materials.

The author discusses different theories of compulsive gambling and several stories of successful recovery through GA. The text ends with GA's 20 Questions.

Lesieur, H. R. (1988). The female pathological gambler. In W. R. Eadington (Ed.), *Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking, Vol. 5* (pp. 230–258). Reno, NV: University of Nevada.

This article discusses the issues facing female pathological gamblers from several perspectives. The sample used includes women who attend Narcotics Anonymous, AA, and other self-help groups. The author laments the way most self-help operations focus, perhaps stubbornly, on the target addiction and discourage talk of multiple addictions. He suggests that an anonymous fellowship that deals with multiple compulsions should be formed and recommends that existing fellowships be more receptive to discussions of other addictions haunting their members. The author discusses how a predominantly male operation such as GA often alienates women and considers female pathological gamblers in need of better outreach assistance.

Lesieur, H. R. (1990). Working with and understanding Gamblers Anonymous. In T. J. Powell (Ed.), *Working with self-help* (pp. 237–253). Silver Spring, MD: NASW Press.

The author discusses many aspects of GA, from its focus on gambling as the primary problem rather than on gambling's purported root causes, to the nature of the recovery program beginning with identification with other members and leading to a reconstruction of one's self-image. Differences with AA are explained, the most obvious being the lesser emphasis on God and spirituality in GA's 12 Steps, as well a lesser emphasis on the Steps. The frequency of GA members involved in other operations such as AA and Narcotics Anonymous is also discussed, and the author mentions that GA members who also attend AA are more amenable to the 12 Steps and more likely to discuss emotional issues.

Lesieur, H. R. (1998). Costs and treatment of pathological gambling. In J. H. Frey (Ed.), *The Annals of the American Academy of Political and Social Science, Vol. 556, Gambling: Socioeconomic impacts and public policy* (pp. 153–171). Thousand Oaks, London, New Delhi: Sage Periodicals Press.

The author discusses the nature and social (and financial) costs of compulsive gambling and concludes that certain parties should be spending more on research (notably governments and the gambling industry). GA is addressed in terms of issues such as its hostility to controlled gambling treatment, relabelling of gamblers from evil/stupid to sick, and identification with other GA members. Other treatment methods, and combinations of methods, are discussed.

Lesieur, H. R., & Blume, S. B. (1991). Evaluation of patients treated for pathological gambling in a combined alcohol, substance abuse and pathological gambling treatment unit using the Addiction Severity Index. *British Journal of Addiction, 86,* 1017–1028.

The results of a study indicate that combined treatment for people suffering from combinations of alcoholism, drug addiction, and problem gambling is effective. The article refers to different studies of GA members and is based upon a treatment program that made use of client-specific combinations of GA, AA, and Narcotics Anonymous.

Lesieur, H. R., & Custer, R. L. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 146–156.

This article was written when far less was known about problem gambling issues. In it, two pioneers in the field discuss the rise of the medical model as well the sociocultural roots of pathological gambling, the phases (winning, losing, desperation) of the gambler's career, and methods of treatment. GA is hailed as a means by which problem gamblers can get over guilt, achieve self-honesty, and, it is hoped, recover. The authors mention that GA's retention rate seems to compare poorly with the rates of other self-help groups and add that without public acceptance of pathological gambling as an illness, gamblers themselves are less likely to accept the medical model employed by GA. A suggestion that outside consultants could help GA on this score is balanced by an understanding of GA's resistance to external influence of any kind.

Lesieur, H. R., & Puig, K. (1987). Insurance problems and pathological gambling. *Journal of Gambling Behavior, 3,* 123–136.

GA members were surveyed in order to assess the cost of problem gambling to the insurance industry, which is estimated at almost $100 billion. The behaviour leading to these costs was not only reversed for many through GA attendance, subjects even began to make restitution.

Livingston, J. (1971). *Compulsive gamblers*. Lafayette, IN: Purdue University.

This book is the product of a 2-year observational study of GA. Interviews were

conducted with gamblers and their wives. The author's samples include male gamblers only, and the study delivers some information that by now is commonplace (for example, that many GA members are either Italian or Jewish). The author found that gamblers are narcissistic and fearful of strong interpersonal ties. The author believes that whereas psychiatry tends to overlook the sociological dimensions of lifestyle change, self-help groups unduly ignore the need for introspection. The author considers GA's effectiveness at the very least equal to that of other available interventions.

Lorenz, V. C., & Yaffe, R. A. (1985). Pathological gambling: Medical, emotional and interpersonal aspects. In W. R. Eadington (Ed.)*, The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 101–108). Reno, NV: University of Nevada.

This study of GA and Gam-Anon members suggests that the medical and emotional needs of gamblers and their spouses could be better addressed if properly focused professional therapy were available at gambling treatment centres, community centres, and GA conferences. The findings also indicate that spouses of compulsive gamblers in recovery face similar physical and psychosomatic illnesses and are less satisfied than the gamblers are with the interpersonal situation at home.

Lorenz, V. C., & Yaffe, R. A. (1986). Pathological gambling: Psychosomatic, emotional and marital difficulties as reported by the gambler. *Journal of Gambling Behavior, 2,* 40–49.

Surveys were distributed at GA conferences—both to GA and Gam-Anon members—in order to gauge the extent of medical, emotional, and marital difficulties during the final ("desperation") phase of the gambling career and some time after abstinence had been achieved. Among the authors' conclusions, based upon answers from the gamblers themselves, are that more research should be done on the physical ailments that often accompany long-term compulsive gambling and that psychosomatic and sexual issues also require more attention.

Lorenz, V. C., & Yaffe, R. A. (1988). Pathological gambling: Psychosomatic, emotional and marital difficulties as reported by the spouse. *Journal of Gambling Behavior, 4*, 13–26.

Based upon a survey of the spouses of GA members, the authors discuss many of the emotional, financial, and other problems confronting the wives of problem gamblers at the last ("desperation") phase of the gamblers' careers and also following abstinence. Wives are said to suffer from many of the physical ailments experienced by gamblers, such as headaches and stomach problems. The authors argue that a gambler's behaviour could be less important than a spouse's insufficient coping skills and that professionals should work in concert with GA and Gam-Anon to assist in this area.

Lorenz, V. C., & Yaffe, R. A. (1989). Pathological gamblers and their spouses: Problems in interaction. *Journal of Gambling Behavior, 5,* 113–126.

Couples at GA conferences were surveyed on their thoughts and feelings about issues during the final desperate phase of the gambler's career and the time after recovery had begun. The results suggest, for instance, that Gam-Anon is more helpful with financial recovery and less so with family and sexual issues. Gamblers along with their spouses felt poorly understood by mental and medical health practitioners and by each other. The authors state that mental health and other professionals should work more closely with GA and Gam-Anon.

Lyons, J. C. (1985). Differences in sensation seeking and in depression level between male social gamblers and male compulsive gamblers. In W. R. Eadington (Ed.)*, The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 76–100). Reno, NV: University of Nevada.

Referring to research that views addictive behaviours as resulting from a process wherein potential growth produces anxiety, which in turn is assuaged by depression, the latter then becoming a defence mechanism that inhibits growth, in turn entailing the need for extreme sensations to (temporarily) alleviate depression, the author discusses similarities between AA and GA members. He claims that while GA and AA work for similar reasons, they may also fail for similar reasons in many cases. A large number of depressed individuals may simply leave these fellowships after a brief trial. Regardless of their respective addictions, some of these individuals may have more in common with each other than with others who share the same addiction and continue with mutual aid. Not all alcoholics, or compulsive gamblers, face the same issues. GA is said to be insufficient for people suffering certain types of depression.

Mark, M. E., & Lesieur, H. R. (1992). A feminist critique of problem gambling research. *British Journal of Addiction, 87*, 549–565.

The authors are critical of the male-oriented nature of most gambling research. Subjects tend to be male, gender-related issues are ignored, and even the gambling sites investigated are usually male dominated. Recommendations are made on how to alter the situation. GA is discussed as male dominated, and the authors suggest that its tendency to produce a "men's club atmosphere" should be taken into account by researchers. "War stories," often shared by male members, are an example of something that may work to alienate women. The authors suggest that GA hold women-only meetings. Other questions are raised. For example, GA suggests that gamblers hand over control of their assets to their spouses. While this may work well for men, the authors question the wisdom of many women who are already subordinate and financially dependent handing over even more power to their husbands. The marginalization of women in GA is also compared to that of minorities.

Martey, H., Zoppa, R. M., & Lesieur, H. R. (1985). Dual addiction: Pathological gambling and alcoholism. In W. R. Eadington (Ed.)*, The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 65–75). Reno, NV: University of Nevada.

A survey of patients at an alcoholism and drug abuse treatment centre found that

almost 35% were also pathological gamblers. The authors also found aversion to GA to be correlated with denial: the more acceptance clients had of their gambling problem, the more GA meetings they attended.

Maurer, C. D. (1982). Challenges in dealing with pathological gambling in outpatient psychotherapy. In W. R. Eadington (Ed.), *The gambling papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 1* (pp. 136–144), Reno, NV: University of Nevada.

The author discusses difficulties he experienced ranging from client resistance to legal matters. He also discusses his experiences attending GA. He found the program "remarkably similar to A.A.," and was soon invited by members to participate by reading some program material (as GA members do at each meeting). Yet many suspected his motives, and one member offended by the "outsider's" presence threatened him physically. Yet members also asked him to facilitate tensions between them and another member. The author discusses how he eventually established a strong rapport with GA and Gam-Anon.

Maurer, C. D. (1985). An outpatient approach to the treatment of pathological gambling. In W. R. Eadington (Ed.), *The gambling studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 5* (pp. 205–217). Reno, NV: University of Nevada.

The author describes an outpatient approach involving GA (and Gam-Anon or AA where appropriate), where success (1 year of abstinence) is achieved in 20% of cases. He believes that a process that at least began with inpatient treatment would be more successful.

McCormick, A., & Brown, R. I. F. (1988). Gamblers Anonymous as medicine, as religion and as addiction recovery process. In W. R. Eadington (Ed.), *Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking, Vol. 5* (pp. 343–364). Reno, NV: University of Nevada.

The authors describe the unique mixture of a medical model of behaviour and religious notions inherent to 12 Step recovery. Referring to AA's (and by implication GA's) debt to the Oxford Group, the article discusses the similarities between the conversion experiences of Christians and GA members. They consider GA's approach to rest, in part, on a secular rendition of the forgiveness of sin.

McCown, W. G., & Chamberlain, L. L. (2000). *Best possible odds: Contemporary treatment strategies for gambling disorders.* New York: John Wiley & Sons.

This book discusses many approaches to treating gambling problems and contains a very positive account of GA despite a few criticisms. The authors discuss GA's debt to AA as well as some of the differences between these two fellowships. Compared to AA, GA is said to be less focused on spirituality, more pragmatic (for example, it helps members address financial issues), and more confrontational. The latter is said to possibly account for higher attrition rates in

GA than in AA and Narcotics Anonymous. The authors claim that people with experience in AA are sometimes disappointed by GA's lesser emphasis on spirituality. On the whole, GA is said to be more receptive to medical and clinical assistance than AA and also more ready to allow access to its members for research purposes. The authors consider abstinence the best goal for problem gamblers and describe GA as "the heart of abstinence-based programs." While recognizing that GA is not for everyone, the authors believe that all problem gamblers should at least try it.

McGowan, V. (2003). Counter-story, resistance and reconciliation in online narratives of women in recovery from problem gambling. *International Gambling Studies, 3,* 115–131.

This study analyzes discourse at an on-line gender-specific support group established by two female GA members and examines the narratives through which women tell their stories of problem gambling and recovery. Given the dominance of male discourse, women create both on-line and off-line symbolic communities. One important theme is the undermining of women's experiences at GA (for example, they are sometimes told that their gambling losses do not qualify them as compulsive gamblers). GA's oral tradition and that of other 12 Step groups is replicated. Shared suffering provides women with a "symbolic community." The result is an on-line forum wherein women's experiences are made visible and transformative. This group is an indicator of dissatisfaction with GA's male-dominated approach, and further study into gender interaction and the needs of women in recovery from problem gambling is recommended.

Miller, W. (1986). Individual outpatient treatment of pathological gambling. *Journal of Gambling Behavior, 2*, 95–107.

This article discusses the issues leading up to quitting gambling and more notably the sense of loss after quitting, the latter being treated as similar to other grieving processes. GA is mentioned first as a good substitute for former social ties, yet the emotional benefits of gambling are said to run more deeply, and the ensuing sense of loss is the main target of the treatment program discussed by the author. The latter is a four-phase program, the first phase being consistent with GA's first step, involving acknowledgement of lack of control over gambling and overall unmanageability. While the author is at odds with GA's belief that gamblers must hit bottom before embarking upon recovery, he considers GA a useful complement to the treatment program.

Moody, G. (1990). *Quit compulsive gambling: The action plan for gamblers and their families.* London: Thorsons.

Written for popular consumption, this self-help book describes the nature and treatment of compulsive gambling along GA lines. GA (and Gam-Anon) is discussed extensively and in very positive terms.

Moody, G. (n.d.). *Wheel of misfortune: Compulsive gambling.* Gamblers Anonymous/Gam-Anon [U.K.]. Available at

http://www.gamblersanonymous.org.uk/wheel.htm

In the author's words: "This present publication is the result of the author's combination, with minor revisions, of his two leaflets, Gamblers Anonymous, and Wheel of Misfortune. These were first published by 'Crucible' and 'Interface' respectively. The author developed these themes further in 'Quit Compulsive Gambling' published by Thorsons in February 1989 and available from Gamblers Anonymous." Compulsive gambling is discussed along disease model lines. The gambler can be helped by GA, and family problems can be addressed with Gam-Anon. The two organizations are discussed briefly.

Murray, J. B. (1993). Review of research on pathological gambling. *Psychological Reports, 72,* 791–810.

This article discusses the state of literature at the time of writing with an eye to questions such as the personality profiles of pathological gamblers and the extent to which such gamblers can control their behaviour. On these and other questions, the author concludes that answers should be taken as preliminary. The similarities and differences between GA and AA are discussed. The author says that both operations have proven successful, but points out that controlled gambling (as well as drinking) has also demonstrated successes. Some of the difficulties in studying GA are also mentioned.

Murray, R. D. (2001). *Helping the problem gambler.* Toronto: Centre for Addiction and Mental Health.

This is a comprehensive collaborative effort, addressing issues ranging from the nature of compulsive gambling and the different types of treatment to family issues and the need for cross-cultural awareness. This document discusses many topics pertinent to understanding and evaluating GA and 12 Step approaches in general, such as the positive and negative features of the call for abstinence. A section on GA and Gam-Anon is included. The programs are described, along with important themes such as GA's increasing (admittedly recent) sensitivity to the needs of women and the importance of professionals working together with this fellowship.

Nora, R. M. (1989). Inpatient treatment programs for pathological gamblers. In H. J. Shaffer, S. A. Stein, B. Gambino, & T. N. Cummings. *Compulsive gambling: Theory, research, and practice* (pp. 127–134). Lexington, MA: Lexington Press.

The author argues that some gamblers require inpatient treatment. One program discussed works closely with GA, whose members (with financial expertise) are sometimes invited to advise clients on financial difficulties. Treatment staff are encouraged to attend GA conferences.

Petry, N. M. (2002). Psychosocial treatments for pathological gambling: Current status and future directions. *Psychiatric Annals, 32* (3), 192–196.

This article discusses several treatment approaches to compulsive gambling, and

the author points out that there is still little consensus on which method is most effective. Mentioning that, to the best of our current knowledge, GA on its own achieves abstinence in only a small percentage of those who try it, the author says that GA in combination with professional therapy may be more effective. Still, she adds that it is hard to generalize from existing studies that suggest this. The author recommends large-scale controlled studies of all treatment options as necessary for a clearer grasp of what really works for pathological gamblers.

Petry, N. (2003). Patterns and correlates of Gamblers Anonymous attendance in pathological gamblers seeking professional treatment. *Addictive Behaviors, 28,* 1049–1062.

Many GA members eventually opt for professional treatment. This study compares gambling and psychosocial problems in GA members seeking treatment and in treatment seekers who are not GA members. In all, GA members were older, with higher incomes and greater likelihood of being married. They also had higher South Oaks Gambling Screen scores, bigger debts, longer problem gambling histories, greater family conflicts, and fewer serious drug problems. Two months after treatment began, GA members were more likely to be abstinent. These findings suggest that there may be important differences between people entering treatment with histories of GA attendance and those without, with implications for treatment recommendations and results.

Preston, F. W., & Smith, R. W. (1985). Delabeling and relabeling in Gamblers Anonymous: Problems with transferring the Alcoholics Anonymous paradigm. *Journal of Gambling Behavior, 1,* 97–105.

Interviews with GA and AA members as well as other data suggest that AA has higher rates of abstinence. The authors argue that belief in a strong medical model permits AA members to deflect shame and stigma more easily, which in turn facilitates recovery.

