

## Pilot study of an Internet-based personalized feedback intervention for problem gamblers

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### Abstract

This pilot study reports on the initial usage of an online personalized feedback screener for problem gamblers. The Check Your Gambling screener (CYG; [www.CheckYourGambling.net](http://www.CheckYourGambling.net)) is an online version of a paper and pencil screener that had shown some promise in an initial evaluation to promote short-term reductions in gambling behaviour. The online CYG screener was linked to two existing Web pages for gambling in Ontario, Canada—the Ontario Problem Gambling Helpline (OPGH) Web page and ProblemGambling.ca. While more participants used the ProblemGambling.ca ( $n = 730$ ) version than the OPGH version ( $n = 591$ ), the OPGH version appeared to be more targeted, as almost all of the participants using this Web site were Canadian (and the personalized feedback of the current version of the CYG is generated using Canadian norms). More work is needed to establish whether the online CYG screener can motivate reductions in gambling among participants or motivate treatment-seeking in those requiring assistance in addressing problematic gambling behaviour.

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### Introduction

Many people with gambling concerns never access treatment (Cunningham, 2005; Suurvali, Hodgins, Toneatto, & Cunningham, 2008). Barriers to treatment include issues of shame, embarrassment, and not wanting to admit having a problem (Suurvali, Cordingley, Hodgins, & Cunningham, 2009). Lack of problem recognition is also a significant factor. As an example, in a general population survey of Ontario adults, only 47% of those with possible or probable pathological gambling status thought they had even a moderate problem with their gambling (Cunningham, Hodgins, Toneatto, & Cordingley, 2009). Given that so many problem gamblers do not access treatment, there is a need to improve accessibility to tools that problem gamblers can use outside of treatment settings. Further, as problem recognition appears to be an important barrier to treatment access, efforts should be made to develop and disseminate screeners that will allow gamblers to assess the severity of their problems even when not in treatment.

Internet-based screeners for problem gamblers are one way of increasing accessibility. Internet access is widespread, and its content can be accessed any time, day or night, and from any location with Web access. A recent general population survey found that half of participants meeting criteria for possible or probable pathological gambling indicated that they would be interested in an Internet-based screener to evaluate their gambling (Cunningham, Hodgins, & Toneatto, 2008). Given this high level of interest, we have taken a brief personalized feedback intervention for gamblers and put it into a Web-based format (beta version located at [www.CheckYourGambling.net](http://www.CheckYourGambling.net)). Little other work has been done on Internet-based interventions for problem gamblers (Carlbring & Smit, 2008; Griffiths, Wood, & Parke, 2009; Wood & Griffiths, 2007). Given the paucity of research in this area, this brief report will describe pilot results from the use of the online Check your Gambling (CYG) screener (Evolution Health Systems, Inc., 2009) during the period it was linked to two existing information Web sites for problem gambling in Ontario, Canada—the Web page for the Ontario Problem Gambling Helpline (OPGH) and ProblemGambling.ca. Both off these sites provide general information on problem gambling and available treatment resources.

