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Gambling by Ontario casino employees: gambling behaviours, problem gambling and impacts of the employment

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Research suggests gambling industry employees exhibit high rates of problem gambling. This paper extends the research by examining casino employee gambling in Ontario. Nine hundred thirty-four employees from five casinos completed a survey and a further 21 participated in interviews. Employees' gambling behaviours were found to relate to various workplace influences (exposure to gambling; exposure to patrons; exposure to the work environment, and the existence of training, restrictions, and resources) and employment variables (length of employment, previous industry experience, and department). Additionally, employees exhibited problem gambling rates over three times greater than those of the general population. These higher rates were explained primarily by employees who increased their gambling after commencing employment and employees who were attracted to their jobs because of prior gambling involvement. Findings highlight the unique factors associated with problem gambling among gambling industry employees.

Keywords: gambling industry; casino employment; problem gambling; responsible gambling

Introduction

Gambling industry jobs exemplify an easily identifiable benefit of the sector, but the industry's workers have been found to exhibit particularly high problem gambling rates (Dangerfield, 2004; Duquette, 1999; Hing, 2008; Hing & Nisbet, 2009; Shaffer, Bilt & Hall, 1999). The purpose of this paper is to further extend the research on this topic by examining the gambling behaviours of Ontario casino employees. The aim is to determine the problem gambling rates of Ontario casino employees and explore how employees' gambling is affected by or associated with different workplace influences (e.g. increased gambling knowledge) and employment variables (e.g. department). Findings emerging from this study may assist casinos and policymakers to formulate more effective strategies for minimizing problem gambling and promoting responsible gambling among casino staffs.

Casino employee gambling

High problem gambling rates have been detected among gambling facility employees in research conducted in various jurisdictions and using different problem gambling measures. For example, studies using the Canadian Problem Gambling Index (CPGI) in gaming venues in Victoria (Hing & Nisbet, 2009) and Queensland, Australia (Hing, 2008),

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and in Alberta, Canada (Dangerfield, 2004), found employees exhibited problem gambling rates that were three to five times greater than rates found in the general population. Similarly, using the South Oaks Gambling Screen, one study classified one-fifth of a Las Vegas casino's employees as level 3 (pathological) gamblers (Duquette, 1999), and another study involving four United States casinos detected a level 3 rate nearly double that of the general population (Shaffer et al., 1999).

Conversely, research also suggests gambling facility employees are more likely to decrease than increase their gambling involvement (Dangerfield, 2004; Hing, 2008; Hing & Nisbet, 2009; Shaffer et al., 1999), and shift to a more improved than more disordered gambling status (Shaffer & Hall, 2002) after commencing employment. Also noteworthy, however, Shaffer et al. (1999) and Hing (2008) found employee problem gamblers were especially likely to have increased their gambling.

Workplace influences

A variety of workplace influences may affect employee gambling behaviours (Hing, 2008; Hing & Breen, 2005, 2006, 2007, 2008a,b). These influences can be classified into four categories: exposure to gambling; exposure to casino patrons; exposure to the work environment; and the existence of training, restrictions, and resources.

Casino employment often involves high levels of gambling exposure, and some employees (e.g. card dealers) must familiarize themselves with gambling simply to perform their jobs. Such exposure may dissuade employees from gambling as they learn about odds, observe casino profits, and/or become bored with gambling (Hing, 2008; Hing & Breen, 2005, 2006, 2007, 2008a,b). Gambling exposure also may reduce belief in erroneous gambling cognitions that otherwise contribute to problem gambling (Ontario Problem Gambling Research Centre, 2010). For example, Dangerfield (2004) found casino employees exhibited far less belief than the general population in the gambler's fallacy. Nevertheless, gambling exposure also may encourage gambling by piquing employees' interest in gambling or offering them the required knowledge about how games are played (Hing & Breen, 2005, 2008b). Moreover, gambling familiarity may promote associated illusions of control (e.g. Bouts & Van Avermaet, 1992; Burger, 1986; Langer, 1975).

Many casino jobs also entail frequent exposure to casino patrons, who may discourage employee gambling if they exhibit symptoms of problem gambling (Hing, 2008; Hing & Breen, 2005, 2006, 2008b; Shaffer et al., 1999). Conversely, employees may be drawn towards gambling through observing patrons' wins or receiving patrons' tips (Hing, 2008; Hing & Breen, 2005, 2008a). Employees also may better recall observed wins than losses, similar to gamblers exhibiting such selective memory biases (Toneatto, 1999). Furthermore, the sound and light effects incorporated into slot machines (Griffiths, 1999) may lead employees to overestimate the frequency of winning.

Environmental factors – co-workers, casino marketing, and job stress – also may affect employee gambling. Interactions with and observations of co-workers may encourage or discourage gambling, depending on employees' attitudes toward and involvement with the activity (Hing, 2008; Hing & Breen, 2005, 2006, 2007, 2008a,b). Also, casinos' marketing and promotional activities may serve as a gambling trigger for problem gamblers (Binde, 2009; Grant & Kim, 2001). Finally, casino work may cause stress that subsequently induces gambling; Keith et al. (2001) found stress represented a primary health and safety concern among gambling industry employees, and other studies have detected positive relations between job stress and casino employee gambling (Hing & Breen, 2008a; Shaffer & Hall, 2002; Wu & Wong, 2008).