Problem and Compulsive Gambling Advanced Workshop (ARF). (1986). *Cognitive treatment for compulsive gambling.* Sault Ste. Marie, ON: Addiction Research Foundation.

Although a document on cognitive therapy for gambling problems, this text attempts to show that cognitive treatment for gambling is in many ways consistent with the 12 Steps of GA.

Rosecrance, J. (1988a). Active gamblers as peer counselors. *The International Journal of the Addictions, 23,* 751–766.

The author questions the efficacy of GA attendance and the goal of complete abstinence, at least for many gamblers, and suggests a format where controlled gambling treatment is assisted by peer counsellors who themselves gamble. Arguing that problem gambling can be rooted in defective wagering strategies, the author suggests that active gamblers could help clients gamble properly (just as abstinent GA members are effective in helping others achieve abstinence).

Rosecrance, J. (1988b). *Gambling without guilt: The legitimation of an American pastime*. Pacific Grove, CA: Brooks/Cole.

This is essentially a book on the history and pervasiveness of gambling in America. While providing accounts of his own experiences with gambling, as well as ethnographic discussions of gambling environments, the author argues that gambling has become more acceptable because of changing middle class attitudes toward it. The author is critical of the medical/compulsion model of problem gambling and the call for abstinence, and argues, for example, that it is easier for GA members to accept the notion of compulsion than to seriously scrutinize and discuss the real motives behind allowing gambling to cause one to forsake one's family, loved ones, and responsibility in general.

Rosecrance, J. (1989). Controlled gambling: A promising future. In H. J. Shaffer, S. A. Stein, B. Gambino, & T. N. Cummings, *Compulsive gambling: Theory, research, and practice* (pp. 147–160). Lexington, MA: Lexington Press.

The author argues that problem gambling in the United States can to a large degree be attributed to a lack of knowledge and sophistication regarding the risks associated with gambling. Defining problem gambling as "the losing of an excessive amount of money," the author questions disease conceptions involving notions such as compulsion. Critical of GA and of medicalization in general, the author argues that controlled gambling involves good betting strategy along with rational financial management. He recommends that active gamblers function as counsellors. The author does concede that controlled gambling is not feasible for some.

Rosenthal, R. J. (1992). Pathological gambling. *Psychiatric Annals, 22* (2), 72–78.

This article discusses definitions and treatments of pathological gambling, with a recommendation that more efforts should be made to identify this underdiagnosed affliction. Similarities to alcohol and substance dependence are discussed, with mention of how some investigators have called compulsive gambling a "pure" addiction given the absence of any ingested substance. The importance of comorbidity and the shortage of women in GA are discussed, as is GA's effectiveness, which, in the author's view, is limited to clients without special needs. Many would do better with a psychodynamic approach in tandem with GA.

Rosenthal, R. J., & Rugle, L. J. (1994). A psychodynamic approach to the treatment of pathological gambling: Part 1. Achieving abstinence. *Journal of Gambling Studies, 10,* 21–42.

The authors argue that a psychodynamic approach to gambling treatment is compatible with an addiction model approach, including 12 Step solutions. In their discussion of the decline in the popularity of psychoanalysis among professionals, the authors argue that, with the addictions, many proponents of alcoholism and drug dependence as primary diseases have been dismissive of psychological approaches because of the emphasis on issues considered secondary at the expense of the addiction itself. By implication, this same attitude

dominates many approaches to compulsive gambling, which is also viewed as a primary disease by GA and many of its supporters. Yet the authors point out, for example, that 12 Step recovery owes the term "denial" to psychoanalysis, even if the term's meaning has changed in some respects over the years. They claim that GA and psychotherapy should be viewed as complementary.

Rugle, L. J. (1993). Initial thoughts on viewing pathological gambling from a physiological and intrapsychic structural perspective. *Journal of Gambling Studies, 9,* 3–16.

This article attempts to harmonize the perspectives of different disciplines on the theoretical and practical treatment aspects of compulsive gambling. The author hypothesizes that addicts (including gamblers) are deficient in "internal structures," leading to dysfunction in emotional, cognitive, and coping capacities. The article discusses the ways in which the author's integrated "structural perspective" is compatible with 12 Step approaches (GA and AA are the focus).

Rugle, L. J., & Rosenthal, R. J. (1994). Transference and countertransference reactions in the psychotherapy of pathological gamblers. *Journal of Gambling Studies, 10,* 43–65.

This article discusses the psychoanalytic themes of transference and countertransference as they apply to the treatment of pathological gamblers. Supportive of GA, the authors caution the therapist against potential countertranference reactions to that fellowship. Therapists may feel threatened by GA and may compete with GA for credit if a client gets better, and for reasons such as this they may downplay GA's effectiveness. GA is said to provide supports that therapists cannot imitate, and a therapist's negative reactions could jeopardize the recovery process.

Sagarin, E. (1969)*. Odd man in: Societies of deviants in America.* Chicago: Quadrangle Books.

This book contains a history of GA, along with some harsh criticisms of GA's account of its own history.

Scodel, A. (1964). Inspirational group therapy: A study of Gamblers Anonymous. *American Journal of Psychotherapy, 18*, 115–125.

The author studies GA from a sociopolitical perspective, on the assumption that alienation leads people to seek out this kind of association. It is argued that the alienated are learning to achieve identity through mutual aid, and at the same time they are becoming insular and depoliticized. The author also sees gambling as a counterproductive attempt by men to attain independence from their wives, who themselves unconsciously wish to see the gambling continue.

Stein, S. A. (1993). The role of support in recovery from compulsive gambling. In W. R. Eadington & J. A. Cornelius (Eds.), *Gambling behavior and problem gambling* (pp. 627–637). Reno, NV: University of Nevada.

This study attempts to validate the importance of social support to recovery from problem gambling. Compulsive gamblers who feel that they have social support for their attempts to change are likely to remain abstinent for longer. GA is discussed, notably as evidence of the need for gamblers to discuss their feelings and thoughts and to refrain from isolating themselves.

Steinberg, M. A. (1993). Couples treatment issues for recovering male compulsive gamblers and their partners. *Journal of Gambling Studies, 9,* 153–167.

The author takes to task an essentially individualistic approach to the treatment of gamblers and their spouses. Spouses, and even children, should be brought into treatment early on in order to complement the GA/Gam-Anon approach, which involves changes within the self but excludes a direct focus upon the interpersonal realm (for example, the Gam-Anon member is expected to heal independently of the gambler's behaviour). Conversely, a "family systems" approach focuses on relations between family members rather than on individuals in isolation.

Stewart, R. M., & Brown, R. I. F. (1988). An outcome study of Gamblers Anonymous. *British Journal of Psychiatry, 152,* 284–288.

A sample of 232 GA attenders revealed that about 8% remained abstinent after 1 year, and about 7% did after 2 years.

Stirpe, T. (1995). *Review of the literature on problem and compulsive gambling.* Toronto: Addiction Research Foundation, Problem and Compulsive Gambling Project.

This is a book-length document that addresses the problem gambling issue with regard to themes ranging from definitions, prevalence, and history to outreach, treatment, and comparisons with other addictions. The section on disease-model treatment suggests that GA may be best suited to gamblers with the most severe problems. The reference section is broken down by topic and could be an excellent resource for those seeking to combine their research with areas not addressed in this bibliography.

Strachan, M. L., & Custer, R. L. (1993). Female compulsive gamblers in Las Vegas. In W. R. Eadington & J. A. Cornelius (Eds.), *Gambling behavior and problem gambling* (pp. 235–239). Reno, NV: University of Nevada.

In Las Vegas, more than half of GA members are women. Based upon responses from 52 female GA members, the authors list some significant findings: 42% of subjects had at least one alcoholic parent, 42% had at least one parent who gambled excessively, 33% had been physically abused by parents, 29% had experienced childhood sexual abuse, 69% had contemplated suicide, and 33% belonged to 12 Step fellowships other than GA. The authors consider this study a wake-up call: female pathological gambling is a grossly understudied yet serious problem compounded by many other issues. Further, as legalized gambling spreads, such high numbers of female gamblers will not be limited to places like Las Vegas.

Taber, J. I., & Chaplin, M. P. (1988). Group psychotherapy with pathological gamblers. *Journal of Gambling Behavior, 4,* 183–196. (Previously, Taber delivered a much longer talk with the same title, which can be found in W. R. Eadington (Ed.), *The gambling papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 1* (pp. 1–88). Reno, NV: University of Nevada (1982).)

The authors discuss their group-therapeutic techniques with an eye to both positive and negative attitudes and behaviours often exhibited by clients. Negative attitudes toward GA are listed as threats to recovery. The authors state that even if a member dislikes GA meetings, the act of going is paramount. They see such "surrender" as an aid to the development of impulse control and argue that a program is likely to work if the gambler simply believes that it can.

Taber, J. I., & McCormick, R. A. (1987). The pathological gambler in treatment. In T. Galski (Ed.), *The handbook of pathological gambling.* Springfield, IL: Charles C. Thomas.

The authors discuss many approaches to the treatment of pathological gambling and consider peer counselling the most important tool available. Though peer counsellors should not be confused with professionals, the authors consider the process of identification extremely helpful. Despite being keen advocates of GA, they present a few criticisms: GA meetings (local ones, at the time of writing) are poorly organized, often with little attention paid to the sensibilities of many newcomers. Interestingly, the authors have urged many of their gambling patients to attend AA simply to learn some things from this more experienced fellowship. They say, however, that gamblers often have little respect for alcoholics and are not receptive to adopting AA practices. Nonetheless, the authors believe that GA will mature as a fellowship, just AA has had to do.

Taber, J. I., McCormick, R. A., Russo, A. M., Adkins, B. J., & Ramirez, L. F. (1987). Follow-up of pathological gamblers after treatment. *American Journal of Psychiatry, 144,* 757–761.

A structured inpatient treatment program, modelled on programs for alcoholics and other substance abusers, shows promising results. GA attendance was associated with higher odds of success.

Taber, J. I., Russo, A. M., Adkins, B. J., & McCormick, R. A. (1986). Ego strength and achievement motivation in pathological gamblers. *Journal of Gambling Behavior, 2,* 69–80.

Stating that pathological gamblers tend to be deficient in ego strength and in some areas of achievement motivation, the authors argue that abstinence is in such cases insufficient to address issues that probably preceded the addictive behaviour itself. A tendency among many GA and AA members to view abstinence as a solution on its own is taken to task. Conversely, a program such as GA is said to be beneficial for many reasons, provided that emotionally underdeveloped individuals are able to adapt and stick it out. The article comments on an awareness within GA of the narcissistic characteristics of many

problem gamblers and points out that in the (lay) parlance of the fellowship, "ego" often refers to such traits.

Turner, D. N., & Saunders, D. (1990). Medical relabelling in Gamblers Anonymous: The construction of an ideal member. *Small Group Research, 21,* 59–78.

Participant observation of GA leads the authors to some highly critical conclusions. Beyond their scepticism about the medical model of pathological gambling, the authors claim that the internalization of an addict identity functions through a process comparable to collective brainwashing, which leaves out those unwilling to go through it (even though many such people are in dire need of help) and causes addiction to other group members in those who comply. Further, the ideal GA identity for which members strive is never achieved, casting doubt on the overall therapeutic benefits of this process.

Ursua, M. P., & Uribelarrea, L. L. (1998). 20 Questions of Gamblers Anonymous: A psychometric study with population of Spain. *Journal of Gambling Studies, 14,* 3–15.

This study reveals that GA's 20 Questions compare favourably to other, professionally developed, diagnostic instruments.

Viets, V. C. L., & Miller, W. R. (1997). Treatment approaches for pathological gambling. *Clinical Psychology Review, 17,* 689–702.

This study examines outcome literature on various modalities. The authors say that no properly controlled outcome research exists on psychodynamic and 12 Step approaches. Where multimodal approaches have been tested, it is hard to determine the efficacy of each modality. Cognitive, behavioural, and cognitive-behavioural approaches have been studied extensively enough to indicate positive results. While allowing for bias in favour of publishing positive reports, the authors claim that evidence indicates that pathological gambling is treatable. GA is still the most widely available solution, yet the authors point out that its retention rates seem to be low. Still, the authors say that there is a strong need for studies on GA's role in treatment outcomes. The authors suggest some often ignored themes be taken into account by new studies on treatment modalities, including the situation of dropouts some time after treatment. Specifics that should be addressed include the following: in some cases gambling may be a secondary addiction that could be relieved by addressing other problems, definitions of "abstinence" hinge upon definitions of gambling, and client characteristics (such as gender and age) may help predict responses to certain treatments.

Walker, M. B. (1992). *The psychology of gambling.* Oxford: Pergamon Press.

This book promotes the notion that excessive gambling is rooted mainly in irrational or at least incorrect beliefs maintained by the gambler. Critical of explanations involving excitement and stimulation in general, the author offers a "sociocognitive" model. GA is discussed extensively, both in positive and negative terms, yet the author believes that its overall effectiveness is hard to

measure. The author says that GA's main strength rests in the collective belief that compulsive gambling can be beaten. While critical of GA's insistence on abstinence for all problem gamblers, the author is perhaps even more critical of many of his colleagues who have researched compulsive gambling with an overreliance on data obtained from GA members and other gamblers in treatment (usually based on similar medical models): such samples are, first, not representative and, second, possibly biased since subjects who have internalized the medical model are likely to reconstruct their past experiences in accordance with its tenets.

Walker, M. B. (1993). Treatment strategies for problem gambling: A review of effectiveness. In W. R. Eadington & J. A. Cornelius (Eds.), *Gambling behavior and problem gambling* (pp. 533–536). Reno, NV: University of Nevada.

The author discusses and evaluates the major treatment approaches to problem gambling. While cautious in appraising GA's effectiveness, the author points out that even if other measures are found to be more successful, GA's cost effectiveness will ensure that it continues to play an important role. Controlled gambling is a valid option for certain treatment strategies, and while the feasibility of long-term controlled gambling is suspect, the same can be said of long-term abstinence. In either case, long-term success rates are low.

Walters, G. D. (1994). The gambling lifestyle: II. Treatment. *Journal of Gambling Studies, 10,* 219–235.

A "lifestyle" model of treatment is discussed. Despite this model's opposition to the disease conception, the author considers GA a good aftercare option (though not necessarily the best).

Winston, S., & Harris, H. (1984). *Nation of gamblers: America's billion-dollar-a-day habit.* Englewood Cliffs, NJ: Prentice-Hall.

This book discusses the scope and the economic, social, and personal costs of gambling in America. Personal accounts are included. GA is strongly endorsed as the best solution to compulsive gambling and the problems incurred by families. Advice (consistent with GA's message) is given to compulsive gamblers and family members.

Zion, M. M., Tracy, E., & Abell, N. (1991). Examining the relationship between spousal involvement in Gam-Anon and relapse behaviors in pathological gamblers. *Journal of Gambling Studies, 7,* 117–131.

This study found no serious differences between the relapse rates of gamblers with spouses in Gam-Anon and those without. Yet the study did show that those with past addictive behaviours (whether involving food, drugs, or alcohol) were, perhaps counterintuitively, less likely to relapse. The authors speculate that the latter were more driven to make larger overall changes in their lives. The authors suggest that interventions should put more focus on possible multiple addictions.

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annotated gambling bibliographies

Problem gambling treatment research: An annotated bibliography

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The preparation of this annotated bibliography was guided by a desire to include all of the problem gambling research articles that have been published in the English language. Some exceptions were made for articles published in other languages but for which an English abstract was available that provided sufficient details about the study. All studies were included, regardless of their methodological quality. In some cases, studies utilizing the same treated sample but providing additional results of the study were included. The studies are listed chronologically, from 1966 to 2005.

The annotations are very brief and simply provide the reader with the full bibliographic reference, the basic treatment approach that is evaluated in the study, and, when available, information about the results. No effort was made to critically appraise or review the study.

The descriptive details for each study (*type of treatment, study design, sample size, follow-up length, year of publication*) are included in the Appendix. The Appendix permits the reader to quickly identify and select certain subsets of articles based on a theme (e.g., aversion therapy, case studies, pharmacological treatments).

Since the problem gambling research field is a growing area of inquiry, this bibliography will become quickly outdated and will require regular update to remain current.

1. Cross, I. (1966). Aversion therapy treatment for compulsive gambling. *Nursing Mirror and Midwives Journal, 123* (7), 159–160.

> This case study describes the use of chemical (apomorphine) aversion therapy in the treatment of a male track gambler. The timing of injection of the chemical is such that nausea and vomiting are induced when the client is presented with tape recordings, objects, and pictures related to gambling. No results are presented.

2. Victor, R., & Krug, C. (1967). "Paradoxical intention" in the treatment of compulsive gambling. *American Journal of Psychotherapy, 21,* 808–814.

> This case study describes the treatment of a compulsive gambler using paradoxical intention. The aim of this treatment is to have the therapist gain control of the therapeutic relationship by taking control of the gambling behaviour (i.e., by telling the patient when, where, and how much he may gamble). The patient is reported to have lost his desire to gamble.