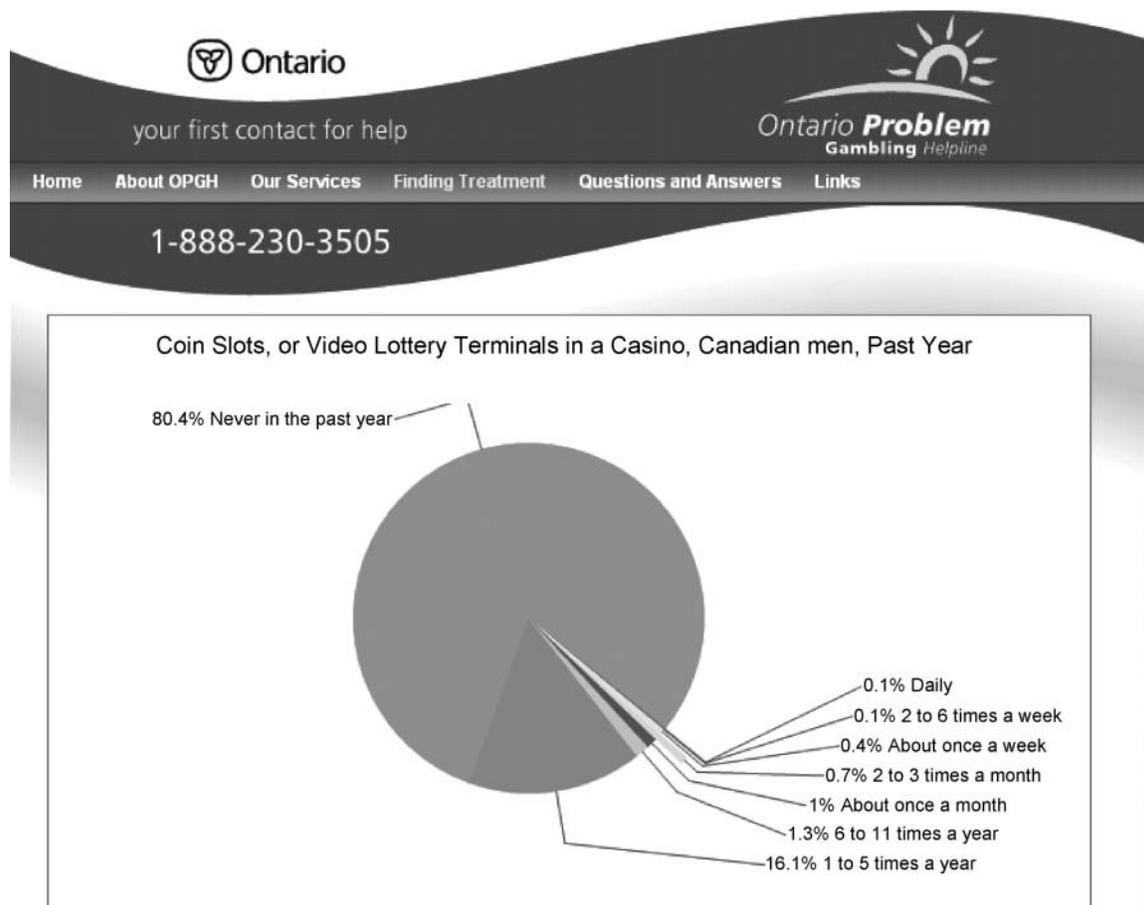
## Methods

### Content of the Check Your Gambling screener

The paper and pencil version of the CYG screener is described in detail elsewhere (Cunningham, Hodgins, Toneatto, Rai, & Cordingley, 2009). The online version can be accessed at [www.CheckYourGambling.net](http://www.CheckYourGambling.net) and has similar content (the reader is invited to try this version of the CYG screener). The only content added to the online version compared to the paper and pencil version was that feedback is now also provided on the amount of money spent on gambling. Translation of the paper and pencil version to the online version was straightforward primarily because the content of the paper and pencil version had initially been developed with the eventual aim of computerizing the materials. Briefly, the CYG screener asks a short set of questions and then provides the participant with a personalized feedback summary. The screener questions consist of demographic items (age, sex, country of origin), questions about frequency of different gambling activities in the past 12 months, amount of money spent on gambling, the nine items of the Problem Gambling Severity Index (CPGI) (Ferris & Wynne, 2001), and the brief, eight-item version of the Gambling Cognitions Questionnaire (GCQ) (Toneatto, 1999), a measure of the cognitive distortions the person holds about gambling. Finally, the front page of the screener (1) asks the respondent why they are taking the test (for yourself, for someone you know, you are just checking out the test to see what the results look like) and (2) asks the participant to acknowledge that their data can be used for research purposes. The CYG screener was programmed such that all questions had to be answered before a feedback report was generated. Conduct of this study was approved by the standing ethics review committee of the Centre for Addiction and Mental Health.