Many casinos attempt to mitigate employee problem gambling with responsible gambling training programs, gambling restrictions, and/or assistance resources. Two studies investigating responsible gambling training programs aimed at Quebec casino (Giroux, Boutin, Ladouceur, Lachance & Dufour, 2008) and video lottery terminal employees (Dufour, Ladouceur & Giroux, 2010) found the training achieved its primary goals of improving knowledge and awareness of chance and patron problem gambling, but some benefits dissipated over time. Employee gambling restrictions vary considerably between jurisdictions and have their ramifications shaped by regional characteristics (e.g. nearby alternative gambling venues), but presumably should reduce employee gambling by reducing its availability (e.g. Adams, Sullivan, Horton, Menna & Guilmette, 2007; Lund, 2009; Room, Turner & Ialomiteanu, 1999; Welte, Barnes, Tidwell & Hoffman, 2009; Welte, Wieczorek, Barnes, Tidwell & Hoffman, 2004). However, Hing and Nisbet (2009) found that employees prohibited from gambling where they worked did not exhibit comparatively lower problem gambling rates (these employees had nearby alternative venues), and Dangerfield (2004) found evidence suggesting that restrictions on employee casino gambling may cause increases in substitute forms of gambling (these employees did not have nearby alternative venues). Finally, many casinos offer resources through which employees can seek assistance for gambling problems. Such resources may reduce problem gambling, but Shaffer et al. (1999) found that employee problem gamblers, fearing their problems could be discovered by other staff, can be reluctant to use these resources.

Employment variables

Casino employees are not a homogenous group, as numerous variables differentiate workers in ways that may be relevant to their gambling. For example, the length of time an employee has worked in the gambling industry has been examined in previous studies, with varied results. Duquette (1999) and Shaffer et al. (1999) found increases in problem gambling and level 3 gambling associated with increased length of employment, whereas Dangerfield (2004) found no relationship between the two variables and Shaffer and Hall (2002) found that level 3 gambling behaviour decreased over the two-year span of their study.

Casino employees also may have very different work experiences owing to their different departments. Some workers (e.g. slot attendants) are fully immersed in gambling, whereas others (e.g. administrators) are fully removed from gambling. Duquette (1999) and Shaffer et al. (1999) both found that employees working closer to gambling tended to exhibit higher problem gambling rates. Furthermore, an assistant casino manager interviewed by Hing and Breen (2008a) claimed, 'Most back-of-house people don't gamble, because they deal with the issues, the complaints, the money, the profit. I think that that deters people .... I find that staff that work in gaming rooms, if they are the gambling sort ... will spend a lot of money gambling' (p. 21).

Job attraction

Based on interviews with nearly 200 gambling venue employees, gambling venue managers, and gambling counsellors, Hing and Breen (2008b) observed, 'Some interviewees suggested the industry attracts outgoing, less risk-averse people, and gamblers and problem gamblers' (p. 11). Similarly, Dangerfield (2004) found that approximately one-third of her sample, when describing why they had chosen casino work, endorsed three survey items suggesting gambling affinities. These results led Dangerfield to conclude, 'There is very little evidence that the high rates of [problem gambling] among

casino employees are a result of their casino employment. Rather, it appears the gaming industry actually attracts problem gamblers' (p. 57).

Research hypotheses

Based on the existing research, four hypotheses were examined:

1. Ontario casino employees will exhibit higher rates of moderate risk and problem gambling than the Ontario general population.
2. Ontario casino employees will be more likely to have decreased than increased their gambling since beginning their jobs.
3. Ontario casino employees' gambling behaviours will have been affected by various workplaces influences.
4. Ontario casino employees' gambling behaviours will be related to the departments in which they work.

Method

Venues

This study was conducted in five Ontario casinos. Ontario was selected for the study because of its convenience for the researchers, the breadth of its casino industry and the lack of previous casino employee gambling research in the province. Ontario is home to 27 casinos, generating approximately $CAD 3.5 billion in annual revenue (Ontario Lottery and Gaming Corporation, 2009). Seventeen of the casinos fall into the category of 'racinos,' being comprised of slot machine rooms, ranging in size from approximately 100 to several thousand machines, connected to horse racing tracks. The other 10 casinos offer a full array of table games and EGMs, but not horse racing; four of these facilities are larger hotel casinos. Ontario also has a provincial lottery, provincial sports betting and numerous bingo halls (Ontario Lottery and Gaming Corporation, 2010).

The study was conducted independently, but with cooperation from the Ontario Lottery and Gaming Corporation (OLG), a governmental corporation that employs over 19,000 people and is responsible for the majority of Ontario's gambling industry (Ontario Lottery and Gaming Corporation, 2009). The five casinos involved in this study included two racinos and three table game facilities, one of which was a hotel casino. The casinos were of varying sizes, ranging from approximately 150 to 3500 employees. These five facilities, therefore, represented the full array of Ontario casino facilities. The five participating facilities were selected by OLG based on their willingness to participate and general proximity to the researchers.