3. Barker, J. C., & Miller, M. (1968). Aversion therapy for compulsive gambling. *Journal of Nervous and Mental Disease, 146,* 285–302.

This article describes three case studies of compulsive gamblers treated with aversion therapy. Subject 1 reported no desire to resume gambling at 18 months posttreatment although he did relapse eventually. He received a "booster" treatment and was abstinent for an additional 6 months. Subject 2 maintained abstinence for 2 years. Subject 3 lapsed on one occasion 12 months posttreatment but was abstinent another 6 months following four "booster" sessions. The authors conclude that aversion therapy is effective.

4. Goorney, A. B. (1968). Treatment of a compulsive horse race gambler by aversion therapy. *British Journal of Psychiatry, 114,* 329–333.

This is a case study of a compulsive horse race gambler whose treatment by aversion therapy led to the remission of a long-standing marital disharmony, a major precipitating cause of the gambling.

5. Boyd, W. H., & Bolen, D. W. (1970). The compulsive gambler and spouse in group psychotherapy. *International Journal of Group Psychotherapy, 20,* 77–90.

Nine pathological gamblers and their wives were treated in psychodynamic group therapy for 1 year, supplemented with supportive individual therapy. It was noted that although therapy led to an improvement in the husband, it was accompanied by a deterioration in the wife and subsequent regression by the husband. It is suggested that this mode of therapy was effective in decreasing gambling, but not in improving the marital relationships.

6. Seager, C. P. (1970). Treatment of compulsive gamblers by electrical aversion. *British Journal of Psychiatry, 117,* 545–553.

Sixteen subjects were recruited for electrical aversion treatment for problem gambling, as inpatients or outpatients. Six did not complete treatment. The number of shocks varied and there were two types of exposure to gambling (paper or slides). Of the 10 subjects who completed treatment, the 12-month follow-up showed that 5 were abstinent, 1 denied gambling (author sceptical), 1 relapsed, 1 was controlling his or her gambling, and 2 were in prison.

7. Cotler, S. B. (1971). The use of different behavioural techniques in treating a case of compulsive gambling. *Behavior Therapy, 2,* 579–584.

In a 32-year-old male problem gambler, positive reinforcement and contingency contracting were used to increase desirable behaviours while aversive electric shock, time-out from spousal contact, and covert sensitization were applied to eliminate gambling behaviour.

8. Koller, K. M. (1972). Treatment of poker-machine addicts by aversion therapy. *The Medical Journal of Australia, 1,* 742–745.

Twenty poker machine gamblers were treated by electrical aversion therapy and 12 were followed up. In most cases, treatment was effective and in three cases it was quite successful.

9. Bannister, G. (1977). Cognitive and behavior therapy in a case of compulsive gambling. *Cognitive Therapy and Research, 1,* 223–227.

This case study describes a 46-year-old male who was treated for compulsive gambling using a modified form of rational emotive therapy (RET) and covert sensitization (CS). Treatment consisted of nine 1-hour sessions over a 3-week period. During each session, the first 20 minutes consisted of RET and the remaining 40 minutes consisted of CS. At 30 months posttreatment, the client had remained abstinent from gambling and reported no urges to gamble.

10. Dickerson, M. G., & Weeks, D. (1979). Controlled gambling as a therapeutic technique for compulsive gamblers. *Journal of Behavior Therapy and Experimental Psychiatry, 10,* 139–141.

A 40-year-old male with a 3-year history of recurrent uncontrolled gambling was allowed restricted controlled gambling under the temporary (20 weeks) services of a bet-placing intermediary. This treatment was followed by behavioural retraining over an additional 12 weeks. Follow-up indicated that the treatment effects were maintained.

11. Moskowitz, J. A. (1980). Lithium and lady luck: Use of lithium carbonate in compulsive gambling. *New York State Journal of Medicine, 80,* 785–788.

This article describes three case reports using lithium carbonate in the treatment of compulsive gamblers. The author concludes that lithium carbonate seemed to dull the gamblers' affective effects such as the excitement of winning.

12. Greenberg, D., & Rankin, H. (1982). Compulsive gamblers in treatment. *British Journal of Psychiatry, 140,* 364–366.

Twenty-six male compulsive gamblers were treated behaviourally: 5 attained control over their gambling, 7 experienced intermittent lapses, and 14 were gambling at last contact.

13. Rankin, H. (1982). Control rather than abstinence as a goal in the treatment of excessive gambling. *Behaviour Research and Therapy, 20,* 185–187.

This case study describes a 44-year-old male's efforts to control his gambling. He was asked to adhere to the following criteria: (1) limit gambling to £5 per week, (2) do not reinvest winnings, (3) do not carry over from week to week, and (4) only gamble on Friday and Saturday. The subject was able to comply for most of the next 2 years, although he did relapse once after 8 months.

14. McConaghy, N., Armstrong, M. S., Blaszczynski, A., & Allcock, C. (1983). Controlled comparison of aversive therapy and imaginal desensitization in compulsive gambling. *British Journal of Psychiatry, 142,* 366–372.

Twenty compulsive gamblers were randomly assigned to receive either aversion relief therapy or imaginal desensitization (ID). At the 1-year follow-up, individuals

in the ID group reported greater reduction of gambling urges and behaviour. The ID group also showed a significant reduction in trait anxiety and state anxiety. The authors concluded that compulsive gambling is driven by aversive tension.

15. Russo, A. M., Taber, J. I., McCormick, R. A., & Ramirez, L. F. (1984). An outcome study of an inpatient treatment program for pathological gamblers. *Hospital and Community Psychiatry, 35* (8), 823–827.

Sixty male patients who completed a 3-day structured inpatient program for pathological gamblers were included in this study. At the 1-year follow-up, 55% of subjects were abstinent. A significant relationship was found between abstinence and improved interpersonal relationships, better financial status, decreased depression, and participation in aftercare and Gamblers Anonymous.

16. Tepperman, J. H. (1985). The effectiveness of short-term group therapy upon the pathological gambler and wife. *Journal of Gambling Behavior, 1,* 119–130.

This study evaluated the efficacy of short-term conjoint group therapy with pathological gamblers and their wives. Ten couples self-selected to the experimental condition (a 12-week, 12 Step recovery program and actively involved in GA and/or Gam-Anon) and 10 couples self-selected to the control condition (actively involved in GA and/or Gam-Anon). The experimental condition consisted of twelve 90-minute sessions. Assessments were conducted at pretest and posttest. No group differences were found.

17. Taber, J. I., McCormick, R. A., Russo, A. M., Adkins, B. J., & Ramirez, L. F. (1987). Follow-up of pathological gamblers after treatment. *American Journal of Psychiatry, 144,* 757–761.

Sixty-six subjects who met DSM-III criteria for pathological gambling participated in a "comprehensive" treatment program. Assessment took place pretreatment and 6 months posttreatment. Follow-up (*n* = 57) revealed that 56% reported abstinence and significant improvement on outcome measures (i.e., number of days gambling, money spent gambling per week, number of GA meetings attended per month).

18. McConaghy, N., Armstrong, M. S., Blaszczynski, A., & Allcock, C. (1988). Behavior completion versus stimulus control in compulsive gambling: Implications for behavioural assessment. *Behavior Modification, 12,* 371–384.

Twenty compulsive gamblers were randomly assigned to either imaginal relaxation (IR) treatment or imaginal desensitization (ID) treatment. Consistent with the behavioural completion model (but not a stimulus control model), subjects' responses to either treatment were comparable and correlated with levels of tension following treatment.

19. Blackman, S., Simone, R. V., Thomas, D. R., & Blackman, S. (1989). The Gamblers Treatment Clinic of St. Vincent's North Richmond community Mental Health Center: Characteristics of the clients and outcome of treatment. *International Journal of the*

***Addictions, 24,* 29–37.**

In this study of 128 gamblers treated as outpatients, posttreatment reductions in gambling were observed as well as improvements in social relationships. Little information is provided about the specific treatment modalities.

20. Ladouceur, R.. Sylvain, C., Duval, C., & Gaboury, A. (1989). Correction of irrational verbalizations among video poker players. *International Journal of Psychology, 24,* 43–56.

Four male video poker players were trained to think aloud while playing. Subjects were also audiotaped during play. Over seven sessions of cognitive restructuring, each irrational verbalization was corrected. The number and nature of verbalizations, the frequency of video poker playing, and motivation to play were determined before, immediately after, and at 3 months after treatment.

21. Dickerson, M., Hinchy, J., & England, S. L. (1990). Minimal treatments and problem gamblers: A preliminary investigation. *Journal of Gambling Studies, 6,* 87–107.

Twenty-nine problem gamblers, recruited though advertisements, received a self-help manual, with or without an initial in-depth interview. Twenty-one subjects completed the 6-month follow-up. The frequency of gambling, frequency of overspending, and weekly expenditure were reduced at the follow-up but expenditure per session did not improve. The in-depth interview did not contribute to the effectiveness of the manual.

22. Toneatto, T., & Sobell, L. C. (1990). Pathological gambling treated with cognitive behavior therapy: A case report. *Addictive Behaviors, 15,* 497–501.

This case study describes a 47-year-old male who presented for treatment to curtail his gambling behaviour. He met DSM-III-R criteria for problem gambling. Treatment consisted of 10 weekly sessions aimed at challenging cognitions about gambling (i.e., probability of events). The results indicated that the frequency of gambling was decreased at the 6-month follow-up. The patient also reported a better understanding about his ability to win. The authors conclude that cognitive-behavioural interventions may prove efficacious in the treatment of pathological gambling.

23. Blaszczynski, A., McConaghy, N., & Frankova, A. (1991). Control versus abstinence in the treatment of pathological gambling: A two to nine year follow-up. *British Journal of Addiction, 86,* 299–306.

Sixty-three of 120 gamblers who received a behavioural treatment 5 years previously completed several questionnaires related to personality functioning, depression, anxiety, and sensation seeking. Subjects showed continued improvement on these variables independent of whether the gamblers had adopted an abstinence or controlled-gambling goal except for the uncontrolled gamblers. The authors concluded that adopting controlled gambling is a legitimate treatment goal that does not invariably lead to uncontrollable gambling.

24. Lesieur, H. R., & Blume, S. B. (1991). Evaluation of patients treated for pathological gambling in a combined alcohol, substance abuse and pathological gambling treatment unit using the Addiction Severity Index. *British Journal of Addiction, 86,* 1017–1028.

Seventy-two pathological gamblers were followed up 6 to 14 months after treatment in a combined alcohol, substance abuse, and compulsive gambling treatment program. Subjects reduced their intake of alcohol and other drugs and their gambling as well as improved in legal, family/social, and psychological functioning. Combined treatment appears to be effective for patients whose gambling problems are discovered when they enter treatment for another addiction.

25. McConaghy, N., Blaszczynski, A., & Frankova, A. (1991). Comparison of imaginal desensitization with other behavioural treatments of pathological gambling: A two to nine year follow-up. *British Journal of Psychiatry, 159,* 390–393.

One hundred and twenty pathological gamblers were randomly assigned to imaginal desensitization (ID) or to another "behavioural" treatment group. Treatment was administered over a 1-week time period. After a 2- to 9-year follow-up period, a significantly greater number of subjects in the ID treatment group reported controlled gambling or abstinence.

26. McCormick, R. A., & Taber, J. I. (1991). Follow-up of male pathological gamblers after treatment: The relationship of intellectual variables to relapse. *Journal of Gambling Studies, 7,* 99–108.

Eleven male problem gamblers were followed up for 12 months following completion of a "comprehensive" treatment program. Fifty-five percent were abstinent 1 year later. The Weschler Adult Intelligence Scale subtests Digit Span and Block Design were found to contribute to outcome.

27. Bujold, A., Ladouceur, R., Sylvain, C., & Boisvert, J.-M. (1994). Treatment of pathological gambling: An experimental study. *Journal of Behavior Therapy and Experimental Psychiatry, 25,* 275–282.

A primarily behavioural treatment (enhanced by cognitive interventions, problem solving, and relapse prevention) was administered to 3 male pathological gamblers on a weekly basis. At posttreatment, all 3 gamblers were abstinent, reported increased perception of self-control of gambling, and rated the gambling problem as less severe. Therapeutic benefits were maintained at the 9-month follow-up.

28. Haller, R., & Hinterhuber, H. (1994). Treatment of pathological gambling with carbamazepine. *Pharmacopsychiatry, 27,* 129.

A case study of a double-blind, placebo-controlled successful treatment (12 weeks for each phase) of a pathological gambler with carbamazepine is described.

29. Ladouceur, R., Boisvert, J.-M., & Dumont, J. (1994). Cognitive-behavioral treatment for adolescent pathological gamblers. *Behavior Modification, 18,* 230–242.

Four late-adolescent pathological gamblers meeting DSM-III-R criteria were treated with cognitive-behavioural treatment in a multiple-baseline design. The results showed clinically significant changes for all subjects with all remaining abstinent at the 6-month follow-ups.

30. Baez Gallo, C., & Echeburúa Odriozola, E. (1995). Stimulus control and exposure with response prevention as psychological treatment of a pathological gambler in an adolescent. *Análisis y Modificacion de Conducta, 21* (75), 125–145.

In this case study, exposure and stimulus control treatment was found to be successful in maintaining abstinence up to the 2-year follow-up with additional benefits in the level of depression and anxiety.

31. Echeburúa, E., Baez, C., & Fernandez-Montalvo, J. (1996). Comparative effectiveness of three therapeutic modalities in the psychological treatment of pathological gambling: Long-term outcome. *Behavioural and Cognitive Psychotherapy, 24,* 51–72.

Three treatments were compared—(1) individual stimulus control and exposure with response prevention, (2) group cognitive restructuring, and (3) both 1 and 2—in 64 DSM-III-R-diagnosed pathological gamblers. A 1-year follow-up was conducted. The success rate was higher in the individual treatment compared to the group cognitive restructuring and combined treatment. There was no difference between the combined treatment and the control group. Individual stimulus control and exposure with response prevention were concluded to be a cost-effective treatment for pathological gambling.

32. Henry, S. L. (1996). Pathological gambling: Etiologic considerations and treatment efficacy of eye movement desensitization/reprocessing. *Journal of Gambling Studies, 12,* 395–405.

Twenty-two gamblers who met DSM-IV criteria for pathological gambling, with or without a trauma history, were treated with eye movement desensitization and reprocessing (EMDR) cognitive therapy or cognitive therapy alone. Gambling frequency decreased significantly for pre- versus post-EMDR and for those with a history of trauma. The authors concluded that anxiety may be an important etiological factor in pathological gambling.

33. Sylvain, C., Ladouceur, R., & Boisvert, J.-M. (1997). Cognitive and behavioural treatment of pathological gambling: A controlled study. *Journal of Consulting and Clinical Psychology, 65,* 727–732.

Twenty-nine male pathological gamblers who met problem gambling criteria according to DSM-III-R were randomly assigned to a cognitive-behavioural treatment group or a wait-list control group. Assessment was conducted at pretest, posttest, and 6-month and 12-month follow-up. The results indicated that

the cognitive-behavioural treatment group showed positive significant changes on all outcome measures including the South Oaks Gambling Screen, perception of control, frequency of gambling, perceived self-efficacy, desire to gamble, and DSM-III-R criteria met. These gains were maintained at both follow-up assessments.

34. Symes, B. A., & Nicki, R. M. (1997). A preliminary consideration of cue-exposure, response-prevention treatment for pathological gambling behaviour: Two case studies. *Journal of Gambling Studies, 13,* 145–157.

This article describes 2 volunteer participants (1 male and 1 female), each of whom received cue exposure and response prevention treatment. Both were considered probable pathological gamblers based on their South Oaks Gambling Screen scores. Gambling behaviour and urges decreased substantially.

35. Hollander, E., DeCaria, C. M., Mari, E., Wong, C. M., Mosovich, S., Grossman, R., et al. (1998). Short-term single-blind fluvoxamine treatment of pathological gambling. *American Journal of Psychiatry, 155,* 1781–1783.

Sixteen patients with pathological gambling entered an 8-week placebo lead-in phase. Ten patients completed an 8-week single-blind fluvoxamine trial. Seven were judged treatment responders (i.e., less than 25% decrease on the pathological gambling modification of the Yale-Brown Obsessive Compulsive Scale). Clinical Global Impression scores for gambling severity were at least much improved.

36. Ladouceur, R., Sylvain, C., Letarte, H., Giroux, I., & Jacques, C. (1998). Cognitive treatment of pathological gamblers. *Behaviour Research and Therapy, 36,* 1111–1119.

Five pathological gamblers were treated in a "multiple baseline across subjects" design with cognitive therapy in one or two weekly sessions lasting 60 to 90 minutes. Four subjects reported a clinically significant decrease in the urge to gamble and an increase in their perception of control and no longer met DSM-IV criteria for pathological gambling, with gains maintained at the 6-month follow-up.

37. Echeburúa, E., Fernandez-Montalvo, J., & Baez, C. (2000). Relapse prevention in the treatment of slot-machine pathological gambling: Long-term outcome. *Behavior Therapy, 31,* 351–364.