Upon completing the screener, the participant is provided with a personalized feedback Final Report. The report consists of pie charts that compare the participants' gambling to others of the same age and sex in Canada (population estimates from the 2002 Canadian

Figure 1. Example feedback from the Ontario Problem Gambling Helpline version of the Check Your Gambling online screener.



Community Health Survey on Mental Health and Well-being were used for this purpose, CCHS) (Statistics Canada, 2003). Please see Figure 1 for a sample pie chart from the OPGH version of the Web site. The Final Report continues with a summary of how much the person spends on gambling, along with the participant's Problem Gambling Severity Index (PGSI) score and an interpretation of what this score means about the severity of their gambling. The report concludes with a list of any distorted cognitions the person holds (e.g., "I try to figure out what my luckiest numbers are"), and a summary describing the error of each of these beliefs (adapted from a self-help book for problem gamblers (Toneatto, Kosky, & Leo, 2003). The final element of the feedback is a list of techniques that the person could adopt to lower the risk associated with their gambling.

### Data collection and analysis

A database of all participants on both these versions of the CYG screener was compiled for the first 15 months of the life of this screener. The database was downloaded and translated to SPSS (SPSS Inc., 2008) for analysis. Only participants who stated that they

Table 1  
*Demographic and Gambling Characteristics of Participants Using the OPGH<sup>a</sup> and the ProblemGambling.ca<sup>b</sup> Versions of the Check Your Gambling (CYG) Screener*

	OPGH ( <i>n</i> = 390)	ProblemGambling.ca ( <i>n</i> = 480)	<i>p</i>
Mean (SD) age	38.2 (12.8)	38.1 (12.1)	.92
% Male	61.5	63.1	.68
% Living in Canada	96.7	80.0	.001
% Problem/pathological gambler <sup>c</sup>	79.2	76.9	.46

<sup>a</sup> Version of the CYG screener linked to the Ontario Problem Gambling Helpline Web site.

<sup>b</sup> Version of the CYG screener linked to the ProblemGambling.ca Web site.

<sup>c</sup> As measured by a score of 8 or more on the Problem Gambling Severity Index.

were taking the test for themselves were included in the full analysis. Demographic and gambling characteristics were compared between participants of these two versions of the CYG using simple bivariate comparisons (t-tests and chi-squares). No adjustments were made to account for multiple statistical comparisons because of the exploratory nature of this pilot study.

## Results

There were 1321 completed CYG tests in the 15 months of use from the OPGH site (*n* = 591) and from the ProblemGambling.ca site (*n* = 730). Almost two thirds (65.9%) stated that they were taking the test for themselves, while 21.2% said they were taking the test for someone else and 12.9% said they were just checking out the test to see what the results looked like. There was no significant difference ( $p > .05$ ) in the proportion of participants who said they were taking the test for themselves between the two versions of the Web sites. The remaining results will only use data from the 870 tests where participants said they were taking the test for themselves (390 tests from the OPGH site and 480 from the ProblemGambling.ca site).

There were no significant differences ( $p > .05$ ) in the mean age ( $M = 38.1$ ,  $SD = 12.4$ ) or the percent of male participants in the two Web sites (62.4%). However, there was a significant difference in country of residence between the two Web sites, with participants using the OPGH Web site being more likely to reside in Canada as compared to the ProblemGambling.ca version (96.7% versus 80.0%;  $\chi^2 = 53.0$ , 1 df,  $p < .001$ ). Table 1 presents the demographic and gambling severity characteristics for the participants of the two Web sites.