Participants

Participation in the study was voluntary, but encouraged with an incentive of restaurant gift certificates that were given away in a series of random prize draws. The survey was distributed to all employees – responsibilities ranged from the direct delivery of gambling services to general hotel duties – except those who solely worked with horse racing. In sum, surveys were distributed to 4698 employees and 934 of these surveys were returned, resulting in a response rate of 19.9%. The individual casinos' response rates varied between 13.5% and 45.3%, with higher response rates generally coming from the smaller casinos. The demographic characteristics of the survey sample are presented in Table 1. Approximately 100 employees volunteered for interviews with 21 finally included, based

on their availability. In order to maintain anonymity and encourage participation, no personal information was requested to create a purposive sample.

Procedure

This study was reviewed and approved by the University of Waterloo Office of Research Ethics. The data collection was conducted between April and June 2009.

The survey and all other study materials were distributed by attaching them to employees' pay cheques, similar to the procedure used by Dangerfield (2004). The survey was accompanied by a cover letter and preceded two weeks earlier by an introductory letter summarizing the study and guaranteeing anonymity. A separate 'contact sheet' was included, inviting employees to participate in a personal interview. These sheets were distributed separate from the surveys so that, when returned, respondents' contact sheets could not be associated with their surveys.

Respondents were requested to deposit completed materials into collection boxes that were placed in locations frequented by employees, under camera surveillance, and recommended by the facilities. Employees also were given prepaid envelopes that could be used in lieu of the boxes to return completed materials, so as to accommodate employees reluctant to return the materials at their workplaces. The employees were given two weeks to return completed surveys.

The personal, semi-structured interviews were conducted approximately six weeks after the survey return date, allowing the researchers use of the survey responses to guide questions. The interviews were designed to provide richness of detail and reveal issues overlooked in the survey. The participants were asked about the general employee population, rather than their personal behaviours. Interviews were held in private conference rooms on the casinos' premises. Interviews were audio-recorded and lasted for

Table 1. Demographic characteristics of the survey sample ($N = 934$).

Variable	%	n
Sex		
Female	64.4	597
Male	35.6	330
Age group		
$\leq$ 30 years	20.3	189
31–40 years	32.0	298
41–50 years	26.4	246
$\geq$ 51 years	21.3	198
Marital status		
Married or living with partner	64.7	601
Single and never married	20.9	194
Divorced, separated, or widowed	14.4	134
Ethnic group		
Canadian	87.6	808
Non-Canadian	12.4	114
Education level		
High school or less	27.9	259
Some post-secondary	26.7	248
Completed post-secondary	45.4	422

approximately 30 minutes. Upon completion, summary transcriptions were made from the audio recordings and subsequently analysed using content analysis.

Materials

Survey

The seven page survey required approximately 10 minutes to complete and consisted of multiple-choice and single-answer items. Questions were designed to elicit information on gambling behaviours, perceived personal impact of different workplace influences, and reasons for choosing casino work. Survey items related to gambling drew heavily from the CPGI (Ferris & Wynne, 2001), with some items altered slightly to accommodate the sample. Other items were adapted from measures used by Shaffer et al. (1999), Dangerfield (2004) and Ryan and Speyrer (1999). Problem gambling status was determined by the CPGI's Problem Gambling Severity Index (PGSI).

The survey included 18 items assessing workplace influences using a five-point scale ranging from 'strongly disagree' (1) to 'strongly agree' (5) and primarily based on the influences identified by Hing and Breen (2005, 2006, 2007, 2008a,b). The survey also included three erroneous cognitions; one from the CPGI and the other two closely adapted from the Gamblers' Belief Questionnaire (Steenbergh, Meyers, May & Whelan, 2002). Length of time spent in the industry was measured with an open-ended question and other employment variables were covered with multiple-choice options.

Results

Gambling behaviours

The rates of low risk, moderate risk and problem gambling were several times greater among the casino employees as among the general population (Table 2), and a χ^2 test found significant differences between the samples. Also, only 3.0% of the employees were determined to be past-year non-gamblers, compared to findings of 40.9% (Williams & Wood, 2004) and 36.6% (Wiebe, Mun & Kauffman, 2006) among the general population.

Despite their high problem gambling rates, over twice as many employees claimed their gambling had decreased since commencing employment (28.4%) as claimed it had increased (12.2%), and the majority (59.4%) reported no change at all (Table 3). A positive relationship existed between increases in gambling and rates of problem gambling (Table 4).

Table 2. PGSI categorizations of Ontario casino employees and general population.

Sample group Study	Non-problem (%)	Low risk (%)	Moderate risk (%)	Problem gambler (%)
Casino employees ($n = 887$*) This study	73.6	14.3	8.9	3.2
General population ($n = 3{,}604$) Wiebe et al. (2006)	90.7	5.8	2.6	0.8
General population ($n = 6{,}654$) Williams and Wood (2004)	87.8	7.5	3.8	1.0
$\chi^2(6, n = 11{,}145) = 203.765, p < 0.001$				

Note: The χ^2 test was performed using group counts for Wiebe et al. (2006) and Williams and Wood (2004) that were calculated by applying the group percentages to the total sample and taking the nearest whole number.
* The total *N* of respondents in the current study was 934, with 887 completing the PGSI.

Table 3. Changes in employees' gambling since beginning work in an Ontario casino ($N = 934$).