The efficacy of stimulus control and exposure with response prevention in stopping pathological gambling was evaluated (either individually or group administered). Sixty-nine DSM-IV-diagnosed pathological gamblers were recruited. The results showed that all treated subjects stopped gambling. Subjects receiving individual and group relapse prevention were more improved than the control group (who did not receive relapse prevention). The authors suggest that relapse prevention is important in the treatment of pathological gambling.

38. Hollander, E., DeCaria, C. M., Finkell, J. N., Begaz, T., Wong, C. M., & Cartwright, C.

(2000). A randomized double-blind fluvoxamine placebo crossover trial in pathologic gambling. *Biological Psychiatry, 47,* 813–817.

In a 16-week randomized double-blind crossover design of fluvoxamine, each subject received 8 weeks of fluvoxamine and 8 weeks of a placebo. Fifteen patients entered and 10 subjects completed the study. Fluvoxamine-treated subjects had significantly greater improvement in overall gambling severity, gambling urges, and cognitions. Post hoc analysis, treating each phase as a separate trial, showed a significant difference between fluvoxamine and the placebo in the second phase of the trial but not in the first.

39. Breen, R. B., Kruedelbach, N. G., & Walker, H. I. (2001). Cognitive changes in pathological gamblers following a 28-day inpatient program. *Psychology of Addictive Behaviors, 15,* 246–248.

The hypothesis that irrational beliefs and attitudes about gambling could maintain pathological gambling was evaluated in a sample of 66 consecutive admissions to a Veterans Affairs 28-day inpatient program for problem gambling. Treatment was found to improve gambling-specific attitudes and beliefs. Although uncontrolled and not followed up, this study is one of the few that evaluate the impact of treatment on gambling-related cognitions.

40. Echeburúa, E., Fernandez-Montalvo, J., & Baez, C. (2001). Predictors of therapeutic failure in slot-machine pathological gamblers following behavioural treatment. *Behavioural and Cognitive Psychotherapy, 29,* 379–383.

Sixty-nine DSM-IV-diagnosed pathological gamblers who dropped out of treatment or relapsed within a 1-year follow-up period were more anxious and more dissatisfied with treatment, abused alcohol, and scored higher on a neuroticism scale than those who did not drop out or relapse.

41. Hodgins, D. C., Currie, S. R., & el-Guebaly, N. (2001). Motivational enhancement and self-help treatments for problem gambling. *Journal of Consulting and Clinical Psychology, 69,* 50–57.

Problem gamblers were randomized to one of three treatments (motivational enhancement telephone intervention and a self-help workbook, workbook only, wait-list control). Eighty-four percent of participants (*N* = 102) reported a significant reduction in gambling over a 12-month follow-up period. Those who received the motivational enhancement telephone intervention and a self-help workbook did better than those in the wait-list control. At the 12-month follow-up, the two active treatments differed only for those with a less severe gambling problem.

42. Kim, S. W., & Grant, J. E. (2001). An open naltrexone treatment study in pathological gambling disorder. *International Clinical Psychopharmacology, 16,* 285–289.

Seventeen subjects meeting DSM-IV criteria for pathological gambling disorder

participated in a 6-week open naltrexone flexible dose trial. Naltrexone reduced urges to gamble and gambling behaviour.

43. Kim, S. W., Grant, J. E., Adson, D. E., & Shin, Y. C. (2001). Double-blind naltrexone and placebo comparison study in the treatment of pathological gambling. *Biological Psychiatry, 49,* 914–921.

Eighty-three DSM-IV-diagnosed pathological gamblers were randomized to receive 11 weeks of either naltrexone or placebo in a double-blind trial. Based on 45 treatment completers, significant improvement was found on the patient and clinician-rated Clinical Global Impressions Scale scores and on the Gambling Symptom Rating Scale. Three quarters of subjects taking naltrexone were much/very much improved compared to a quarter of those on placebo.

44. Ladouceur, R., Sylvain, C., Boutin, C., Lachance, S., Doucet, C., Leblond, J., et al. (2001). Cognitive treatment of pathological gambling. *Journal of Nervous and Mental Disease, 189,* 774–780.

Sixty-six gamblers meeting DSM-IV criteria for pathological gambling were randomly assigned to cognitive treatment or wait-list control conditions. Thirty-five subjects completed the full program and 31 dropped out. Posttest results (e.g., South Oaks Gambling Screen, DSM symptoms) indicated significant improvement by the treatment group on all outcome measures, with gains maintained at the 1-year follow-up.

45. Stinchfield, R., & Winters, K. C. (2001). Outcome of Minnesota's gambling treatment programs. *Journal of Gambling Studies, 17,* 217–245.

This article measured the efficacy of four state-supported gambling treatment programs in Minnesota. Five hundred sixty-eight subjects took part in this pretest/posttest design and follow-up at 6 months and 12 months posttreatment. Treatment was eclectic and consisted of individual, group, education, 12 Step, family, and financial counselling. The results indicated statistically significant improvements on all outcome measures between pretest and follow-up including gambling frequency, gambling severity, amount of money gambled, number of friends involved in gambling, psychosocial problems, and number of financial problems.

46. Amor, P. J., & Echeburúa, E. (2002). Psychological treatment in pathological gambling: A case study. *Análisis y Modificacion de Conducta, 28* (117), 71–107.

A case study is described of a 40-year-old man with a 2-year history of pathological gambling. Treatment consisted of nine individual sessions (six sessions of stimulus control and exposure with response prevention, one session of emotional support, and two sessions related to relapse prevention). At the 1-year follow-up, the patient was abstinent from gambling and less depressed and anxious.

47. Blanco, C., Petkova, E., Ibanez, A., & Saiz-Ruiz, J. (2002). A pilot placebo-controlled

study of fluvoxamine for pathological gambling. *Annals of Clinical Psychiatry, 14,* 9–15.

Fluvoxamine (200 mg/day) was evaluated in a double-blind, placebo-controlled study of 32 problem gamblers over a 6-month period. Fluvoxamine was not statistically significantly different from placebo in the overall sample on the key gambling outcome measures (reduction in expenditures, time spent gambling per week) except among males and younger patients. The study lacked any follow-up.

48. Echeburúa, E., & Fernandez-Montalvo, J. (2002). Psychological treatment of slot machine pathological gambling: A case study. *Clinical Case Studies, 1,* 240–253.

In this case study, a 47-year-old woman was treated with stimulus control, exposure, and relapse prevention over nine individual sessions. At the 1-year follow-up, the patient remained abstinent from gambling.

49. Freidenberg, B. M., Blanchard, E. B., Wulfert, E., & Malta, L. S. (2002). Changes in physiological arousal to gambling cues among participants in motivationally enhanced cognitive-behavior therapy for pathological gambling: A preliminary study. *Applied Psychophysiology and Biofeedback, 27,* 251–260.

Cognitive-behavioural therapy for pathological gamblers augmented with motivational enhancement was administered to 9 subjects. Measures of psychophysiological arousal following exposure to imagined gambling vignettes were collected at pre- and posttreatment. Decreases in arousal during exposure to the vignettes were observed with a significant correlation between reductions in gambling symptoms and reductions in arousal.

50. Kim, S. W., Grant, J. E., Adson, D. E., Shin, Y. C., & Zaninelli, R. (2002). A double-blind placebo-controlled study of the efficacy and safety of paroxetine in the treatment of pathological gambling. *Journal of Clinical Psychiatry, 63,* 501–507.

In a randomized, double-blind, placebo-controlled study of paroxetine in the treatment of pathological gambling, subjects entered a 1-week placebo run-in phase followed by 8 weeks' treatment with paroxetine or placebo. Significantly greater reductions in the total score of the Gambling Symptom Assessment Scale and Clinical Global Impressions Scale were found in the paroxetine group compared to the placebo group.

51. Milton, S., Crino, R., Hunt, C., & Prosser, E. (2002). The effect of compliance-improving interventions on the cognitive behavioural treatment of pathological gambling. *Journal of Gambling Studies, 18,* 207–229.

Forty pathological gamblers were recruited according to DSM-IV criteria. They were randomly assigned to either a cognitive-behavioural treatment group or a cognitive-behavioural treatment group that included interventions designed to improve compliance. Dependent variables included a structured clinical interview, South Oaks Gambling Screen scores, and percent of income gambled. At

posttest, the group that received cognitive-behavioural treatment and compliance-enhancing treatment was found to have a significantly reduced dropout rate, which resulted in better outcomes. However, this gain was not maintained at the 9-month follow-up.

52. Pallanti, S., Quercioli, L., Sood, E., & Hollander, E. (2002). Lithium and valproate treatment of pathological gambling: A randomized single-blind study. *Journal of Clinical Psychiatry, 63,* 559–564.

Forty-two DSM-IV-diagnosed pathological gamblers (nonbipolar) entered a 14-week single-blind study of lithium and valproate. Subjects were randomly assigned. At posttreatment, both groups showed a significant improvement on the Yale-Brown Obsessive Compulsive Scale (modified). There were no differences between groups on this measure. Sixty-one percent of the lithium group and 68% of the valproate group were considered "responders" based on their Clinical Global Impressions-Improvement score.

53. Pallanti, S., Rossi, N. B., Sood, E., & Hollander, E. (2002). Nefazodone treatment of pathological gambling: A prospective open-label controlled trial. *Journal of Clinical Psychiatry, 63,* 1034–1039.

Fourteen subjects who met DSM-IV criteria for pathological gambling took part in an 8-week open-label trial of oral nefazodone. In the 12 subjects who completed the study, a significant improvement was found in all outcome measures including anxiety and depression. The authors conclude that nefazodone may be an effective treatment for pathological gamblers.

54. Robson, E., Edwards, J., Smith, G., & Colman, I. (2002). Gambling decisions: An early intervention program for problem gamblers. *Journal of Gambling Studies, 18,* 235–255.

This article describes an evaluation of the "Gambling Decisions" treatment program, a cognitive-behavioural approach intended for early-stage problem gamblers. Seventy-nine subjects were recruited and were given the choice of the program in either (a) Self Help Plus format (two 1-hour sessions with a nurse facilitator) or (b) Group (six weekly 90-minute sessions led by a nurse practitioner). Both groups were provided with a copy of the Client Handbook. The results indicated that there was a significant reduction in the number of hours and days spent gambling. There was also a significant reduction in money lost gambling, with gains maintained at the 12-month follow-up.

55. Zimmerman, M., Breen, R. B., & Posternak, M. A. (2002). An open-label study of citalopram in the treatment of pathological gambling. *Journal of Clinical Psychiatry, 63,* 44–48.

This study evaluated the efficacy of 12 weeks of citalopram in 15 DSM-IV-diagnosed pathological gamblers in an open-label study. Significant improvement was found on outcome measures including number of days gambled, amount of money lost, preoccupation with gambling and gambling urges, depression, and

overall quality of life. Eighty-seven percent were rated as at least "much improved" on the Clinical Global Impressions Scale for gambling. The authors concluded that citalopram may be efficacious in the treatment of problem gambling.

56. Grant, J. E., Kim, S. W., Potenza, M. N., Blanco, C., Ibanez, A., Stevens, L., et al. (2003). Paroxetine treatment of pathological gambling: A multi-centre randomized controlled trial. *International Clinical Psychopharmacology, 18,* 243–249.

A 16-week, double-blind, placebo-controlled trial of paroxetine in the treatment of 76 pathological gamblers was conducted at five outpatient academic research centres in the U.S. and Spain. Subjects were randomized to acute treatment with paroxetine or placebo. Both the paroxetine- and the placebo-treated groups demonstrated comparable improvement at 16 weeks with no statistical differences on the Clinical Global Impressions Scale scores, the Yale-Brown Obsessive Compulsive Scale Modified for Pathological Gambling, or the Gambling Symptom Assessment Scale.

57. Kuentzel, J. G., Henderson, M. J., Zambo, J. J., Stine, S. M., & Schuster, C. R. (2003). Motivational interviewing and fluoxetine for pathological gambling disorder: A single case study. *North American Journal of Psychology, 5,* 229–248.

An adult male gambler completed a 10-week trial of fluoxetine and four sessions of motivational interviewing. Weekly expenditures were reduced posttreatment and sustained at the 3-month follow-up. Negative mood decreased significantly throughout the study and at follow-up.

58. Ladouceur, R., Sylvain, C., Boutin, C., Lachance, S., Doucet, C., & Leblond, J. (2003). Group therapy for pathological gamblers: A cognitive approach. *Behaviour Research and Therapy, 41,* 587–596.

In a study of group cognitive treatment for pathological gambling, subjects were randomly assigned to treatment (*N* = 34) or wait-list control (*N* = 24). Posttreatment results showed that 88% of the treated gamblers and 20% in the control group no longer met the DSM-IV criteria, with gains maintained at the 2-year follow-up.

59. Grant, J., & Grosz, R. (2004). Pharmacotherapy outcome in older pathological gamblers: A preliminary investigation. *Journal of Geriatric Psychiatry and Neurology, 17,* 9–12.

Fourteen older (aged 60 or older) patients who fulfilled DSM-IV criteria for pathological gambling were treated in an outpatient clinic. In a retrospective assessment using information collected on gambling symptoms during clinic visits, 8 patients achieved sustained response to pharmacotherapy.

60. Hodgins, D. C., Currie, S., el-Guebaly, N., & Peden, N. (2004). Brief motivational treatment for problem gambling: A 24-month follow-up. *Psychology of Addictive Behaviors, 18,* 293–296.

A 2-year follow-up of a randomized clinical trial of two brief treatments for problem gambling (*N* = 67) showed better outcomes for those who received a motivational telephone intervention plus a self-help workbook compared to those who received only the workbook. The motivational intervention group gambled less frequently and showed decreased financial losses and lower South Oaks Gambling Screen scores. This study supported the efficacy of a mail-based treatment accompanied by a brief telephone intervention for problem gamblers.

61. Melville, C. L., Davis, C. S., Matzenbacher, D. L., & Clayborne, J. (2004). Node-link-mapping-enhanced group treatment for pathological gambling. *Addictive Behaviors, 29,* 73–87.

In experiment 1, 13 pathological gamblers were randomly assigned to one of three groups: a mapping group, a nonmapping group, and a wait-list control group. Treatment sessions consisted of 90-minute sessions, twice weekly for 8 weeks. Assessments were conducted at pretreatment, posttreatment, and 6-month posttreatment. The dependent variables included DSM-IV criteria, control of gambling, gambling expenditure, and duration. In experiment 2, 9 pathological gamblers were randomly assigned to either a mapping treatment group or a wait-list control group. The dependent variables in this experiment included changes in comorbid depression and anxiety. The results from both experiments showed that the node-linked mapping group reported a greater decrease in depression and anxiety and desire to gamble, met fewer DSM-IV criteria at posttest and follow-up, and had increased ratings of control.

62. Hollander, E., Pallanti, S., Allen, A., Sood, E., & Rossi, N. B. (2005). Does sustained-release lithium reduce impulsive gambling and affective instability versus placebo in pathological gamblers with bipolar spectrum disorders? *American Journal of Psychiatry, 162,* 137–145.

In a 10-week randomized, double-blind, placebo-controlled treatment study, 40 pathological gamblers with bipolar spectrum disorders were treated with sustained-release lithium carbonate. Subjects with bipolar spectrum disorders significantly improved while taking sustained-release lithium carbonate compared to placebo on scores on the Yale-Brown Obsessive Compulsive Scale and the Clinical Global Impressions severity of pathological gambling scale. Ten of 12 treatment completers in the medication group were rated as compared to 5 of 17 completers in the placebo group.

63. Saiz-Ruiz, J., Blanco, I. A., Masramon, X., Gomez, M. M., Madrigal, M., & Diez, T. (2005). Sertraline treatment of pathological gambling: A pilot study. *Journal of Clinical Psychiatry, 66,* 28–33.

This study evaluated the efficacy of sertraline in the treatment of pathological gamblers. Sixty patients who met DSM-IV criteria for problem gambling were included in this 6-month double-blind, flexible dose, placebo-controlled study. Three quarters of both the sertraline group and the placebo group were considered responders based on the Criteria for Control of Pathological Gambling Questionnaire. The authors concluded that sertraline was not significantly more efficacious than placebo.

