

2016

Exposure to and engagement with gambling marketing in social media: Reported impacts on moderate risk and problem gamblers

Sally M. Gainsbury

Southern Cross University, sally.gainsbury@scu.edu.au

Alex MT Russell

Southern Cross University

Daniel L. King

The University of Adelaide

Paul Delfabbro

The University of Adelaide

Jeffrey Derevensky

McGill University

Nerilee Hing

Southern Cross University

Publication details

Postprint of: Gainsbury, S. M., King, D. L., Russell, A. M. T., Delfabbro, P., Derevensky, J., & Hing, N. (2016, February 1). Exposure to and Engagement With Gambling Marketing in Social Media: Reported Impacts on Moderate-Risk and Problem Gamblers. *Psychology of Addictive Behaviors*. Advance online publication.

Published version available from:

<http://dx.doi.org/10.1037/adb0000156>

This article may not exactly replicate the final version published in the APA journal. It is not the copy of record.

©American Psychological Association, 2016. This paper is not the copy of record and may not exactly replicate the authoritative document published in the APA journal. Please do not copy or cite without author's permission. The final article is available, upon publication, at: <https://doi.org/10.1037/adb0000156>

Acknowledgments: The authors would like to thank Professor Alex Blaszczynski who assisted with the research on which this manuscript is based.

Funding: This research was commissioned by Gambling Research Australia [Use of social media in gambling] - a partnership between the Commonwealth, State and Territory Governments. GRA had no involvement in the research design, conduct, analysis or the preparation of this paper.

Declaration of Conflicting Interests: The authors have no conflicting interests to declare in relation to this manuscript.

All correspondence should be addressed to: Dr. Sally Gainsbury, Centre for Gambling Education and Research, Southern Cross University, POBox 157, Lismore NSW 2480, email: sally.gainsbury@scu.edu.au

Exposure to and engagement with gambling marketing in social media: Reported impacts on moderate risk and problem gamblers

ABSTRACT

Digital advertising for gambling and specifically marketing via social media have increased in recent years and the impact on vulnerable consumers, including moderate-risk and problem gamblers is unknown. Social media promotions often fall outside of advertising restrictions and codes of conduct and may have an inequitable effect on susceptible gamblers. This study aimed to investigate recall of exposure to, and reported impact on gamblers of, gambling promotions and marketing content on social media, with a focus on vulnerable users currently experiencing gambling problems. Gamblers who use social media (N=964) completed an online survey assessing their exposure to and engagement with gambling operators on social media, problem gambling severity and reported impact of social media promotions on gambling. Gamblers at moderate-risk and problem gamblers were significantly more likely to report having been exposed to social media gambling promotions and indicated actively engaging with gambling operators via these platforms. They were more likely to self-report that they had increased gambling as a result of these promotions and over one-third reported that the promotions had increased their problems. This research suggests that gamblers at moderate-risk or experiencing gambling problems are more likely to be impacted by social media promotions and these may play a role in exacerbating disordered gambling. Future research should verify these self-reported results with behavioural data. However, the potential influence of advertisements via these new platforms should be considered by clinicians and policy makers given their potential role in the formation of this behavioural addiction.

Keywords: problem gambling, social media marketing, advertising, public health, exposure,

INTRODUCTION

Marketing for gambling products has increased significantly in recent years (Binde, 2007; Lee, Lemanski, & Jun, 2008; Ofcom, 2013; Sproston, Hanley, Brook, Hing, & Gainsbury, 2015). Digital advertising for gambling in Australia has grown more than 266% since 2008 (Gardner, 2013), which enables gambling operators to target advertisements to specific audiences and directly reach customers (Sproston et al., 2015), including through social media. Gambling operators use social media to display content to users who opt to follow their brand, target specific users and users may share promotions with their connections. A survey of Australian gamblers found 40% had seen wagering marketing on Facebook (Sproston et al., 2015). Most gambling operators do not promote responsible gambling messages on social media (Gainsbury, Delfabbro, King, & Hing, 2015; Gainsbury, King, Hing, & Delfabbro, 2015). The present study aimed to examine the impacts of social media marketing by gambling operators on those experiencing gambling-related problems.