	Decreased significantly (%)	Decreased a little (%)	Remained the same (%)	Increased a little (%)	Increased significantly (%)	*n*
TOTAL SAMPLE	17.9	10.5	59.4	8.8	3.3	904
Months in industry						
≤ 12	14.3	14.3	65.7	5.7	0.0	70
13–60	20.9	10.2	58.6	6.5	3.7	215
61–120	19.7	11.9	56.4	9.5	2.4	411
≥ 121	12.8	5.9	64.0	11.3	5.9	203
	$\chi^2(12, n = 885) = 24.145, p = 0.019$					
Previous industry experience						
No	17.5	10.1	60.7	8.6	3.1	839
Yes	23.5	19.6	35.3	13.7	7.8	51
	$\chi^2(4, n = 890) = 14.887, p = 0.005$					
Department						
Administration/HR	6.3	9.4	84.4	0.0	0.0	32
Cashiering	19.4	9.7	59.7	9.0	2.1	144
Finance	20.0	20.0	56.0	4.0	0.0	50
Food & Beverage	16.8	8.4	65.3	7.4	2.1	95
Maint., Housekeeping, Hotel	25.3	6.9	56.3	6.9	4.6	87
Marketing	16.0	10.4	58.5	12.3	2.8	106
Security	12.7	11.1	65.9	7.9	2.4	126
Slots	23.1	7.7	55.4	10.8	3.1	65
Surveillance	15.0	12.5	57.5	10.0	5.0	40
Table Games	19.4	9.7	44.7	15.5	10.7	103
	(A χ^2 test was not performed owing to low expected values in several cells)					
Prior gambling involvement ('I was a frequent gambler so I thought I would enjoy the work')						
Disagree/strongly disagree	14.2	11.4	62.9	8.9	2.7	528
Neutral	32.8	6.0	35.8	13.4	11.9	67
Agree/strongly agree	43.2	20.5	13.6	9.1	13.6	44
	$\chi^2(8, n = 639) = 77.927, p < 0.001$					

Workplace influences

Exposure to gambling

Respondents generally agreed that gambling exposure had not increased their interest in gambling, nor had acquired knowledge caused them to believe they could profit from gambling (Table 5). For example, one interviewee remarked, 'I wasn't big into [gambling] when I started here, but now, seeing it every time I work, it's not exciting now … [it] definitely doesn't have an entertainment factor to me. If I'm on my day off, I definitely don't want to spend it in a casino again.' Another interviewee stated, 'We know the house wins, you just see it. We're not about to use our hard-earned money to go do the same thing.'

Fewer than 2.5% of the respondents 'agreed' or 'strongly agreed' with any of the three erroneous cognitions. In comparison, Wiebe, Single and Falkowski-Ham (2001) included the gambler's fallacy (one of the cognitions used in the survey) in a study of Ontario's general population and found over 13% of their sample 'agreed' or 'strongly agreed' with it (although they did not offer a 'neutral' option, which was provided in the present study). Nonetheless, some interviewees claimed it is not uncommon for employees to believe

Table 4. PGSI categorizations of different groups ($N = 934$).

	Non-problem (%)	Low risk (%)	Moderate risk (%)	Problem gambler (%)	Mean PGSI score*	SD	*n*
Gambling change							
Decreased significantly	75.5	13.9	8.6	2.0	0.80[a]	1.99	151
Decreased a little	62.9	24.7	9.0	3.4	1.06[ab]	2.08	89
Remained the same	81.6	12.0	5.4	1.0	0.49[a]	1.74	515
Increased a little	50.0	21.1	22.4	6.6	2.08[b]	3.48	76
Increased significantly	6.7	16.7	40.0	36.7	6.80[c]	5.17	30
	$F(4, 856) = 62.775, p < 0.001$						
Months in industry							
≤ 12	80.0	14.3	4.3	1.4	0.46	1.36	70
13–60	75.6	13.6	6.1	4.7	1.04	3.06	213
61–120	72.1	14.9	10.4	2.5	0.97	2.41	402
≥ 121	72.5	14.0	10.5	3.0	0.95	2.23	200
	$F(3,881) = 1.025, p = 0.381$						
Previous industry experience							
No	74.5	14.4	8.5	2.5	0.86	2.31	825
Yes	59.2	12.2	14.3	14.3	2.55	4.50	49
	$t(872) = 2.615, p = 0.012$						
Department Group**							
Involved on floor	63.1	16.3	13.1	7.5	1.66[b]	3.33	160
Uninvolved on floor	77.4	14.2	7.3	1.1	0.64[a]	1.80	261
Close to floor	71.8	15.6	9.2	3.4	1.05[ab]	2.83	294
Removed from floor	81.5	11.8	5.9	0.8	0.52[a]	1.48	119
	$F(3, 830) = 6.881, p < 0.001$						
Department							
Table Games	58.0	15.0	16.0	11.0	2.12[b]	3.67	100
Maint., Housekeeping, Hotel	62.9	19.1	13.5	4.5	1.38[ab]	2.89	89
Food & Beverage	75.5	13.3	7.1	4.1	1.17[ab]	3.66	98
Surveillance	71.8	15.4	10.3	2.6	0.90[ab]	2.01	39
Slots	71.7	18.3	8.3	1.7	0.88[ab]	2.52	60
Security	80.6	10.5	7.3	1.6	0.70[ab]	2.18	124
Marketing	75.7	15.0	7.5	1.9	0.67[ab]	1.65	107
Cashiering	74.5	17.5	7.3	0.7	0.58[ab]	1.38	137
Finance	91.8	2.0	6.1	0.0	0.37[ab]	1.35	49
Administration/HR	77.4	22.6	0.0	0.0	0.29[a]	0.59	31
	$(F(9, 824) = 3.981, p < 0.001)$						
Prior gambling involvement ('I was a frequent gambler so I thought I would enjoy the work')							
Disagree/strongly disagree	77.4	14.1	7.2	1.3	0.63[a]	1.73	526
Neutral	47.0	22.7	19.7	10.6	2.42[b]	3.74	66
Agree/strongly agree	23.3	23.3	27.9	25.6	5.28[c]	6.00	43
	$(F(2, 632) = 77.609, p < 0.001)$						