Appendix

Key descriptive details for each study

Article	Type of treatment	Study design	Sample size	Follow-up	Year
1	chemical aversion therapy	case study	*n* = 1	none	1966
2	"paradoxical intention"	case study	*n* = 1	none	1967
3	Faradic aversion therapy	case study	*n* = 3	18–26 months	1968
4	Faradic aversion therapy	case study	*n* = 1	12 months	1968
5	outpatient group therapy	program evaluation	*n* = 9 (& spouses)	none	1970
6	Faradic aversion therapy	single group	*n* = 16	12 months	1970
7	behavioural therapy, Faradic aversion therapy	case study	*n* = 1	3 months	1971
8	Faradic aversion therapy	case study	*n* = 20	6–24 months	1972
9	rational emotive therapy & covert sensitization	case study	*n* = 1	30 months	1977
10	behavioural therapy	case study	*n* = 1	15 months postreferral	1979
11	lithium carbonate	case study	*n* = 3	none	1980
12	behavioural therapy	single group	*n* = 26	9 months–4.5 years	1982
13	behavioural therapy	case study	*n* = 1	24 months	1982
14	Faradic aversion therapy, imaginal desensitization	randomized clinical trial	*n* = 20	12 months	1983
15	residential treatment	program evaluation	*n* = 60	12 months	1984
16	group psychotherapy	quasi-experimental	*n* = 20 couples	none	1985
17	residential treatment	program evaluation	*n* = 66	6 months	1987
18	imaginal relaxation, imaginal desensitization	randomized clinical trial	*n* = 20	12 months	1988
19	outpatient group therapy	program evaluation	*n* = 128	none	1989
20	cognitive therapy	single case	*n* = 4	3 months	1989
21	self-help manual & in-depth interview	single group	*n* = 29	6 months	1990
22	cognitive-behavioural therapy	case study	*n* = 1	6 months	1990

Article	Type of treatment	Study design	Sample size	Follow-up	Year
23	cognitive-behavioural therapy	controlled clinical trial	*n* = 64	12 months	1991
24	residential treatment	program evaluation	*n* = 72	6–14 months	1991
25	imaginal desensitization, behavioural therapy	post hoc analysis	*n* = 63	2–9 years	1991
26	residential treatment	program evaluation	*n* = 66	12 months	1991
27	cognitive-behavioural therapy	case study	*n* = 3	9 months	1994
28	carbamazepine	case study	*n* = 1	30 months	1994
29	cognitive-behavioural therapy	multiple-baseline	*n* = 4	6 months	1994
30	stimulus control & exposure treatment	case study	*n* = 1	24 months	1995
31	behavioural therapy	post hoc analysis: relapsed vs. nonrelapsed	*n* = 63	9 years	1996
32	eye movement desensitization and reprocessing & cognitive therapy	single group	*n* = 22	none	1996
33	cognitive-behavioural therapy	randomized clinical trial	*n* = 29	12 months	1997
34	cue-exposure, response prevention	case study	*n* = 2	none	1997
35	fluvoxamine	single-blind, placebo-controlled	*n* = 16	none	1998
36	cognitive therapy	multiple-baseline	*n* = 5	6 months	1998
37	stimulus control & exposure with response prevention	controlled clinical trial	*n* = 69	12 months	2000
38	fluvoxamine	randomized, double-blind, placebo-controlled, cross-over	*n* = 15	none	2000
39	inpatient cognitive therapy	program evaluation	*n* = 66	none	2001

Article	Type of treatment	Study design	Sample size	Follow-up	Year
40	stimulus control & exposure with response prevention	post hoc analysis of completers	*n* = 69	12 months	2001
41	self-help manual, motivational telephone intervention	randomized clinical trial	*n* = 102	12 months	2001
42	naltrexone	open-label	*n* = 17	none	2001
43	naltrexone	randomized, double-blind, placebo-controlled	*n* = 83	none	2001
44	cognitive therapy	randomized clinical trial	*n* = 66	12 months	2001
45	outpatient treatment	program evaluation	*n* = 568	12 months	2001
46	stimulus control, exposure, & response prevention	case study	*n* = 1	12 months	2002
47	fluvoxamine	randomized, double-blind, placebo-controlled	*n* = 32	none	2002
48	stimulus control, exposure, & relapse prevention	case study	*n* = 1	12 months	2002
49	cognitive-behavioural therapy, motivational enhancement	single group	*n* = 9	none	2002
50	paroxetine	randomized, double-blind, placebo-controlled	*n* = 45	none	2002
51	cognitive-behavioural therapy	randomized clinical trial	*n* = 40	9 months	2002
52	lithium carbonate, valproate	randomized, single-blind	*n* = 42	none	2002
53	nefazodone	open-label	*n* = 14	none	2002
54	cognitive-behavioural therapy, self-help manual	randomized clinical trial	*n* = 79	12 months	2002
55	citalopram	open-label	*n* = 15	none	2002
56	paroxetine	randomized, double-blind, placebo-controlled	*n* = 76	none	2003

Article	Type of treatment	Study design	Sample size	Follow-up	Year
57	fluoxetine & motivational interviewing	case study	*n* = 1	3 months	2003
58	cognitive therapy	randomized clinical trial	*n* = 58	24 months	2003
59	SSRIs, naltrexone	chart review	*n* = 14	not applicable	2004
60	self-help manual, motivational telephone intervention	randomized clinical trial	*n* = 67	24 months	2004
61	node-link mapping	randomized clinical trial	*n* = 13, *n* = 19	6 months	2004
62	lithium carbonate	randomized, double-blind, placebo-controlled	*n* = 40	none	2005
63	sertraline	randomized, double-blind, placebo-controlled	*n* = 60	none	2005

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annotated gambling bibliographies

Web review

DSpace @ the University of Calgary: A digital library of gambling-related publications

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Introduction to the DSpace collection

Over the past several years, the Alberta Gaming Research Institute Library and the University of Calgary Image Centre have collaborated on a project to digitally archive a selection of historical and contemporary gambling-related publications. As of June 2006, there were 289 items included in the collection which is accessible from the Institute's DSpace "community" at the University of Calgary: <https://dspace.ucalgary.ca/handle/1880/79>.

Resources selected for inclusion in the collection have primarily been comprised of monographs (books), technical reports, government publications, graduate student dissertations, and journal article post-prints. The nature of the digital library, however, also makes it possible to incorporate multimedia formats such as video, sound clips, data files, web pages, and presentation files (e.g., Microsoft PowerPoint). It is anticipated that this collection of materials will be of interest to a variety of researchers – particularly those interested in tracing the growth and development of gambling in North America and elsewhere.

Examples of content included in the collection

Though the majority of items available in the collection were produced in the twentieth and twenty-first centuries, there are a number of examples of even older materials. The earliest such document included is By the King, a proclamation for the better regulating of lotteries within the kingdoms of Great Britain and Ireland <http://hdl.handle.net/1880/444> which was a 1665 proclamation by King Charles II – See Figure 1.

The earliest Canadian source appearing in the collection is the Lottery for building a prison, for the Town and District of Montreal <http://hdl.handle.net/1880/442> -- See Figure 2. This item is an image of an early lottery ticket printed in 1784 to raise funds for construction of a Montreal prison. As these examples illustrate, making accessible digitized materials online has great potential for improving access to a range of rare and potentially valuable pieces of gambling history.

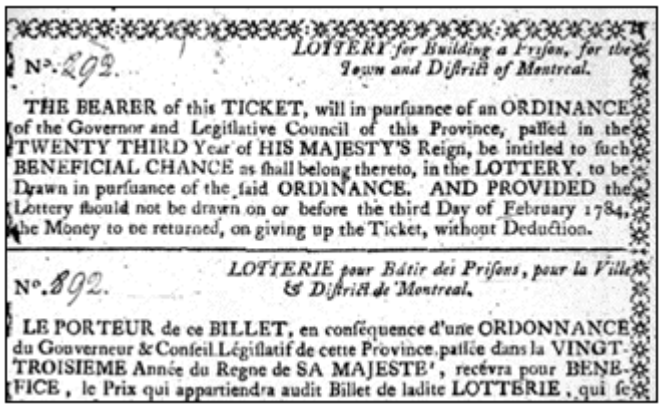
By the King.

A PROCLAMATION

For the better Regulating of LOTTERIES within the Kingdoms of *Great Britain* and *Ireland*.

CHARLES R.

Figure 1
By the King, A Proclamation



LOTTERY for Building a Prison, for the Town and District of Montreal.

N°. 892.

THE BEARER of this TICKET, will in pursuance of an ORDINANCE of the Governor and Legislative Council of this Province, passed in the TWENTY THIRD Year of HIS MAJESTY'S Reign, be intitled to such BENEFICIAL CHANCE as shall belong thereto, in the LOTTERY, to be Drawn in pursuance of the said ORDINANCE. AND PROVIDED the Lottery should not be drawn on or before the third Day of February 1784, the Money to be returned, on giving up the Ticket, without Deduction.

LOTTERIE pour Bâtir des Prisons, pour la Ville & District de Montreal.

N°. 892.

LE PORTEUR de ce BILLET, en conséquence d'une ORDONNANCE du Gouverneur & Conseil Législatif de cette Province, passée dans la VINGT-TROISIEME Année du Regne de SA MAJESTE', recévra pour BENEFICE, le Prix qui appartiendra audit Billet de ladite LOTTERIE, qui se

Figure 2
Lottery for building a prison, Montreal, February 1784

While such historical materials have provided a rich source of materials for the collection, it should be noted that more recently published items are also included. Some of these items were never made available on the Web (e.g., The history of the law of gaming in Canada [1983] by R. G. Robinson for the Royal Canadian Mounted Police <http://hdl.handle.net/1880/1477>). Others were once available but have been subsequently removed (e.g., Native gaming and gambling in Canada [2001] by Kiedrowski & Associates Inc. <http://hdl.handle.net/1880/238>). Making such items permanently accessible online can be beneficial for scholars and the interested lay public when attempting to comprehensively review the specialized gambling research literature.

Using the DSpace collection

Accessing the Collection

Access to the Institute's digital library collection is free to anyone with a high-speed Internet connection. Users can either connect directly to the Institute's DSpace community from <https://dspace.ucalgary.ca/handle/1880/79> or first connect to the main DSpace site <https://dspace.ucalgary.ca/> and then select the Alberta Gaming Research Institute community – See Figure 3 and Figure 4.

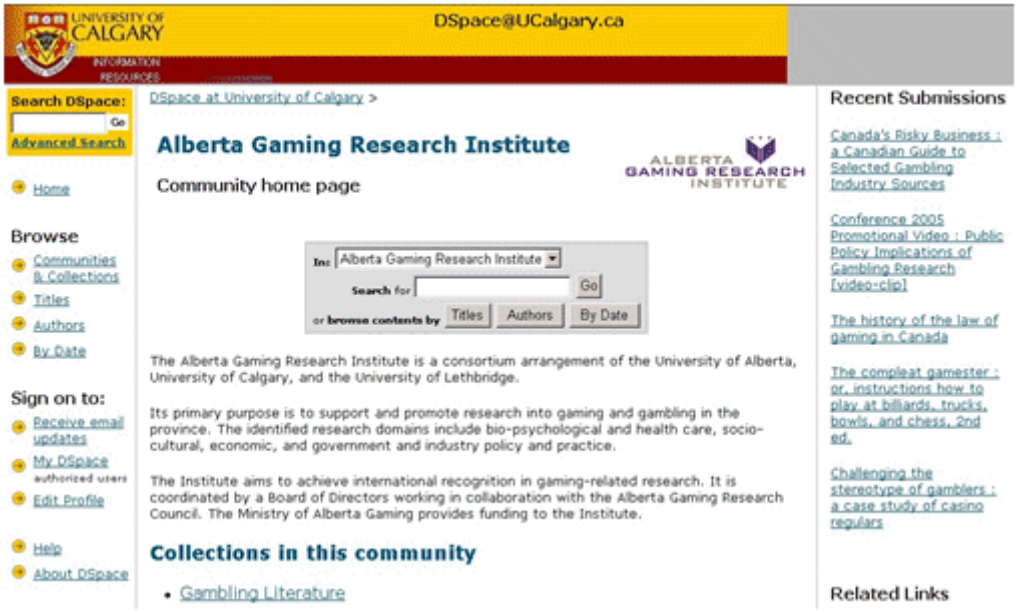


Figure 3
Alberta Gaming Research Institute DSpace Community

Figure 4
University of Calgary DSpace Home Page

Searching and Browsing the Collection

Site users can perform keyword searches to locate materials included in the digital library collection. A keyword search searches both the descriptive “metadata” associated with an item as well as the digitized “full-text” of the item. This type of search is most useful when attempting to discover resources when specific document titles and authors are unknown. Browsing is another way to locate documents in the collection. Users may choose to browse and sort items by title, author, or publication date (either chronologically or reverse-chronological). Such searches are particularly effective when specific information about a resource is known.

Matching document titles are returned to digital library users when performing either a keyword search or a document browse. Users can then select an item's title to reveal information such as the author, publisher, publication date, subject keywords, and abstract. A hyperlink to a PDF file also appears which allows users to view the digitized content. Although the primary file format for storing the digitized content is Adobe PDF, there are no restrictions on file types that can be included.

A special feature that may be of interest to researchers is the ability to subscribe to a reminder service that provides an email notification when new items have been uploaded to the gambling collection.

Digital library project goals

The primary goals of the digital library initiative have been to increase access to historic and contemporary gambling resources and to ensure the long-term availability of these resources.

Increasing Access to Historic and Contemporary Gambling Resources

The digitization initiative has helped to further the Institute Library's mandate of supporting the research activities of the Institute and serving as a publicly-accessible clearinghouse of gambling materials. As no comparable collection of gambling-specific digitized materials is known to exist on the Internet, it is expected that this collection will play in central role in filling this identified gap.

A significant proportion of the items selected for inclusion in the collection were published prior to the mid-nineteen-nineties. As such, they were not originally made available on the World Wide Web or included in collections of content developed by commercial publishers. This means that access to such literature was restricted to physical copies (i.e., those available print or on microfilm) available from libraries, archives, and private collections.

Increasing the availability of gambling publications by including them on the Internet is only one aspect in making them more accessible. It is also necessary to efficiently locate and retrieve such documents. The DSpace search interface provides an effective means of searching and displaying the content included in the collection. In addition, the DSpace software is fully compatible with the Open Archives Initiative (OAI) metadata standards. This makes items accessible to web search engines (e.g., Google) as well as specialized academically-oriented search engines like OAIster <http://oaister.umdl.umich.edu/> and Google Scholar <http://scholar.google.com/>.

Ensuring Long-Term Availability of Gambling Resources

Gambling scholars who incorporate web materials into their research often find that online resources are regularly relocated or removed from the Internet altogether. Web pages and web documents are ephemeral and web references cited in publications are often rendered obsolete after only a few years. The DSpace software can, however, store digital documents in a way that approximates a traditional archive. It provides for long-term access to information by making use of accepted preservation techniques for digital materials. One way in which this is accomplished is by using a "handle system" that assigns persistent

identifiers to each item in the collection. Effectively, researchers who cite an item's handle are assured that the item will permanently be available at the referenced web address. For example, the handle <http://hdl.handle.net/1880/193> will permanently lead to the digitized version of the publication Gambling in Canada: Golden Goose or Trojan Horse? (1988).

Concluding comments and future directions

The Institute's digitization initiative has demonstrated that it has the potential to be an invaluable source of gambling-related material. Digital collections offer the promise of greatly increasing the availability of materials previously inaccessible to many researchers. An added benefit provided by this project is that access can be provided in a way that also facilitates stable and secure digital archiving of materials.

The nature of the DSpace software tool used to build the digital library also allows it to be used in various other ways that provide substantial future value to both the gambling research community and general public. For instance, scholarly journal article "post-prints" can be deposited and archived in the collection by authors or author designates. This "self-archiving" function has become an increasingly accepted method of scholarly communication in academia and serves to increase the impact of research and its uptake.

At the present time, it is difficult to accurately assess the ultimate value of this project to the research community. It is anticipated, however, that as the number of items in the collection increases and as awareness of the project grows, the lasting value of the collection will become readily apparent.

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Rhys Stevens has been a librarian at the University of Lethbridge since 2001. During this time, he has been responsible for the provision of library and web site services for the Alberta Gaming Research Institute. The primary focus of his work is to support the research needs of researchers and the general public who are interested in issues related to gaming and gambling.

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opinion

Reducing the moral jeopardy associated with receiving funds from the proceeds of gambling

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Abstract

This paper outlines the ethical and organisational risks for community and other public good organisations of accepting funding from gambling industry sources. Aspects of this moral jeopardy include the ethics of benefiting from the suffering of others as well as impacts on an organisation's reputation, governance, and internal relationships. After 50 years of unethical practice by tobacco manufacturers, community agencies involved with tobacco control are now actively challenging organisations that continue to pursue these links. This readiness to question has not yet been extended to gambling, but with efforts at improving ethical awareness, people in key agencies can be assisted in challenging these relationships. The different arrangements for dispersing charitable funds from gambling are examined and we conclude that none of them are free from moral jeopardy. The paper finishes with recommendations on ways organisations might participate in promoting low moral jeopardy environments.
Key words: problem gambling, ethics, gambling industry, research funding, community organisations

Introduction

Example 1: Surprise attack
Jenny works in a division of a large health service organisation. One afternoon during her tea break, she picks up a staff bulletin and happens to read about a newly established fund to support educational development projects. This discovery seems unbelievably convenient; it was only 2 days ago that she had been complaining to colleagues about the lack of information available to clients in managing their health issues. She begins discussing a potential project with colleagues and finds they share her enthusiasm. Following several lively meetings, they manage to design a project and work out a rough timeline. She then dutifully sits down to begin filling in the necessary forms. Upon accessing the application form from the Internet, she is surprised to read at the end of the first pages an acknowledgement that declares 'Proudly Supported by XXX Trust' (a major electronic gambling machine trust) followed by the organisation's logo. Her enthusiasm instantly drains. A close member of her family has been severely affected by problem gambling so she has developed strongly negative views on gambling and the effects this industry is having on her community. How can she in all conscience accept their money? Yet, at the same time, the funding is appealing. Jenny's organisation could achieve so

much for their clients with this sort of funding. It is a dilemma, and she wishes that the funding were not from this source. One part of her is even tempted to pretend she did not see the logo and to continue filling in the form.