Advertising is recognised as a significant distal influence on gambling (Binde, 2014). Social media marketing influences infrequent as well as frequent gamblers who may be unable to resist urges elicited by the external cues found within advertising (Abrams, Monti, Carey, Pinto, & Jacobus, 1988; Martin et al., 2013). Gambling advertising may also compromise responsible gambling campaigns aimed at reducing gambling and encouraging help seeking (Joint Select Committee on Gambling Reform, 2013). Research suggests that gambling advertisements have a greater impact on problem gamblers (Binde, 2009; Derevensky, Sklar, Gupta, & Messerlian, 2010; Gainsbury, Russell, Wood, Hing & Blaszczynski, 2015; Hanss, Mentzoni, Griffiths, & Pallesen, 2015; Hing, Cherney, Blaszczynski, Gainsbury, & Lubman, 2014; Hing, Lamont, Vitartas & Fink, 2015; Sproston et al., 2015). Advertising may trigger the initiation of gambling or increase levels of gambling through reinforcing irrational ideas, which may become problematic (Binde, 2014).

There appears to be a ‘dose-exposure response’, whereby increased exposure to gambling marketing has a cumulative influence and results in greater gambling engagement (Binde, 2014). Individuals with high exposure to wagering marketing are more likely to report that this marketing has a greater impact on their gambling, stronger intentions to gamble, and greater problem gambling severity scores (Hanss et al., 2015; Hing, Vitartas, Lamont & Fink, 2014; Sproston et al., 2015). However, cross-sectional studies have been unable to demonstrate causality of the impact of advertising on gambling behaviour in general and on gambling problems.

Social media services are a valuable tool for public education because they allow information to be rapidly disseminated to a broad audience as well as targeted users at minimal cost (Korda & Itani, 2013). Social media can also foster active participation and interaction between users which can be a helpful intervention for managing gambling problems (Gainsbury & Blaszczynski, 2011; Loss, Lindacher, & Curbach, 2014). Social marketing, including through social

media, appears to be effective in raising awareness and promoting behavioural change regarding health risks (Gordon, McDermott, Stead & Angus, 2006; Maher et al., 2014; Stead, Gordon, Angus & McDermott, 2007). However, research suggests that industry messaging is often more prevalent and engaging to users than social marketing (Burton, Dadich, & Soboleva, 2013; Nicholls, 2012). Furthermore, the extent to which the target population for responsible gambling messages would seek information about responsible and problem gambling via social media is unknown.

There are gaps in our understanding of the impact of social media on vulnerable groups including problem gamblers (McCreanor et al., 2013). This study aimed to investigate recall of exposure to, and reported impact on gamblers of gambling promotions on social media, with a focus on users currently experiencing gambling problems. It was hypothesised that social media promotions by gambling operators would have a greater self-reported impact on moderate-risk and problem gamblers, increasing their gambling as compared to low-risk and non-problem gamblers.

METHOD

Participants

A subset of 964 participants was selected from a larger sample of 1,554 for the purpose of the study based on self-reported use of social media and gambling within the previous 12 months.

Procedure

The respondents were recruited from existing panels held by an Australian market research company in May-June 2014. Inclusion criteria were being Australian, 18 years or older, active Internet use and English proficiency. Respondents were screened according to age, gender and location quotas that were representative of the Australian population. Respondents were compensated a small amount for their participation directly by the marketing company. This compensation took the form of points which can be collected and redeemed for goods. Ethics approval was granted by [anonymised for review] Human Research Ethics Committee.

Survey instrument

A comprehensive survey instrument was used containing the following measures:

Demographic data: Age (in years) and gender.

Gambling behaviour: Participation in gambling using any mode of access (online and offline) over the previous 12 months (six activities assessed: lottery-type games, electronic gaming machines (EGMs), sports betting, race wagering, poker and other casino-style card or table games).

Time spent on social media. Frequency (at least daily, weekly and monthly) and time spent on social media during a typical day (0-15 min, 16-30 min, 31-59 min, 1-2 hours, 2+ hours) were combined to provide an estimate of minutes spent per month on social media.

Exposure to and engagement with gambling operators on social media: Recall of exposure was measured using a list of possible promotions for gambling operators on Facebook, Twitter, YouTube and other social media services (see Table 1). Recall of engagement was measured by whether respondents had interacted with a gambling operator on social media (see Table 2) and questions about interactions on Facebook (e.g., visited an operator's Facebook page, posted/commented on a Facebook page, shared content, clicked on advertisements), Twitter (e.g., followed, retweeted, tweeted about or directly to a gambling operator), YouTube (e.g., watched, shared, commented a video posted by an operator or followed an operator) and through other services (e.g., read or commented on a blog post from or about a gambling operator). Respondents indicated the amount and purpose of advertisements by gambling operators on social media.