Note: Groups not sharing the same superscript differ significantly based on Scheffé's test ($p < 0.05$)
* 0 = Non-problem, 1–2 = Low risk, 3–7 = Moderate risk, 8+ = Problem gambler (Max = 27)
** 'Involved on floor': Slots and Table Games; 'Uninvolved on floor': Security and Cashiering; 'Close to floor': Food & Beverage, Marketing, and Maintenance/Housekeeping/Hotel; 'Removed from floor': Administration, Finance, Human Resources (HR) and Surveillance.

acquired gambling knowledge gives them an edge. For example, one employee remarked, 'Even though it's ingrained into us that it's all random .... I've definitely heard some slot attendants say, like, that they've been on the floor so much that they've figured it out.'

Table 5. Attitudes toward the impacts of exposure to gambling ($N = 934$).

Impacts of exposure to gambling	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean*	SD	*n*
After work I want to avoid spending even more time in a casino or involved with gambling	4.9	7.7	17.9	27.4	42.1	3.94	1.16	894
As I have become more knowledgeable about the games I have realized that I cannot overcome the house odds in most games	8.2	4.5	15.7	34.2	37.5	3.88	1.20	822
I spend so much time surrounded by gambling that it is no longer interesting	7.6	15.2	26.8	22.9	27.4	3.47	1.25	853
I have become more interested in gambling so I wanted to participate	56.7	27.8	9.1	5.7	0.7	1.66	0.91	864
I believe I can win money because I have become more knowledgeable about casino games	64.9	24.0	6.2	3.8	1.0	1.52	0.85	870

* Based on scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

Several interviewees suggested that perceptions of an edge typically relate to table games and especially poker. As one interviewee explained, 'Some people that started dealing poker thought, "Yeah, I can do this, this is easy" .... They deal a lot of hands in an hour, in a day, in a week. I'm sure they pick up a lot of skill by dealing – knowing when to bet and what hands are winning.' In fact, some interviewees claimed that they knew of employees who had quit their jobs to focus entirely on gambling.

Several interviewees also noted that employees may increase their gambling simply because their new-found familiarity with gambling makes them more comfortable participating. As one interviewee explained, 'Being an employee in a gambling establishment, they develop more of a comfort zone to go to another place – they feel comfortable gambling. It's not unfamiliar to them .... You're more comfortable walking into a gambling establishment once you've worked in one.'

Exposure to the patrons

Many respondents felt they were dissuaded from gambling by their exposure to the patrons, and very few employees felt they had been drawn to gambling by the patrons (Table 6). In fact, when asked how frequently they observed patrons considered to have a gambling problem, 41.0% of the respondents claimed it was daily and another 21.6% claimed it was at least weekly.

Exposure to patrons was described in numerous interviews as playing a significant role in dissuading many employees from gambling. For instance, one interviewee stated, 'You see everything [the patrons] are losing. You see what it does to them .... "Gosh," you think to yourself, "there's more to life, why would you spend your time here?" .... So

Table 6. Attitudes toward the impacts of exposure to the casino patrons ($N = 934$).

Impacts of exposure to patrons	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean*	SD	*n*
I see patrons losing money and do not want to do the same	5.0	3.8	14.0	34.2	43.1	4.07	1.08	845
I see some negative consequences of gambling among patrons and I do not want to be like them	4.6	5.0	15.8	38.0	36.6	3.97	1.07	866
I see how much fun patrons are having and I want to participate too	38.2	28.9	22.4	9.1	1.4	2.07	1.05	866
I have seen many patrons win so I think I have a good chance of winning money	58.7	30.6	7.4	2.3	0.9	1.56	0.80	862
I receive gambling tips from patrons that I feel are worth following	71.4	22.1	4.1	1.3	1.1	1.39	0.73	786

* Based on scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

I think it makes [employees] even more determined not to [gamble].' Another interviewee similarly claimed, '[Working here] made me realise how silly [gambling] really is and you see people out on the gaming floor … do the strangest things and you see people wasting their money when they don't have any and it's sad, and, to me, I'm like, I never want to be in that situation.' Numerous interviewees also commented on the frequency of complaints and poor treatment from the patrons, noting that such experiences could dissuade employees from gambling. As one interviewee stated:

> A lot of the negativity that we often hear is, you know, the machines don't pay out …. A lot of that we hear all day …. You're trying to be happy with them and bring the whole thing up and they bring you back down …. I think it has an impact. I think it completely deters us [from gambling] because I don't want to go. After hearing that, I don't want any part of it.