Money derived from gambling has become one of the major sources of funding for community and other public good organisations (COPGOs). Different nations (and different states or provinces for those in federal systems) have adopted different approaches to the extent to which gambling is used as a specific mechanism for raising revenue. Some jurisdictions (such as many states in the USA and Australia) regard gambling as a heavily taxed commercial activity with revenue absorbed into their consolidated funds. Other countries (such as the UK, Canada, and New Zealand) have strong traditions where community benefit funding is identified as either one or the primary purpose of formal gambling (O'Sullivan & Christoffel, 1992; Reith, 1999; Morton, 2003). Each arrangement introduces its own set of problems, but, in the longer term, the heavy reliance of COPGOs on gambling sources introduces some particularly challenging issues for the future. The increasing amounts of available funds, particularly from electronic gambling machine providers, engage more and more community organisations in seeking gambling funds for their activities. For example, in New Zealand, a small country of 4 million people, gambling industries generate somewhere in the vicinity of $500 million to $700 million per year for community organisations. This amount means that the majority of their COPGOs are receiving gambling funding in some form. As the above scenario illustrates, people in these organisations are often unaware of the extent of the involvement and can at times be taken by surprise when they discover the funding source for their initiatives. Some may be troubled by the industry involvement, but may perceive the relationship as too well established to challenge.

In this paper COPGOs will refer to a broad range of organisations which all share a common purpose in seeking to improve the quality of life of their members or the people they serve. COPGOs include nongovernment organisations (NGOs), not-for-profit societies and trusts, civil society organisations, government and quasi-government organisations, community wellbeing organisations, health service organisations, and academic and research organisations.

It is easy to understand how poorly funded COPGOs are attracted to this considerable and easily accessible source of revenue, particularly when government contributions become increasingly difficult to obtain. The catch is that once an organisation receives its first amount of funding from a gambling industry source, a precedent is set that for many will lead to the acceptance of further funding, thereby laying the foundations for a relationship of reliance and dependency. This paper examines these and other risks and explores ways that such hazards could be minimised.

Moral jeopardy

Example 2: Reasons to accept funding??

- We could not survive without it.
- You need to be in to win.
- We won't be able to compete with those who do receive it.
- There are few other opportunities around.
- If we don't, some other organisation will accept it.
- If we don't, the money will go to less deserving causes.
- Gambling causes much less harm than other sources.
- We could end up refusing all sources of funding on moral grounds.
- We would be seen as acting too precious if we refuse.

'Morality' is a broad term that encompasses ethical, practical, and perceptual issues. Morality evolves according to the norms generated over time through the influences of history, culture, and material resources. It embraces what a particular society at a particular time deems acceptable and unacceptable. These perceptions are never fixed and can vary considerably over time. For example, the morality of drug use—such as with tobacco and heroin—has changed radically over the last century. The increasing consumption of commercialised gambling in Western-style democracies is relatively new, and how it is seen from a moral perspective is changing and likely to continue changing. While gambling undeniably introduces a range of benefits to communities in the form of enjoyment, social engagement, and funding sources, its consumption also introduces a range of harms. The following section identifies the dimensions of risk that COPGOs should consider when deciding to receive funds from gambling industries. These include ethical and reputational risks alongside risks to governance, organisational coherence, and democracy.

Ethical risks

Similar to the impacts of other dangerous consumptions with addictive potential (such as tobacco and alcohol), the impacts of gambling are complex and diverse. By plugging into systems of financial transaction, gambling interacts with individual lifestyles and patterns of social connection. The most obvious impact in the medium term is the rise in prevalence of problem gambling (Ladouceur, Boisvert, Pepin, Loranger, & Sylvain, 1994; Shaffer, Hall, & Vander Bilt, 1997). Problem gambling is strongly linked to a range of indicators of social distress. In North America, where nearly a third of younger people gamble weekly, their involvement with gambling outstrips their participation in smoking, drinking, and taking other drugs (Gupta & Derevensky, 1998; Shaffer, Hall, Vander Bilt, & George, 2003). Ten to fifteen

percent of younger people are at risk for problem gambling (Jacobs, 2000; Shaffer & Hall, 1996). Problem gambling also co-occurs at high rates with other mental health concerns, in particular depression, anxiety, suicide, and substance abuse (Cunningham-Williams, Cottler, Compton, & Spitznagel, 1998; Specker, Carlson, Edmonson, Johnson, & Marcotte, 1996). Other indicators of disruption from problem gambling are family dysfunction and violence (Bland, Newman, Orn, & Stebelsky, 1993; Lorenz & Yaffee, 1986), bankruptcy (Gerstein et al., 1999), and criminal offending (Abbott & McKenna, 2000).

The negative effects of gambling are not confined to problem gambling. Regular nonproblematic gambling can contribute to a variety of worrying trends. For example, regular gambling can divert parental energy away from family life, thereby reducing input into relationships in such areas as family recreation and care of children (Williams, 1996; Raeburn, 2001). Frequent gambling also correlates highly with other behaviours that pose risks to health, such as heavy alcohol use and smoking (National Opinion Research Center, Gemini Research, The Lewin Group, & Christiansen/Cummings Associates, 1999). For members of low-income families even a moderate investment in gambling may tip the balance between managing rent or mortgage payments and facing destitution. The loss of a financially stable home environment contributes to family conflict, it affects the emotional development and educational prospects of children, and it propels movement between locations that contributes further to the fragmentation of local communities (Dyall & Hand, 2003; McGowan, Droessler, Nixin, & Grimshaw, 2000). Economists researching gambling have discussed how gambling could be considered to be a form of regressive taxation (Pickernell, Brown, Worthington, & Crawford, 2004). By 'regressive' they mean that instead of the burden of taxation being differentially lighter on people of lower income, a higher burden is placed on those who can least afford it. This research is at an early stage. Some point to the higher engagement of people of low income in most forms of gambling (Adams et al., 2004; Costello & Milar, 2000; Doughney, 2002). Added to this effect, people on lower incomes have less to lose, are more financially vulnerable, and are therefore more likely to suffer negative effects from gambling losses.

The essential ethical consideration that follows from accepting gambling monies is that an organisation becomes locked into a challenging ethical inconsistency. How can a COPGO that claims to serve the good of a community maintain its credibility when part of its income comes from sources that are known to cause harm to that same community? Some might rationalise such an involvement by claiming that the end justifies the means. But to what extent will an organisation tolerate this inconsistency? How can an organisation set up to reduce poverty and other social ills in all conscience benefit in a real sense, either directly or indirectly, from other people's misery?

Another more active possibility could emerge from a visible relationship with industry sources. Gambling industries that generate the most harm (currently electronic gambling machines) are likely to be acutely aware of the negative views that can be formed regarding their operations. Negative public perceptions can have major effects on the sale of their products, particularly with regard to brand image, marketing, site approvals, regulations, and government policies. Visible relationships with COPGOs could serve to mitigate potential negative associations and to give the impression either that the activity leads to public good or that they have at least attempted to rectify potential harm. In this way gambling providers can potentially derive significant benefits from a positive public image, which enables them to interface more easily in community, local authority, and public arenas and helps support them in venue and licensing processes, in creating new products and venues, and in de-

emphasising much of the harm their activities generate. A visibly funded relationship could also provide a respectable platform for industries to negotiate their relationships with government agencies.

A further active ethical concern is that the COPGO's acceptance of gambling funds becomes incorporated into the marketing of that gambling product. The positive associations formed in the relationship often provide a base for engaging the spending behaviour of punters. For example, it is likely that people will feel more inclined to purchase a ticket in a national lottery when they believe the profits are going to a worthy cause. This perception will be particularly strong when they see their gambling as visibly benefiting their immediate community. This acts to encourage or at least disinhibit the punter at the point of sale and is thereby likely to increase the amount they are likely to purchase. The consequent increase in gambling consumption adds to the extent of gambling-related harm. Thus, from one perspective, the COPGO's acceptance of gambling funding can be viewed as actively contributing to the negative impacts gambling has on individuals and communities.

Reputational risks

Putting ethical considerations aside for a moment, organisations contemplating a relationship with gambling monies would benefit from considering how they will be seen by others. Reputational risk refers to the perceptions of other relevant stakeholders regarding the decision of a COPGO to accept gambling funds. Depending on the importance of the stakeholder, these perceptions could have major implications for the viability of the organisation. The perceptions that matter will vary but they typically include those of funders, consumers, collaborators, and the general public. For example, a theatregoer with strongly negative views of gambling might choose to boycott a company that is funded by gambling sources, and for that person the negative association could last long after the company ceases receiving such funds. At another level, government funding agencies could themselves have concerns about being linked to gambling providers and for that reason prefer relationships with COPGOs that do not have such associations. The impact of negative perceptions also extends to those working within an organisation. For those with ethical concerns, an organisational link to gambling providers could challenge their own involvement with the COPGO. For example, a counsellor with strong views about gambling industries who works in a problem gambling counselling agency is likely to have serious reservations about that service assisting casinos with their host responsibility programmes. The perception of an association could be interpreted as complicity, which would sap the counsellor's morale and enthusiasm for the work of the service.

Governance risks

The primary risk to governance centres on the threats to organisational independence and sovereignty due to an increasing reliance on gambling industry sources of funding. As the proportional level of gambling funding increases, members of a COPGO may begin viewing such funding as essential for survival. Often incremental increases in funding creep up on an organisation; reliance evolves without those in the COPGO fully appreciating the extent. In situations where a governance board on balance opposes this source on ethical grounds, on pragmatic grounds they may have little choice but to continue with the funding—they see the organisation as simply ceasing to exist without it. A board might consider a small amount of gambling revenue (say 5% of income) as expendable, and consequently they would have no difficulty risking it by criticising the source. But for many COPGOs a larger amount (say 10%

or more) could lead to perceptions of reliance and they would be reluctant to jeopardise the funding by criticising or challenging the activities of the source. In a Canadian survey of NGOs who had received grants from gambling sources Berdahl & Azmier (1999) found a full 20% received over half their annual revenues from gambling grants and 50% rated gambling grants as the top funding source. Many of the NGOs receiving funds argued that they would not be able to survive without these grants. The investigators also surveyed and interviewed NGO board members to find that as high as 69% of people in the organisation disagreed or strongly disagreed with the statement 'our board members oppose our organisation's use of gaming revenues.' They noted that opposition was particularly low among sports and recreation organisations. They explored these views further in in-depth interviews with board members and found that while individual board members may object to the funds,

> ... the greater sentiment is that their commitment to their cause overrides their ethical concerns about gambling. For these individuals, the acceptance of gambling revenues is seen as a 'compromise,' or a 'necessary evil,' that must be accepted to meet their larger goals. As one respondent wrote, 'Ethically our staff and board are always debating this issue. Our need for operating money usually wins out however.' (Berdahl & Azmier, 1999, p. 15)

Relationship risks

A further risk to consider is the possibility that receiving gambling funds could jeopardise relationships within an organisation. Approaches to achieving community wellbeing will vary across an organisation. Differences in focus and orientation can lead to interpersonal tensions that in turn lead to conflict and dissension, and differences in approaches to ethical issues can generate the most passion and debate. There are two different levels at which this can occur: the suborganisational and the individual.

In larger organisations, such as health services or universities, one section of activity may have considerably less interest in these ethical concerns than other sections. For example, in a large health service organisation (such as a hospital), the less community-oriented sections of the organisation (such as critical care) may have few qualms about receiving urgently needed funds from gambling sources. They are likely to do so without considering the impact this might have on other sections with more of a community orientation, such as mental health and addiction services. People in these services are then put in a difficult position because their institution's involvement in receiving gambling funds compromises their ability to speak out on the negative impacts of gambling. This situation is particularly important to organisations with sections that are likely to champion causes associated with harm from gambling, such as universities and social justice advocacy organisations. Once one part of a university accepts significant gambling funds, other sections of the same institution are less able to comment credibly on gambling issues and, if they do, may find themselves in difficulties with those receiving the funds and perhaps in conflict with central management.

The other situation to consider is the impact on dissenting individuals within a COPGO when it decides to receive gambling funds. The following example captures some of these dynamics.

Example 3: Marginalisation
Jason was a member of the board of trustees for a golf club. His club decided some years before to accept major sponsorship from a large electronic gambling machine provider. Jason initially had no objections to this, but as time went on and he read more in newspapers about the impacts of gambling, he grew increasingly concerned about the club's willingness to accept this funding. He believed strongly that golf was a game that aimed to promote the health, wellbeing, and moral integrity of citizens. He had increasing difficulty reconciling this with what he heard about gambling. He raised these issues tentatively with the board. They listened, but the ensuing discussion was light and full of quips about betting on the future of the club. He raised the issues again in two subsequent meetings. Other board members began to recognise that he was serious and they engaged more strongly in countering his arguments. Eventually he tabled a motion proposing the club pull out of the funding relationship. The debate then became highly personal with accusations regarding inconsistencies in his own participation in gambling and challenging his credentials to take the moral high ground. Predictably the motion was not carried and from then on he sensed that others on the board viewed him as a problem. They joked about him being a moral arbiter and were careful what they discussed in his presence. He too was wondering about his continuing board membership. As time went on his concerns about this funding had not diminished and he was becoming increasingly silent and passive at board meetings.

Persistent dissenting voices are a problem for an organisation. Should they be engaged, challenged, ignored, or marginalised? Their dissent can become corrosive to organisational coherence, so it is tempting to transfer the discomfort to individuals and treat them as the problem—suggesting that it is the dissenters and not the organisation who choose to make life difficult. The effect of this response on the dissenters is to silence their voices, but in the long run it could lead to the loss of key and highly committed people within the organisation.

Democratic risks

A longer-term consequence of gradual losses in an organisation's independence and sovereignty is the subtle erosion of its capacity to participate actively in democratic processes. Sports clubs, charities, church and school committees, work social clubs, hobby groups—from small local groups to large national NGOs—these all make up the intricate web that provides the base for social involvements. It is often through interactions in community groups that people form their views on social issues. Consequently, financial influence at a community level could go a long way in shaping public views on gambling. The charitable contributions of the gambling industry to public good activities quickly translate into community support for their developments and their recognition as responsible community benefactors. (For a more detailed discussion on these issues see Adams et al., 2003; Adams, 2004.)

Moral jeopardy in tobacco research

'Perhaps research grants coming from tobacco companies should carry their own Surgeon General's warning. Caution: Tobacco industry sponsorship may be hazardous to the public's health.' (Parascandola, 2003, p. 549)

We searched the published literature on the morality of accepting gambling and we found little published discussion and no formal protocols or policies that purport to address this issue. The absence of formal discussion is presumably a function of the relatively recent nature of the global expansion of commercial gambling. Other legalised and commercialised dangerous consumptions share a similarly variable and often fraught relationship between those who manufacture the product and those involved in responding to associated harms. For example, in an article debating the merits of alcohol funding, Griffith Edwards (1998), a leading alcohol and public health researcher, stated,

> So should researchers take research money from a tainted industry which exploits vulnerable populations, mounts attacks on valid research and independent researchers, and which, through its front organisations, tries to distort the truth? Those considerations suggest perhaps an answer tilting towards a 'no' in a more obvious way than some scientists might on first inspection have thought. (p. 336)

Concerns such as these have led the International Society of Addiction Journal Editors (ISAJE) to agree in 1997 in a meeting in Farmington, Connecticut (ISAJE, 2005), to require all members to support the 'Farmington Consensus', an understanding that set standards for ethical expectations of authors, referees, and editors regarding 'maintaining editorial independence' and included declarations of 'support from the alcohol, tobacco pharmaceutical or other relevant interests'.

Nonetheless, the most lively and lengthy debate on the morality of industry funding has occurred about tobacco, and it is this relationship that provides useful clues as to how this issue might unfold for gambling. The tobacco debate has been assisted by two sources of information: first, the increasing evidence that tobacco has contributed significantly to cancer and other fatal illnesses (Doll, Peto, Wheatley, Gray, & Sutherland, 1994), and, second, increasing revelations of how the tobacco industry managed to manipulate scientific evidence to stall restrictive legislation. In a study of tobacco industry internal documents Drope and Chapman (2001) identified how the tobacco industry had built up networks of scientists sympathetic to its position that environmental tobacco smoke is an insignificant health risk. They concluded that, 'Industry documents illustrate a deliberate strategy to use scientific consultants to discredit the science on ETS [environmental tobacco smoke]' (Drope & Chapman, 2001, p. 588).