There were no significant differences ( $p > .05$ ) in the proportion of gamblers categorized as problem gamblers in the two Web sites (77.9% as measured by a score of 8 or more on the PGSI). There was some indication that participants using the OPGH Web site were spending more on gambling than participants using the ProblemGambling.ca Web site. Using just those participants who came from Canada to control for type of currency used

to report the amount of money spent on gambling (OPGH,  $n = 377$ ; ProblemGambling.ca,  $n = 384$ ), a higher proportion of participants using the OPGH Web site reported that they had spent more than \$1000 on gambling during the occasion that they gambled the most in the last year ( $\chi^2 = 8.4$ , 1 df,  $p < .01$ ; OPGH = 42.7%; ProblemGambling.ca = 32.3%). However, the other two measures of the amount of gambling in the last year, the proportion who spent more than \$1000 in the last month on gambling (52.8%) and the proportion who spent more than \$1000 on gambling in the last year (82.7%), showed no significant difference ( $p > .05$ ) between the two Web sites.

## Discussion

The CYG screener was designed to help gamblers evaluate their gambling. Having the screener available on the Internet allows participants to use the CYG at a time and location of their choosing. In addition, it is hoped that the anonymity of the online screener will alleviate some of the barriers to seeking help that problem gamblers have identified.

The current study linked copies of the CYG screener to two existing Web pages for problem gamblers in Canada—ProblemGambling.ca and the online information page of the OPGH site. Both Web sites showed substantial use of the CYG over the 15-month pilot period, indicating that tools like the CYG are of interest to problem gamblers. While the ProblemGambling.ca version had more users, the OPGH site had more of its users from Canada. As the normative feedback component of the CYG is only available using Canadian data at present, it could be argued that the OPGH link provided a better “match” of the screener to its users. Further, the large majority of participants in both versions of the CYG met criteria for problem or pathological gambling, with some indication (based on the reported amount of money spent) that participants in the OPGH version had more severe current problems.

What needs to be done next in the evaluation of this screener? First, the content of the CYG Web site would benefit from usability testing, to identify if any elements are confusing to participants or if additional feedback elements are merited. This step is being undertaken as part of the process of developing a new version of this screener that will be made available through the ProblemGambling.ca Web site. As well, the content of the screener might be improved through a comparison with other gambling screeners on the Internet (e.g., Your First Step to Change, [http://s96539219.onlinehome.us/toolkits/FirstStepSite/main\\_intro.htm](http://s96539219.onlinehome.us/toolkits/FirstStepSite/main_intro.htm); Mise Sur Toi, <http://misesurtoi.ca/en/test-gambling-habits/>; the Atlantic Lottery Corporation, <http://corp.alc.ca/PlayResponsibly.aspx?rdr=true&LangType=1033&ekfrm=106>; Spelinstitutet, <http://www.spelinstitutet.se/produkter/gamtest>). Third, some form of reliability check on the types of responses made by participants is necessary. The data for this pilot study consist entirely of self-reported responses made by users of the CYG Web site. While we did restrict analyses to just those participants who said that they were reporting on their own gambling, the question still arises as to the reliability of the data (e.g., are 78% of participants really problem gamblers?). This limitation also points to the need to explore whether this screener—consisting of measures that have largely been validated in paper and pencil format—is also psychometrically valid in a computerized format (Buchanan, 2003).

Finally, a clear limitation of the current study is that it focuses only on the usage of the CYG screener. While a small pilot found some indication that the CYG led to reductions in gambling (Cunningham, Hodgins, Toneatto, Rai, et al., 2009), considerably more research is needed before any reliable claims can be made as to the efficacy of the CYG as a brief intervention in and of itself. Part of this research, a randomized controlled trial of the CYG materials, is currently underway in which participants are recruited from the community through random-digit dialling. However, no efficacy research has been conducted to-date of the impact of the CYG screener in an online setting. Similar screeners that target alcohol have been shown to have an impact on problem drinking in a general population setting (Cunningham, Wild, Cordingley, van Mierlo, & Humphreys, 2009; Doumas & Hannah, 2008). Realistically, though, it can be expected that the CYG will only have limited, short-term impact (if any) on the severity of participants' problem gambling because it is such a brief screener. The real usefulness of tools like the CYG is as an easy-to-access and nonthreatening portal to motivate participants to seek further help online or in person. This use of the online CYG screener remains to be studied and will be an important signpost of the long-term benefits of promoting online screeners for problem gamblers.

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