Exposure to the work environment

The employees did not generally perceive co-workers, casino marketing, or job stress as major factors that had motivated the employees to gamble (Table 7). Nevertheless, numerous interviewees noted that employees frequently gambled with one another, including on lottery games, in sports pools, in house games, and in casinos. Moreover, the casinos' social clubs sometimes organized visits to other casinos, which were described as being quite popular.

Training, restrictions, and resources

The respondents tended to agree that their responsible gambling training was useful in preventing problem gambling, while not agreeing that the training had discouraged them from gambling (Table 8). The interviewees' opinions of the responsible gambling training varied, but most of the interviewees viewed it positively. For instance, one interviewee stated, '[The training] has changed a lot of how I look at things.' However, numerous

Table 7. Attitudes toward the impacts of exposure to the work environment ($N = 934$).

Impacts of exposure to work environment	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean*	SD	*n*
My friends who also work in the facility rarely or never gamble so I rarely or never gamble	16.1	19.5	26.4	22.2	15.8	3.02	1.30	799
My friends who also work in the facility gamble a lot so I gamble with them	61.8	27.0	7.0	3.3	0.9	1.54	0.83	812
The marketing and advertising that I see at work tempts me to gamble	68.1	23.7	4.5	2.5	1.1	1.45	0.79	872
Gambling relieves the stress from my job	69.8	22.1	4.6	2.6	0.8	1.43	0.77	839

* Based on scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

interviewees also explained that while the training devoted significant attention to the subject of patron problem gambling, very little attention was devoted to the employees themselves. As one interviewee described, 'We do get training to recognise [problem gambling] in customers … but I don't think that there's a lot of looking at ourselves.'

Depending on their position and facility, some employees could gamble at casinos other than where they worked, others could gamble only in a handful of select Ontario casinos, and others could not gamble in any Ontario casino. The survey respondents lived

Table 8. Attitudes toward the impacts of responsible gambling training and employee gambling restrictions ($N = 934$).

Impacts of training and restrictions	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean*	SD	*n*
My facility's problem gambling training course was useful in teaching me about problem gambling	3.5	6.0	19.8	50.6	20.0	3.78	0.95	828
My facility's problem gambling training course has reduced the chances that I will ever become a problem gambler	7.2	13.3	27.8	31.7	20.0	3.44	1.16	774
My job's regulations about employee gambling make it difficult for me to visit a casino where I am allowed to gamble	29.1	20.6	15.6	19.5	15.2	2.71	1.45	853
My facility's training about problem gambling convinced me to gamble less	25.1	23.6	32.0	13.5	5.9	2.52	1.17	798

* Based on scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

an average of 76 minutes (SD = 54.83) from the nearest casino where they could gamble, and this duration was positively correlated with employees' agreement that the restrictions made it difficult to visit an unrestricted casino ($R(818) = 0.350$, $p < 0.001$). However, no correlation was found between travel time and PGSI scores ($R(842) = 0.004$, $p = 0.901$).

Contrasting opinions were voiced about the restrictions' impacts. One interviewee explained, 'I used to come to [my facility] and gamble … at least maybe once or twice a month, and now that I've been working here … I don't gamble very often at all. It's because … I really don't want to gamble so badly that I want to drive … to the next gaming facility.' Conversely, another opined, 'I think [the restrictions are] irrelevant …. If someone's really interested in playing, they're going to make that trek.' Several interviewees also mentioned substitution gambling, but as a result of a lottery ban rather than the casino restrictions. This ban, which affected employees at some of the participating casinos, was instituted shortly before the study began. As one interviewee claimed, 'Now I'm playing the hospital lotteries because that's the only other thing that I can do.'

In addition to such restrictions, Ontario casinos also offer an Employee Assistance Plan (EAP), which is a helpline employees can use to access assistance for any type of problem. When presented with the hypothetical situation of experiencing a gambling problem and offered numerous potential courses of action, far more employees indicated they would use the EAP (52.1%) than anything else. The value of the EAP also was emphasized throughout the interviews. For instance, one interviewee stated, '[The EAP] is really great. I've used it for other things [aside from gambling] …. They're excellent …. They were great with me …. I know quite a few employees have used it for a lot of different things and I have not heard a negative thing about our system at all.' Nevertheless, some other interviewees voiced concerns regarding confidentiality, worrying that exposed problems may somehow be revealed to other staff members, including supervisors. As one interviewee explained, 'A lot of people are afraid [that] … when you put a claim into our benefit program, it's going to come back to the company … and you're going to get fired because of whatever the problem is.' Moreover, although only 5.0% of the survey respondents claimed they would not seek assistance anywhere if experiencing a gambling problem, these individuals exhibited particularly high rates of moderate risk and problem gambling, and a *t*-test found they had a significantly higher mean PGSI score than their co-workers ($t(814) = 2.802$, $p = 0.008$).