In a similar study Fields and Chapman (2003) reviewed internal industry documents concerning the large cigarette firm Philip Morris and its grooming over a 40-year period of a leading tobacco scientist, Ernst Wynder. They provided detailed evidence from documents that revealed the thinking of the firms at the time. For example, in considering the rising anti-tobacco health lobby, Philip Morris executives commented,

> Get scientists who are against us on the primary issue to speak up in our favour on the ETS issue. There are probably quite a number of scientists who would be ready to do this—Wynder is one example. These people should address scientific meetings, conduct interviews with the media, appear on talk shows etc. We should attempt to arrange debates between these scientists and the more rabid or silly antis. (p. 574)

They were subsequently amply supported by scientists eager to embrace what appeared to be an important source of research funding. In concluding their analysis Fields and Chapman (2003) stated,

> In austere funding environments, today's scientists face ongoing funding challenges. The tobacco industry can provide comparatively easy access to allegedly no-strings research funds, but there is growing momentum among universities to refuse to permit such funding because of its track record in corrupting the integrity of science. (p. 576)

These concerns have stimulated considerable debate in several of the world's most prestigious medical journals, particularly the *British Medical Journal*, *Tobacco Control*, and the *Journal of Epidemiology and Community Health*. For example, Richard Smith, the chief editor of the *British Medical Journal*, has published several editorials challenging the willingness of scientists, institutions, and publications to engage in activities associated with tobacco funding. A similarly strong position is adopted by Simon Chapman at the University of Sydney, who is editor of the prestigious journal *Tobacco Control*. In considering these issues Turcotte (2003) concluded, 'Universities should not enter into any kind of co-operation with the tobacco industry on the grounds that are related to their responsibility, the nature of tobacco problem and the behaviour of the tobacco industry' (p. 107).

Richard Smith has taken this position one step further: he resigned from his position as professor of medical journalism at the University of Nottingham after the University accepted US$7 million from British American Tobacco to fund an international centre for the study of corporate responsibility.

This willingness to move beyond debate to taking action or instituting policy is becoming increasingly common with tobacco funding. More organisations are declaring publicly that they will not engage in funding relationships with tobacco manufacturers. These include the American Public Health Association, University of Toronto's School of Social Work, Brigham and Women's and Massachusetts General Hospitals, the M. D. Anderson Cancer Center in Houston, the Roswell Park Cancer Institute, and the University of Sydney (Cohen, Ashley, Ferrence, & Brewster, 1999; Cohen, 2001). In a discussion of this trend Cohen et al. (1999) concluded, 'We urge colleagues in these settings to demand that the issue of dependence on the tobacco industry in all its forms be explicitly put on policy agendas of their institutions and organisations' (p. 76). At another level, some health funding institutions are also moving from debate to action by announcing that they will not fund research institutions that accept tobacco money. These include the UK Cancer Research Campaign, the Norwegian Cancer League, and some members of the Union Internationale Contre le Cancer—European Cancer League (Cohen et al., 1999). At yet another level, some organisations are beginning to explore cross-institutional understandings regarding such funding. In 2004, UK universities and the charity Cancer Research UK signed a joint protocol on good practice in industry funding which acknowledged that individual universities can decide what research funds to accept or reject, but agreed that they would 'consider carefully' whether to accept from any source 'if to do so would be potentially detrimental to their reputation' (Mayor, 2004). Admittedly, the signing of cross-jurisdictional agreements is a relatively new and controversial development and is contested on a number of grounds, including its threat to academic freedom (Davies, Drucker, & Cameron, 2002).

Types of gambling funding

Example 4: Would you receive ...

- funds from an armaments manufacturer?
- funds from a manufacturer of pornographic materials?
- funds from a manufacturer that engages child labour in developing countries?
- funds from a fast-food company?
- sponsorship from a psychotropic pharmaceutical company?
- sponsorship from a brewery?
- sponsorship from a cigarette manufacturer?
- contributions from an illicit drug manufacturer?
- donations anonymously from a gambling provider?
- grants from an electronic gambling machine trust?

There is a complex array of ways that money becomes available to COPGOs from gambling activity. The following section briefly examines five of the most common of these arrangements and discusses how they potentially contribute to increases in moral jeopardy.

Direct industry contributions

In this arrangement, private commercial gambling operators choose to provide direct funding to COPGOs for community purposes. Since these organisations are profit driven, their contributions are understandably driven largely by commercial imperatives. For example, a casino during its first few years of operation might seek the positive good will of adjacent COPGOs—churches, charities, performance venues—by donating generously to their development projects. Furthermore, such contributions can vary according to the perceived strategic importance of the recipient to the donor's business. For example, high-profile Asian events might receive generous sponsorship if the donor considers Asian patronage important.

For community benefit this is the least desirable arrangement because it involves a strong and direct relationship between the recipient COPGO and a gambling provider. Within this relationship the contribution is unlikely to occur anonymously because the donor is seeking an association primarily to improve its public profile. The community recipient is consequently likely to perceive that a strong obligation to the donor involves discouraging activities that might threaten the source.

Community-administered contributions

With this arrangement COPGOs run their own gambling operation for the primary purpose of raising money to fund their own activities. Often this is on a small scale and involves lower-salience forms of gambling such as raffles or bingo (housie). However, in some jurisdictions, COPGOs are being permitted to offer more salient forms such as electronic gambling machines. While on the whole this arrangement occurs on a relatively small scale, these COPGOs often end up targeting their own constituencies. For example, people attending church-run bingo (housie) evenings are most likely to be friends and families of local parishioners. Similarly, electronic gambling machines in venues such as sports clubs and war veteran organisations will on the whole be accessed by their own membership, often a membership—older, younger, poorer—already identified as vulnerable to gambling-related problems. Besides engaging their own constituencies, the other main drawbacks of this arrangement are how it normalises and legitimises gambling at a grassroots community level and how organisations with a concern for the poor and underprivileged in their communities are discouraged from speaking out about gambling.

Government-administered contributions

In this arrangement government manages the provision of gambling and disperses profits to the community in the form of funding grants. The most common examples are national and state lotteries. In England and New Zealand and many of the states or provinces in Australia, Canada, and the United States, lottery products are provided by either the government or a commercial subsidiary under supervision of government, with the profits disbursed directly by a branch of government. The chief risk with this arrangement is that the agency that administers the funding itself begins to benefit from dispersing the money—it begins to derive indirect benefits from the activity and thereby risks building a reliance on the source for its own activities and status within broader government circles. These can include benefits associated with a larger revenue stream, such as increased status and expansion of development priorities. In addition, government interest in ensuring that lottery products maintain a share of the gambling market can involve enabling competitive advantages such as privileged access to advertising and other promotional opportunities. As with community-administered contributions, the involvement of government in the provision and promotion of gambling products contributes further to the normalisation and acceptance of gambling as a low-risk part of everyday life.

Government-brokered contributions

In response to perceptions that direct industry funding allows the industry too much leeway to influence outcomes, some governments have sought to establish their own independent organisations to receive and disperse contributions from privately run gambling providers. Typically a government or quasi-government agency is created to manage voluntary funds in a way that appears independent of the source. The main difficulty with this arrangement is the perception that donor organisations should still retain a significant say in how the money is used. The management agencies set up for this purpose tend to establish governance structures that are highly responsive to gambling industry providers. For example, the lead author of this paper served for 5 years on a national committee of this form (the Problem Gambling Committee) which distributed 'voluntary'[1] contributions from industry sources to help problem gamblers. Gambling industry executives made up half the committee and, in

the lead author's opinion, they were consistently instrumental in ensuring that activities that might threaten the consumption of gambling were unlikely to receive significant funding (this particularly applied to research, health advocacy, and public health initiatives).

Government-mandated contributions

In this arrangement governments enact legislation that requires gambling providers to allocate a portion of their net income to fund projects with a community purpose. Since gambling on electronic gambling machines is the major driver for the expansion of gambling, in many jurisdictions funding from this source has quickly become the largest available pool of monies for community sports and educational, cultural, and charitable activities. In the absence of other significant sources, most community organisations find themselves drawn into applying for this funding. The major difficulty with this arrangement is the risk to COPGOs of increasing financial dependency leading to them becoming the major advocates for the provision of gambling. For example, in New Zealand it is now commonplace for COPGOs to line up in defence of gambling providers when rises in consumption are debated in the media or government committees. Their major point is that reductions in consumption will jeopardise their own funding base. In this way COPGOs are recruited as lobbyists for the industry.

No risk-free arrangement

Most national and state gambling policy frameworks allow for a mixture of the above arrangements, often varying according to the mode of gambling. For example, the distribution of funds generated by lottery products is usually government administered, whereas electronic gambling machines contribute to a government-mandated fund and casinos pursue their own sponsorship programmes. However, as can be seen from the above discussion, each arrangement brings its own set of problems. From whichever route community benefit funding is derived, for COPGOs there is no risk-free arrangement. In some ways the ethical issues have less to do with the way these funds are administered and more to do with the nature of the source itself. Whatever future arrangements emerge, it will still fall back to people within COPGOs themselves to decide how far into an arrangement they are willing to proceed before it leads to intolerable ethical compromise.

Principles in minimising moral jeopardy

In line with a public health approach to gambling which places an emphasis on minimising harm and promoting wellbeing (Brown, 2001; Korn, Gibbins, & Azmier, 2003), a longer-term view would require review of how to prevent or minimize circumstances that might contribute to high levels of moral jeopardy. The following discussion provides a preliminary exploration of some of the issues and opportunities in the prevention of moral jeopardy.

Principle 1: Ethical consciousness. An organisation's capacity to identify and respond to the risks associated with gambling industry funding is a function of the degree of ethical consciousness of the people within. A considered response to these issues is unlikely to occur if the majority are unaware or have only a peripheral understanding of the issues. As discussed in the previous section, such awareness is low for most COPGOs at all levels of their operation. Consequently, a key task with regards to gambling funding is to promote widespread appreciation of associated moral jeopardy issues.

Principle 2: Informed participation. This principle calls on the need for transparency regarding sources of funding and how this funding is obtained. In particular, the absence of information denies potential consumers the opportunity to weigh up whether they wish to engage with this organisation. For example, a problem gambler may have strong views on the impact gambling has had on her and her family and have a strong reluctance to engage in services that are directly funded by gambling industries. An increase in transparency has two effects: first, it informs people of the extent of reliance on gambling funds and, second, it enables those who have ethical concerns to decide whether to stay involved.

Principle 3: Independence of function. The major long-term threat here relates to the likelihood that over time dependency on this funding will build and that a COPGO could find itself unable to function without it. All major decisions begin to be influenced by considerations of how to avoid jeopardising this funding source. Moral jeopardy prevention strategies need to identify threats to organisational independence and devise ways to protect systems and processes from undue influence. Strategies are required to preserve the independent decision-making of COPGOs. Their independence not only is important for maintaining their own purpose but also enables them to speak out as required about the gambling environment and thereby actively participate in the democratic vitality of wider society. In situations where direct funding could compromise an organisation's independence mechanisms are required to ensure organisational independence is preserved. For example, the academic independence of a university to conduct gambling research is likely to be compromised if the research is purchased directly by a casino. The independence might be better protected if the funding came through an independent government agency.

Principle 4: Government duty of care. Government and its various associated agencies (departments, ministries, and quasi-government agencies) have a key role in determining the environment in which gambling occurs. They have a primary role in setting the parameters for the funding environment, monitoring their effect, and protecting people and organisations from environments that are likely to compromise their function. Governments (such as in New Zealand and Canada) that create high moral jeopardy environments also have a primary duty to ensure that the range of risks identified in this document does not compromise the integrity and purpose of community organisations. Putting aside the government's own interest in the revenue generated from gambling, it is hard to see where else an adequate level of protection is likely to come from.

Levels of prevention

Next we explore the opportunities for preventing moral jeopardy for people and organisations with differing roles within the broader environment: those who work in COPGOs; government, which determines the broader environment; community professionals and support workers; and clients and consumers, who influence COPGO affiliations.

The role of COPGOs

COPGOs have an essential role in preventing their organisations from entering uncritically into risky relationships with gambling providers. With the relatively recent proliferation of commercialised gambling, members in most organisations are likely to have low levels of awareness of the risks. Consequently, the first and most critical step is to develop an appreciation of the ethical issues across all organisational levels. This includes people who

function at a governance level, those involved with management and administration, and other employees within the organisation. The following lists some prevention possibilities for COPGOs.

Consciousness raising. Community organisations receive assistance in recognising the risks of direct association and are equipped to assess where they place themselves.

Governance workshops. COPGO governance boards are assisted in their deliberations on gambling industry involvements by presentations or workshops (depending on interest) to raise their awareness of the issues and help them reach an informed position on the extent of gambling industry involvement.

Restrictions on receiving funds directly from industry. COPGOs include within their charters or constitutions as part of their public good function a clause that restricts receiving funds directly from gambling providers. This could vary according to the nature of their activity and the nature of the source, but it would need to be explicit about the circumstances in which the organisation is and is not willing to accept funds.

The role of government

Government agencies have a key role in determining the broader funding environment. As discussed previously, in high-frequency gambling environments where significant amounts of funding are being directed for community purposes it is highly predictable that COPGOs will end up in risky relationships with gambling providers. It follows, therefore, that government agencies are responsible to assist them in either avoiding or managing these relationships. The following measures would contribute to lower moral jeopardy environments.

Restrictions on direct industry contributions. Laws are enacted whereby gambling providers are restricted from contributing directly to COPGOs. This is a strong measure. Ideally this could take the form of a complete ban, or, more realistically, could involve tightened regulations.

Independent disbursement. The proceeds from gambling for community benefit are managed independently of gambling providers. This is likely to require formation of an independent agency to receive and manage the disbursement. This agency should ideally also function independently of local or regional government in order to protect the independence of their roles.

Financial transparency. COPGOs are required to declare in their annual reports the extent and nature of funding from gambling industry sources. This should also include a declaration by key officeholders (board members, executives) of interests or associations with gambling industry companies. Ideally this information should be available to other stakeholders, including consumers.

The role of community professionals and support workers

Community professionals and support workers, such as social workers, general practitioners and other health professionals, counsellors, lawyers, court workers, budgeters, council officers, hospital workers, health promoters, and cultural professionals, have a special role in

helping to prevent risky gambling provider relationships. These professionals often operate at the interface between COPGOs and their consumers and between COPGOs and the regulatory environment. For example, problem gambling counsellors become intimately acquainted with the negative impacts of gambling and can play a critical role in raising the general awareness of the impacts of increased gambling consumption. The following measures could enhance their preventive role.

Generic professional training. This provides basic health and social professional education and continuing professional education programmes that include content designed to sensitize trainees to the ethical dimensions of gambling industry funding.

Specialist gambling professional training. This provides training to enhance the understanding of professionals working within COPGOs providing remedial services for problem gamblers of the ethical issues associated with gambling funding, particularly when it comes to assisting clients, colleagues, and community organisations in serious consideration of these ethical issues.

Stated position of professional bodies. Professional organisations (such as practice registration boards) are engaged in stating their position on the ethics of receiving gambling funds. This could be incorporated into codes of ethics and act as a guide to members on how to perform in employing organisations.

The role of clients and consumers

COPGO clients and consumers have a critical role in determining gambling industry involvements because they are ultimately at the receiving end of such arrangements. Collectively, both they and the general public can play an influential role in assisting COPGOs in deciding how far to proceed with gambling industry connections. The following outlines how their role could be enhanced.

Consumer sovereignty. This ensures that consumers of health, charity, leisure, and other COPGO services have access by right to information regarding any sources of gambling industry funding.

Consumer advocacy. Consumer advocacy groups identify moral jeopardy as an issue and seek to engage a broad range of stakeholders in improving standards of ethical practice.

Ethical awareness promotions. Resources are provided to help consumers to both appreciate the ethical issues and recognise the influence they could exert on COPGOs. These resources could take the form of posters, pamphlets, and other materials that prompt consumers to enquire into COPGO affiliations.

Future opportunities for prevention

A focus on the ethics of gambling industry funding is new territory, and research and intervention will take time to evolve. As commercialised gambling proliferates throughout Western democracies and begins to include developing nations, the challenges posed by moral jeopardy in community/industry relationships will become increasingly important. This article concludes with two specific examples of how moral jeopardy prevention strategies

might be developed in the future. They are intended to provide initial examples of the types of strategies that could be developed and included as part of an overall strategy.