Problem gambling severity index (PGSI; Ferris & Wynne, 2001): The PGSI measures the severity of gambling problems for an individual and has been extensively validated (Currie, Hodgins, & Casey, 2013; Orford, Wardle, Griffith, Sproston, & Erens, 2010). The instrument consists of nine items, each rated from never to almost always. Total scores are used to classify respondents as: non-problem and low-risk gamblers (referred to here as non-problem gamblers; PGSI = 0-2, $n = 751$, 77.9%) and moderate-risk and problem gamblers (referred to here as moderate-risk/problem gamblers; PGSI= 3-27, $n = 213$, 22.1%). PGSI reliability in this sample was .95 (Cronbach's alpha).

Impacts of social media use on gambling behaviour and on gambling problems: Respondents indicated whether their gambling had increased, decreased or neither due to promotions on social media by gambling operators. Respondents with a PGSI of 3+ indicated whether social media use by gambling operators increased or decreased any problems that they have had with their gambling.

Information about responsible gambling and problem gambling on social media: Recall was assessed of responsible gambling messages promoted on social media or by gambling operators on social media. Respondents were asked how likely they were to seek information, ask for advice, or share their opinion about responsible gambling and problem gambling on social media sites.

Data analysis

The PGSI was not completed by respondents who participated only in lottery-type gambling on a less-than-weekly basis ($n=268$) and these respondents were allocated a PGSI score of 0. This is consistent with best practice on gambling survey administration to minimise false positives (Williams & Volberg, 2009). Pairwise comparisons of non-problem to moderate-risk/problem gamblers used chi-square tests of independence, Mann-Whitney U -tests and independent samples t -

tests (or Welch *t*-test where variances were not equal). Likert scales were treated as continuous. Bonferroni corrections were applied to control for Type I error for multi-response variables and the relevant critical *p*-value is reported with those results. A critical *p*-value of 0.05 was used otherwise. Analyses controlled for age, gender and monthly exposure to social media. No results changed when including covariates, so only results without covariates are reported.

RESULTS

Exposure to and engagement with gambling operators via social media

Exposure to gambling operators on social media

Moderate-risk/problem gamblers were significantly more likely to report seeing gambling promotions on social media (66.2%) including advertisements and content posted by gambling operators compared to non-problem gamblers (39.9%; $\chi^2(1, N = 964) = 46.07, p < .001, \phi = .22$). Moderate-risk/problem gamblers were significantly more likely to report having seen all types of promotions on social media, with the exception of paid advertisements or promoted content on Facebook and on Twitter, where no significant differences were found between the groups (Bonferroni adjustment applied; Table 1).

Table 1

Proportion of respondents who reported seeing promotions from gambling operators on social media platforms by problem gambling status (% of adults, n = 964)

Content	Non-problem gamblers (n = 751)	Moderate-risk/problem gamblers (n = 213)	Inferential statistics		
	n(%)	n(%)	χ^2	p	ϕ
Facebook					
Official page of a gambling operator	67 (8.9)	51 (23.9)	34.86	<.001	.19
Unofficial page or content about a gambling operator	31 (4.1)	38 (17.8)	46.95	<.001	.22
Promoted or shared content in a friend's newsfeed	71 (9.5)	45 (21.1)	21.36	<.001	.15
Paid advertisements or promoted content	146 (19.4)	40 (18.8)	0.05	.829	-
Twitter					
Tweets from a gambling operator	9 (1.2)	17 (8.0)	29.09	<.001	.17
A gambling operator's Twitter page	7 (0.9)	21 (9.9)	46.89	<.001	.22
Tweets about a gambling operator	12 (1.6)	16 (7.5)	20.58	<.001	.15
Paid advertisements or promoted content	34 (4.5)	17 (8.0)	3.95	.047	-
YouTube					
Videos posted by a gambling operator	40 (5.3)	42 (19.7)	44.16	<.001	.21
Videos about a gambling operator	41 (5.5)	30 (14.1)	18.09	<.001	.14
Other					
Official blog or discussion board provided by a gambling operator	11 (1.5)	24 (11.3)	45.57	<.001	.22
Official Google Plus page of a gambling operator	29 (3.9)	28 (13.1)	25.71	<.001	.16
Official Instagram account of a gambling operator	6 (0.8)	15 (7.0)	30.35	<.001	.18
Official Pinterest account of a gambling operator	5 (0.7)	16 (7.5)	36.50	<.001	.20
Seen an online game provided by or related to a gambling operator	68 (9.1)	43 (20.2)	20.19	<.001	.15
Other	18 (2.4)	1 (0.5)	3.19	.074	-

Note: A Bonferroni adjustment was applied, such that the critical p-value for these analyses was $0.05/16 = \text{approx. } 0.003$.