Employment variables

Length of time working in the gambling industry

The amount of time that employees had worked in the gambling industry did not exhibit any significant correlation with PGSI scores ($R(883) = 0.038$, $p = 0.257$). Nonetheless, it is worth noting that those employees who had been in the industry for less than one year exhibited the lowest levels of moderate risk and problem gambling, and were the least likely to have increased their gambling (Tables 3 and 4).

When asked whether a relationship existed between employees' gambling and the amount of time spent in the industry, interviewees offered divergent opinions. For example, one interviewee, who started gambling occasionally after working in a casino, claimed, 'I think [gambling] would be more after a year, more after being there for a while. For me, anyway, it wasn't like an instantaneous thing.' Contrastingly, another employee commented:

> I think [for] people that are new and fresh out of the first few years, [the employment] would probably have an effect, as in they would want to go and play, or they like the excitement, they've learned some things they want to try. People who have been here, after so many years,

Table 9. Reasons why employees sought their jobs ($N = 934$).

Why did you choose to work in an Ontario casino?	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean*	SD	*n*
I needed a job	3.0	4.2	11.2	33.9	47.7	4.19	1.00	876
The pay was good	1.4	3.0	15.7	47.5	32.4	4.06	0.85	864
It offered good benefits	2.1	4.4	18.7	46.1	28.7	3.95	0.92	850
I thought I would enjoy the atmosphere	0.8	2.1	24.6	53.0	19.5	3.88	0.76	862
I thought I would enjoy the nature of the work (e.g. dealing cards, attending slots, etc.)	1.6	4.6	28.1	47.1	18.6	3.76	0.86	797
I thought I would enjoy interacting with the players and/or other customers	1.3	6.2	29.4	45.8	17.3	3.72	0.87	839
It provided an opportunity for career advancement	3.9	8.0	28.1	40.5	19.5	3.64	1.01	847
Another employee suggested I apply	15.3	20.5	17.6	26.8	19.9	3.16	1.36	694
I already knew and liked members of the staff	12.0	22.4	35.9	23.3	6.4	2.90	1.09	686
The hours appealed to me	12.8	20.8	39.1	20.1	7.1	2.88	1.09	849
I thought it would be easy because I was already familiar with most casino games	29.7	32.3	26.9	6.8	4.3	2.24	1.08	677
I was a frequent gambler so I thought I would enjoy the work	58.1	24.5	10.6	5.0	1.8	1.68	0.98	658
I had previous experience working in a casino	61.3	25.7	5.6	2.1	5.4	1.65	1.06	573

* Based on scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

> I think, aren't as naïve. Now they've seen the bad side, or the hard side, or the house side of things, and maybe they're less likely [to gamble].

Previous industry experience

Employees who had worked in the gambling industry before working in an Ontario casino exhibited significantly higher rates of moderate risk and problem gambling than their co-workers (Table 4). These employees also were more likely to have changed (either increasing or decreasing) their gambling (Table 3).

Department

The casinos' departments were divided into four categories based on their involvement with gambling and proximity to the gambling floor. Significant differences existed

between the groups' PGSI results, and the group most directly involved with gambling exhibited the highest rates of moderate risk and problem gambling (Table 4). Nevertheless, considering each department individually revealed notable differences between some departments that had been grouped together (the Administration and Human Resources [HR] departments remained combined because their gambling behaviours appeared fairly similar and there were relatively few respondents from either department). Although a Scheffé *post-hoc* test only differentiated employees from the Table Games and Administration/HR departments, the lack of other significant differences likely results in part from issues related to the small group sizes and skewness of the PGSI scores. It is clear that the Table Games employees exhibited the highest rates of problem gambling (Table 4) and also were the most likely to have increased their gambling (Table 3).

The varying impacts that different workplace influences may have on different departments were mentioned in some of the interviews. For example, one interviewee claimed, 'My perception would be … the [employees] that have access to the gaming floor are more inclined to gamble …. Maybe they have a confidence that they understand the way a casino works. They would be maybe less intimidated to go up to a gaming table to play.' Furthermore, another employee remarked, 'A lot of the Table Games employees and Surveillance department are trained in card counting and that sort of thing, and basic strategy in blackjack, and so I really do think that a lot of them think they have an edge because of that.'

Job attraction

The primary reason why the employees decided to work in an Ontario casino was the perception that the casinos offer good pay and benefits (Table 9). The next most common motives were employees' feelings that they would enjoy different aspects of casino work. The vast majority of the respondents did not appear to decide to work in a casino because of a prior familiarity or involvement with gambling. The majority (63.6%) of those employees who agreed with having taken their jobs because of prior gambling involvement claimed their gambling had since decreased, but a fairly high percentage (22.7%) also claimed their gambling had increased (Table 3). Additionally, employees who agreed with the statement exhibited exceptionally high rates of moderate risk and problem gambling (Table 4).

Discussion

This research confirms findings from other jurisdictions that casino employees exhibit higher moderate risk and problem gambling rates than the general population (hypothesis 1), but also are much more likely to decrease than increase their gambling after commencing employment (hypothesis 2) (Dangerfield, 2004; Duquette, 1999; Hing, 2008; Hing & Nisbet, 2009; Shaffer et al., 1999). Consequently, the findings suggest that these patterns are fairly widespread throughout the casino industry.