Advancing ethical readiness

The notion of 'readiness' is a familiar and widely used construct in intervention programmes across all dangerous consumptions, particularly in applying the transtheoretical model of change (or 'Wheel of Change'—Prochaska & DiClemente, 1986). This model differentiates several levels of readiness and acknowledges that it would be unrealistic to expect individuals or organisations to move suddenly from having little or no awareness of ethical dilemmas to actually being ready to implement policy. These processes take time and a range of milestones need to be attained before implementation becomes a possibility. For instance, awareness of ethical issues may initially occur to only a couple of individuals within an organisation, and they are unlikely to influence policy until they can engage a wider circle of supporters. Even with wider support, concerns about viability and external perceptions can provide enough of a barrier to restrict change. COPGOs that remain unaware of the ethical risks ('precontemplation') will require assistance in shifting to a point where they are capable of considering the risks ('contemplation'), and then onto a point where they are proactively involved in planning, resourcing, and implementing change ('action'). The main advantage of looking at organisational change in terms of stages of change is that it recognises that intervention goals will be different depending on the extent of readiness. For example, there is little point in discussing how to start dieting with a person who is unconcerned about his or her weight; what that person really requires is access to information and opportunistic moments to reflect on the issues. The majority of COPGOs are at the precontemplation stage of ethical readiness, and the goal of engaging them in implementing policies is unlikely to be successful. A more realistic goal is to develop strategies that help them move from precontemplation to contemplation. Such strategies could involve the development of educational packages, discussion workshops, booklets, and promotional materials that engage people within organisations in thinking about the issues. As with assisting people in behavioural change, the opportunities for reflection need to be engaging, matter-of-fact, and nonjudgemental (Rollnick, Butler, & Hodgson, 1997).

Ethical awareness educational packages

The preceding sections have emphasised the critical role ethical awareness will play in the current environment to reduce the prevalence of risky industry involvements. One previously mentioned device that could further this process is the development of an educational package to help COPGOs assess their industry associations. Such a package could incorporate a range of resource materials—such as some of the content from the current article, fact sheets, and scenarios. These items would be incorporated into discussion exercises that engage COPGO members in lively discussions of the pros and cons of receiving gambling funds. When it comes to delivery of the package—and contingent on funding support (presumably not from industry sources)—facilitators would be required to organise and convene the discussions and workshops. Facilitators would need to have advanced skills at conducting workshops that engage precontemplating COPGO members. The delivery of the package would then require independent evaluation examining the responsiveness of COPGO participants to the process and assessment of whether their participation has improved their awareness of the ethical issues.

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[1] At the time, it was generally understood that if a voluntary contribution was not provided the government would impose a compulsory levy.

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review

movie review

Two for the Money (2005)

Runtime: 122 minutes. Rated 14A (Canada) for pervasive language, sexuality, and a violent act. Currently available on DVD, approx. cost CA$24.00. Production: United States: Universal Pictures; producer: Jay Cohen; director: D.J. Caruso; starring Matthew McConaughey as Brandon Lang (hotshot sports tout), Al Pacino as Walter Abrams (owner of the tout service), and Rene Russo as Toni Morrow (Walter's wife).

Nicely Nicely:

I got the horse right here, The name is Paul Revere
And here's a guy that says that the weather's clear
Can do, can do, this guy says the horse can do
If he says the horse can do, can do, can do.

Benny:

I'm pickin' Valentine, 'cause on the morning line
A guy has got him figured at five to nine
Has chance, has chance, this guy says the horse has chance
If he says the horse has chance, has chance, has chance.

Rusty:

But look at Epitaph, he wins it by a half
According to this here in the Telegraph
"Big Threat"—"Big Threat," this guy calls the horse "Big Threat"
If he calls the horse "Big Threat," Big Threat, Big Threat.

"Fugue for the Tinhorns," from the musical *Guys and Dolls* by Frank Loesser, 1991, 1951.

Two for the Money (2005) is not the first movie about gambling, but it is perhaps the first movie to focus exclusively on the subject of sports touts. Touts are neither part of the gambling industry, nor gamblers per se, but they exist on the margins of the gambling industry selling advice on which teams or horses have the best chance of winning. As the quotes from the 1951 musical *Guys and Dolls* reveal, touts have been around for many years, selling information on which horses, sports teams, or even lottery numbers are allegedly likely to be winners. Although gambling on sports is illegal in most US states, running a tout service for sports gambling is completely legal.

In the film *Two for the Money* Brandon Lang (Matthew McConaughey) is a star college quarterback with great potential who suffers a career-ending injury. To make ends meet while he waits, fruitlessly, for his injury to heal, he takes on a job as a telemarketer and ends up selling advice to gamblers on which football teams to bet on. He is so successful that he attracts the interest of Walter Abrams (Al Pacino), who we are told is one of the most renowned professional sports touts. Brandon moves to New York City and rapidly makes his

way up the ladder in the sports tout business. Walter Abrams encourages Brandon to change his name to John Anderson and his image into something more confident, suave, and slick.

Brandon/John's magic touch with the numbers continues for a while and he consistently picks 80% winners. Walter pushes aside other experienced handicappers in favour of Brandon/John, including one man who uses a computer to pick winners. Over the course of the movie, Brandon gradually becomes John, but in the process loses himself and his ability to pick winners. In a pivotal scene John arrogantly asks an office co-worker at random which team he likes. John writes it down and claims that it will be the winner because he has picked it as the winner. The team wins, but as in a classic tragedy, this hubris leads to a great fall the next week, when he goes from picking 80% winners to picking 80% losers. Near the end of the film, in desperation, he makes picks by flipping a coin. The stages of Brandon's career are similar to Custer's classic phases of the development of a gambling pathology (Custer & Milt, 1985), but Brandon does not himself gamble; he advises other people what to gamble on. His clients, however, follow him through his rise and fall, gaining wealth and then losing severely in the process.

Throughout the movie Walter and the other touts seem completely unaware of the concept of outcome variance and place a huge emphasis on day-to-day results and, in the final showdown, on the outcome of a specific game.

Overall, I found the movie to be entertaining and well acted. Al Pacino's over-the-top performance as Walter, the head handicapper, reminded me of his role as John Milton in *The Devil's Advocate* (Hackford, 1997). He is the boss, he lures the young naïve Brandon into his organization, he changes his lifestyle, and so forth. However, unlike John Milton, Walter is not totally evil. But Walter comes close to pure evil when he takes Brandon to a Gamblers Anonymous (GA) meeting and hands out his business card to drum up new business. Underneath his aggression, manipulation, and fast lifestyle, Walter has a vulnerable side that makes the movie an interesting character study. At the same time, however, the movie suffers from a confused love triangle between Walter, Toni Morrow (Rene Russo), and Brandon. In addition the movie follows an annoying father figure theme throughout, and juxtaposition of this theme and the love triangle hints at Freudian issues. Neither the love triangle nor the father figure theme is satisfactorily resolved.

According to an article in *The Toronto Star*, the movie is based on a true story (Arpe, 2005), but in Hollywood the truth is often stretched. How realistic is this movie? A common trait in many films about gambling is to portray unrealistic outcomes of games (Fritz & Turner, 2002). Examples are the straight flush versus ace-high full house in the final showdown in the *Cincinnati Kid* (Ransohoff & Jewison, 1965) and the incredible winning streak in *Let It Ride* (Giler & Pytka, 1989).

Two for the Money is no exception. It is difficult to win 80% of sports bets because to win a bet, the team you choose doesn't merely have to win the game, it has to beat the point spread. The point spread is set by the bookie specifically to remove the differential skill of the two teams and make the outcome of the game as close to random as possible. For example, if the Green Bay Packers football team had a good record and were favoured by 6 points, for the gambler to win the bet, the team would have to exceed the point spread. If the Packers won by only 5 points, the bet would be a loss. Picking the winner 80% of the time is unrealistic. However, the DVD features an interview with the real-life Brandon, who claims to

have actually had the very winning streak depicted in the film. It is possible that such an outcome could have occurred by chance. The problem with the movie is that this sort of success will likely encourage punters to look for the mythical tout who is always right.

The movie briefly examines the downside of gambling. It presents touts as highly predatory. This particular group of touts tries to get people to bet larger sums of money than they initially planned, which leads to wild swings of success and then failure. This aspect of the business is revealed in the film by following the career of one particular punter, Amir (Craig Veroni). Near the beginning, we watch as Brandon encourages Amir to go from $1000 a bet to $10,000 a bet. At the height of Brandon's success Amir is shown standing in front of a brand new European sports car. After the fall, the sobbing man asks Brandon how he can live with himself. Walter mockingly suggests to Brandon that they keep the same number, but turn it into a suicide hotline.

According to Walter, the job of the sports tout is to sell a very rare commodity—"certainty" in a world where nothing is certain. But as Walter admits, it's all smoke and mirrors because there is no certainty. However, Brandon's winning streak gives him a good reputation for picking wins, which can guarantee one thing: continued profit for the tout. As with many movies about gambling, the film mainly depicts gamblers as problem gamblers. According to Walter, people who call the handicappers for advice are already desperate to win their money back. They are already on the hook and the tout's job is to reel them in. The assumption that all gamblers are addicts is again emphasized in the special feature interview with the real Brandon.

Another flaw with the movie is that it seems to confuse sports touts with bookies. Sports touts or handicappers sell information on which teams will win. They have no financial commitment to the outcome of the game other than the hope for repeat customers. Bookies take the bets, collect from the losers, and pay off the winners. Bookies and touts do not usually work together (unless the tout is a front for the bookie). Too many winners would undermine the bookie's profit margin or force the bookie to tighten up his or her estimation of the point spread. If Walter's business is to sell information, why does he want the players to make larger bets? The audience is told that this is because his company charges a commission on the wins. The logistics of how the touts can take a commission on a bet is not stated but hinted at in one scene where we see Brandon on the phone telling Amir to send him a $75,000 commission if he wants any more advice. However, one is left wondering why the player would not simply lie and tell Brandon he only placed a $1000 bet.

In the context of a drama, Brandon's fall from grace is quite similar to a classic tragedy, where the hero's hubris leads to his downfall. Brandon's arrogant belief in his invincibility leads to his fall. Although both the winning and subsequent losing streaks are improbable events, all things are possible when it comes to random chance. However, sports bets are not truly random, but rather chaotically unstable. The point spread is based on the team's previous performance and the betting habits of the public. A handicapper can theoretically gain an edge if he or she finds information that is not currently being factored into the bookies' estimates of the point spread. However, if a sports tout had an 80% success rate and was selling advice to million-dollar bettors, the bookies would be forced to tighten up their estimates to protect their profit margin. Perhaps Brandon's very success led to his fall by forcing the bookies to take notice of his picks.

One film reviewer wrote that the movie gives real insight into the mind of an addict. Indeed

the movie does bring up a number of important issues about problem gambling, including the link between excessive gambling and suicide, the fact that gambling leads to losses, the notion that the gambling industry is always the real winner, the fact that gambling results are unpredictable, the notion that touts are predators who do not necessarily give accurate advice to their customers, and the idea that drug abuse and gambling can be viewed as diseases. The film takes a highly disease-oriented view of gambling. In the GA scene Walter Abrams tells everyone that he has a disease, a "lemon" in his head that makes him gamble to lose. Pathological gamblers, he tells us, are defective and "f*** things up all the time." Ordinary gamblers, we are told, gamble to win, but pathological gamblers gamble to lose. Later he tells Brandon that the moment before the dice stop dancing is the greatest high in the world. In addition, his wife Toni Morrow tells us that Walter needs to lose to convince himself that he exists. As an example of his self-destructive need to bring himself to the brink of disaster he promises on his TV sports-betting channel to guarantee the gamblers' bets and so he sets up the climax of the film. He does this even though he has just been told by Brandon that this pick was selected by the flip of a coin.

Although the film is an interesting examination of the world of sports betting, there are numerous shortcomings in its portrayal of gambling addiction. The film ignores the roles played by psychology, financial needs, a need to escape stress, wins, erroneous beliefs, experience, and game availability, and even the role that the game itself may play in the development of a gambling pathology. Instead it promotes an outdated Freudian notion that the addict wants to hurt him or herself.

Is this film promoting or discouraging gambling? The movie might discourage gambling by leading people to question the legitimacy of the information offered by touts. The first half of the movie might lead people to believe in the tout as a legitimate prognosticator of future events. However, the film portrays touts as predatory, corrupt, sleazy, selfish, and inept. Brandon's fall from success suggests that the information offered by the tout service is no better than the flip of a coin. Even computer handicappers are targeted for ridicule in the movie. The negative message, however, is again undermined by an unlikely climax. The potential harm or benefit of the film for the average gambler depends on which part of the film the viewer pays more attention to.

It might be possible to use Brandon's career in this film as a model for the fundamental uncertainty of gambling and the ever-present potential for the fall. However, the film is so filled with images of the glamour of the sports tout (e.g., a Mercedes Benz) that the harmful messages likely overwhelm any helpful message.

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review

book review

Gambling in the Nineteenth-Century English Novel: "A Leprosy is o'er the Land"

By Michael Flavin. (2003). Brighton, UK: Sussex Academic Press, 254 pp., ISBN 1-903900-18-2 (hardcover). Price (approx.): CA$78 or US$70.

Thou knowest, Lord, the fell disease.
Has Smitten myriads, rich and poor;
The workman's hour, the wealth of ease
Are squandered for the gambler's store.
Palace and cottage, works and mart
Are suffering from the fatal bane;
Prison, asylum, refuge, home,
Are peopled with the victims slain.

"A Leprosy is o'er the Land": Winner of The National Anti-Gambling League's hymn-writing competition, 1905 (pp. 222–223).

According to Michael Flavin, gambling was so widespread in England during the 19th century that it was considered to be the most prevalent vice of the age—a leprosy over the land. In *Gambling in the Nineteenth-Century English Novel*, Flavin examines the attitudes towards gambling shown in the novels of seven prominent English writers: Disraeli, Dickens, Thackeray, Eliot, Hardy, Trollope, and Moore. His examination of the content of these novels is interlaced with an examination of major historical events that shaped these views and legislation that attempted to curtail gambling throughout this period. For example, excessive gambling during the Regency period (1811 to 1820) created a strong negative reaction against gambling during the middle part of the century.

The consensus of most of the novels examined in this book is that gambling is harmful to society. Patrons of betting shops were viewed as being driven to insanity, theft, and even suicide. A strong link is also drawn between gambling and crime. To partake of one vice was to be lured into other vices. Gamblers in these novels have little self-control. Gambling was also seen as a contamination. As a result, Trollope was concerned about how people of lower classes were allowed to mix with people of higher classes at racetracks.

Attitudes were not universally negative. Dickens, for example, is characterized as advocating control rather than abolition. George Moore appeared to have negative views of gambling in most of his novels, but in his *Ester Waters* he presents a sympathetic characterization of a bookie, driven to his death by unfair regulation of gambling. In addition, one of the main characters in Thackeray's *Vanity Fair* (Rawdon Crawley) makes his living for a short while as a professional gambler.

Several of these 19th-century English novelists appeared to be aware of the addictive or

disease nature of pathological gambling. Some of the stories are sympathetic towards the entrapment that comes with a mania to gamble. There was also an awareness of escape as a motive for gambling and the erroneous beliefs about winning that often accompany the disorder. In addition, the links between gambling and alcoholism, and gambling and suicide, were apparently well known in this period. However, according to Flavin these images are excessively negative. They most often show gambling as a means to financial and personal ruin rather than as a normal recreational activity. For Flavin the authors fail to appreciate the idea that for most people gambling was an affordable hobby.

The moral crusade against gambling emerged and became increasingly vocal as the century progressed. English novelists tended to be middle class. At the time gambling was most popular amongst the aristocracy and the working classes. This situation left "a self congratulatory middle class to claim moral authority" (p. 58). On the one hand, industrialists worried that gambling would undermine their profit margin by "fostering habits and methods absolutely antagonistic to national progress" (p. 59). On the other hand, middle-class reformers and leaders of labour movements saw gambling as parasitic upon the poor, who lacked self-discipline. In gambling legislation there was a clear double standard. "Common" gaming houses were banned, but exclusive gaming clubs and racetracks (the sport of kings) were allowed to continue. One of the more interesting observations in the book is the idea that the attempt to stamp out gambling among the working class led to an increase in alcohol consumption. Flavin concludes that both right- and left-wing commentators failed to appreciate the fact that for most people in the 19th century gambling was a hobby, not leprosy.

I have three main criticisms of the book. First, in the conclusion he appears to criticise 19th century English writers for exaggerating the negative aspects of gambling. However, a novelist is under no obligation to be accurate when portraying gambling and society. In many cases the characters' problems with gambling create a crisis that makes the story interesting. If the *Young Duke* in Disraeli's novel of the same name, or Nell's grandfather in the Dickens's *Old Curiosity Shop* could control their gambling, there would not be much of a story to tell. Furthermore, even if most people gamble non-problematically, stories about the consequences of excessive gambling were an important topic for discussion. Second, the book fails to connect with modern gambling research literature. It could have been enriched by an examination of the extent to which the images of gambling (both nonproblem and problem) are consistent with what we know today about gambling. Third, Flavin explains the negative view of gambling in terms of the middle class's sense of moral superiority. He does not consider the extent to which the consequences of excessive gambling may have contributed to the negative attitude towards gambling expressed by these writers. Nonetheless, the book is a fascinating examination of gambling in 19th century English literature and makes an important contribution to our understanding of the history of gambling.

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Nigel E. Turner is by training a cognitive research psychologist and has had a long-term involvement in numerous gambling studies. He is particularly interested in gambling systems and the experience of gambling. He is working towards an integrative model of the psychology, biology, and sociology of pathological gambling. He has a keen interest in history and as a hobby participates in historical re-enactments of the War of 1812.

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