Use of social features on social media sites

Moderate-risk/problem gamblers were significantly more likely to report having used social features on an Internet gambling site or on the social media page or profile of a gambling operator (42.7%) compared to non-problem gamblers (8.3%; $\chi^2(1, N = 964) = 147.64, p < .001, \phi = .39$).

Moderate-risk/problem gamblers were significantly more likely to have read comments, posted comments and promoted their activity, shared comments and invited their online network to engage with a gambling operator (Table 2).

Table 2

The proportion of respondents who have used social features on the website or social media page of a gambling operator by problem gambling status (% of adults, n = 964)

Action	Non-	Moderate-	Inferential statistics		
	problem gamblers (n = 751)	risk/problem gamblers (n = 213)	χ^2	p	ϕ
Read comments written by other users	53 (7.1)	66 (31.0)	87.81	<.001	.30
Posted comments	24 (3.2)	33 (15.5)	45.11	<.001	.22
Promoted my activity, shared comments, or invited my wider online network to join	5 (0.7)	13 (6.1)	26.78	<.001	.17

A Bonferroni adjustment was applied, such that the critical p -value for these analyses was $0.05/3 = 0.0167$.

Interaction with gambling operators on social media

Moderate-risk/problem gamblers were significantly more likely to report interacting with gambling operators on all social media services assessed (56.8%) compared to non-problem gamblers (13.0%; $\chi^2(1, N = 964) = 180.97, p < .001, \Phi = .43$). Furthermore, moderate-risk/problem gamblers were significantly more likely to engage in each type of interaction compared to non-problem gamblers after a Bonferroni correction (critical p -value = $0.05/19 = \text{approx. } 0.001$; smallest significant test: $\chi^2(1, N = 964) = 10.49, p = .001, \Phi = .10$ for linked to/visited the gambling operator's own website directly from Facebook), with the exception of commented on a blog or discussion forum about a gambling operator ($p > .001$).

Opinions on promotions by gambling operators via social media

Non-problem gamblers were significantly more likely to report that there were too many unsolicited promotions from gambling operators on social media sites (71.8%) compared to moderate-

risk/problem gamblers (52.1%), while moderate-risk/problem gamblers were significantly more likely to report that the amount of promotions is about right (43.2%) compared to non-problem gamblers (23.7%; $\chi^2(2, N = 964) = 32.03, p < .001, \Phi = 0.18$). No significant difference was observed between the groups in terms of percentage of respondents saying that there were too few promotions (non-problem gamblers 4.5%, moderate-risk/problem gamblers 4.7%). Furthermore, no significant difference was found on whether gambling operators use social media to encourage people to try gambling, $t(407.46) = 0.53, p = .597$.

Reported impact of social media use

Impact of social media use on gambling

Moderate-risk/problem gamblers were significantly more likely to report an increase in the desire to gamble due to promotions and content posted on social media by gambling operators (41.8%) compared to non-problem gamblers (12.0%; $\chi^2(1, N = 964) = 97.46, p < .001, \Phi = .32$), as well as an increase in their actual gambling (31.9% vs 6.5%; $\chi^2(1, N = 964) = 100.39, p < .001, \Phi = .32$).

Impact of social media promotions by gambling operators on gambling problems

Twenty-two of the 213 moderate-risk/problem gamblers reported that they never had any gambling problems. Of the remaining 191 moderate-risk/problem gamblers, 29.3% reported that social media promotions had increased their problems (8.4% greatly, 20.9% somewhat), 63.4% reported that their problems had not changed and 7.3% reported that their problems had decreased (4.7% somewhat, greatly 2.6%).

Responsible gambling and problem gambling on social media

Recall of responsible gambling messages

Moderate-risk/problem gamblers were significantly more likely to recall responsible gambling messages on social media sites ($M = 1.92, SD = .73$) compared to non-problem gamblers ($M = 1.58, SD = .68; t(323.19) = 6.16, p < .001$). Moderate-risk/problem gamblers ($M = 1.85, SD = .75$) were significantly more likely to recall responsible gambling messages on social media by gambling operators that they have seen content from compared to non-problem gamblers ($M = 1.47, SD = .66; t(309.38) = 6.65, p < .001$).