Both intentionally and unintentionally, casino employment seems to be fairly effective at discouraging gambling. As Shaffer et al. (1999) suggested, some casino employees appear to be repelled from gambling through a process of 'social adaptation,' as related to more general adaptation theory (e.g. Abbott, 2006; Shaffer, 2005; Storer, Abbott & Stubbs, 2009). This study demonstrates that this process can be precipitated by a wide variety of influences, including improved knowledge of erroneous gambling cognitions and observations of patron problem gambling. Such influences are similar to those that may affect a general population, but also unique in the manner and degree in which they will be experienced by casino employees. Moreover, employees' 'adaptation' is not precisely the same as a general

population's, because employees experience increased exposure to the activity of gambling, but oftentimes decreased availability as a result of gambling restrictions.

Although casino workplace influences discourage many employees from gambling, for some other employees the effect is the opposite, and among this group problem gambling is quite prevalent. In other words, casino employment holds the interesting distinction of being both a significant protective factor and a significant risk factor. This distinction appears to result from the high concentration of gambling-related workplace influences that can affect employee gambling not only in varying degrees, but also in completely opposite ways (hypothesis 3). This study's findings, therefore, highlight the complexity of gambling behaviours and illustrate that there will be no panacea for problem gambling, either among casino employees or more generally, as the same factors that can discourage gambling among some people actually may encourage gambling among others.

It is not particularly surprising that problem gambling rates were found to be so high among employees who increased their gambling, as these employees are surrounded every workday by the very influences that encourage their gambling. Nonetheless, employees do not appear to be equally likely to experience such increases, as some groups, like Table Games employees (hypothesis 4) and employees who had previously worked elsewhere in the industry, seem particularly likely to increase their gambling and be problem gamblers. These characteristics of Table Games employees appear to relate to the gambling knowledge and familiarity they acquire, which highlights how such influences, which may otherwise be assumed to discourage gambling, actually may encourage gambling among certain groups of gamblers. The high rates of gambling change (both increases and decreases) among employees with previous industry experience demonstrate that different types of gambling venues can impact employees differently, likely owing to the presence and intensity of different workplace influences.

Although many casinos already take measures to promote responsible gambling within their workforces, employee problem gambling is a clear cost associated with casino jobs, so it is an issue casinos must continue to address. This study's findings highlight various additional responsible gambling measures that may prove beneficial. First, responsible gambling training should specifically address employee gambling and the unique influences associated with such gambling. Second, responsible gambling measures should specifically target those employees, such as Table Games employees, who are shown to be particularly vulnerable to problem gambling. Third, casinos should not assume that employee gambling restrictions will automatically reduce problem gambling, and casinos also must be cognizant of substitute gambling when considering different potential restrictions. Fourth, in order for confidential assistance resources to be fully effective, casinos must assure their employees that the resources are genuinely confidential.

Limitations

Participation biases may have affected results from both the survey and interview samples. The survey sample included over 900 respondents, but the response rate may have allowed for participation biases, which may have been further pronounced among subgroups within the sample. For example, the quantity of moderate risk and especially problem gamblers in the sample was relatively small, so seemingly salient patterns detected among these respondents may not be wholly representative of Ontario's moderate risk and problem gambling casino employees.

The representativeness of the interview sample was arguably more limited than the survey sample, being that the interview sample was a convenience sample that was small

in size. It is doubtful that the 21 interviewees could have been perfectly representative of the thousands of casino employees in Ontario, so even perceptions voiced by numerous interviewees cannot be seen as necessarily widespread among the employee population. Nonetheless, this limitation was somewhat mitigated by focusing the interview questions on the total employee population rather than the individuals being interviewed, which allowed for general patterns to be identified and other insights to be revealed.

Participation biases could have manifested themselves in a variety of ways, as non-gamblers may have been reluctant to participate because of a lack of interest or a belief that their answers would not be valuable (Williams & Volberg, 2009), or heavy gamblers may have been reluctant to participate because of the nature of the study. This latter possibility seems more likely, as both the survey and interview samples exhibited a disproportionately large percentage of females, who exhibited lower levels of problem gambling than their male counterparts. Additionally, the interview sample did not appear to involve an especially large quantity of heavy gamblers, although this could not be tested reliably because personal gambling was not a topic directly broached in the interviews.

Also, owing to the use of self-reporting, some respondents' answers possibly were affected by biases. For example, heavy gamblers may have struggled to acknowledge their gambling involvement, or may have been eager or reluctant to blame this involvement on different workplace influences.

Finally, the external validity of this study is somewhat limited. The results are most applicable to the Ontario casino industry, yet even within Ontario each individual facility will possess distinctive characteristics that could encourage or discourage employee gambling. These differences obviously increase in significance when considering the casino industry beyond Ontario.

Conclusion

It is clear that casino employee gambling behaviours are affected by a multitude of varied and often contrasting influences and variables. It is also clear that these behaviours exhibit some decipherable and important patterns that can be increasingly understood and subsequently used to advance responsible gambling. Therefore, with continued attention devoted toward such issues, casinos will be better able to minimize problem gambling and promote responsible gambling among their employees.

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