Table 3

Responses to questions about responsible gambling on social media sites by problem gambling status (% of adults, n = 964)

	Non- problem gamblers (n = 751)	Moderate- risk/problem gamblers (n = 213)
How often have you noticed any responsible gambling messages being promoted on any social media sites you have used?	n(%)	n(%)
Never	393 (52.3)	57 (26.8)
Sometimes	292 (38.9)	125 (58.7)
Often	58 (7.7)	22 (10.3)
Almost always	8 (1.1)	9 (4.2)
How often have you noticed any responsible gambling messages being promoted on social media by gambling operators you have seen content from?	n(%)	n(%)
Never	460 (61.3)	71 (33.3)
Sometimes	239 (31.8)	112 (52.6)
Often	44 (5.9)	22 (10.3)
Almost always	8 (1.1)	8 (3.8)

Information seeking about responsible and problem gambling

Moderate-risk/problem gamblers were significantly more likely to report being willing to use social media to find information about responsible and problem gambling ($M = 2.60$, $SD = 1.31$) compared to non-problem gamblers ($M = 1.83$, $SD = 1.08$; $t(298.27) = 7.81$, $p < .001$). They were significantly more likely to be willing to ask for advice about responsible/problem gambling ($M = 2.51$, $SD = 1.23$) and to share their opinion about responsible/problem gambling via social media ($M = 2.72$, $SD = 1.28$) compared to non-problem gamblers ($M = 1.83$, $SD = 1.07$; $t(309.25) = 7.33$, $p < .001$ and $M = 1.99$, $SD = 1.14$, $t(313.94) = 7.55$, $p < .001$ respectively; Table 4).

Table 4

Responses to questions about how likely respondents were to do each of the following actions on social media sites by problem gambling status (% of adults, n = 964)

	Non- problem gamblers (n = 751)	Moderate- risk/problem gamblers (n = 213)
Find information about responsible gambling and problem gambling	n(%)	n(%)
Very unlikely	421 (56.1)	66 (31.0)
Unlikely	114 (15.2)	32 (15.0)
Neither likely nor unlikely	149 (19.8)	49 (23.0)
Likely	56 (7.5)	54 (25.4)
Very likely	11 (1.5)	12 (5.6)
Ask for advice about responsible gambling and problem gambling	n(%)	n(%)
Very unlikely	417 (55.5)	62 (29.1)
Unlikely	117 (15.6)	43 (20.2)
Neither likely nor unlikely	155 (20.6)	53 (24.9)
Likely	50 (6.7)	47 (22.1)
Very likely	12 (1.6)	8 (3.8)
Share your opinion about responsible gambling and problem gambling	n(%)	n(%)
Very unlikely	375 (49.9)	54 (25.4)
Unlikely	114 (15.2)	34 (16.0)
Neither likely nor unlikely	177 (23.6)	59 (27.7)
Likely	68 (9.1)	50 (23.5)
Very likely	17 (2.3)	16 (7.5)

DISCUSSION

Almost three in ten moderate-risk and problem gamblers reported that their problems increased as a result of social media promotions. This reflects perceptions of a subset of vulnerable gamblers that social media marketing may influence their gambling problems. These gamblers were more likely than low-risk and non-problem gamblers to recall promotions and interact with operators on social media. This likely reflects their interest in gambling and existing relationships with gambling operators as these gamblers are likely to have multiple online gambling accounts (Gainsbury,

Russell et al., 2015). Greater exposure to social media promotions may represent the combined influence of users being targeted by gambling operators and users seeking out promotions.

Our findings are consistent with previous research that the impacts of marketing on gambling tend to be the highest among moderate-risk and problem gamblers as compared to low-risk and non-problem gamblers (Binde, 2009; Derevensky et al., 2010; Gainsbury, Russell et al., 2015; Hanss et al., 2015; Hing, Cherney, Blaszczynski et al., 2014; Hing, Lamont et al., 2015; Sproston et al., 2015). Moderate-risk and problem gamblers were significantly more likely to self-report that promotions for gambling on social media increased their desire as well as their actual gambling. Exposure to gambling content may act as a trigger for gambling among moderate-risk and problem gamblers, producing urges to gamble, which are difficult to control (Binde, 2014; Hing, Cherney et al., 2014). It is also possible that moderate-risk and problem gamblers are more attentive and receptive to gambling-related stimuli and therefore find it easier to recall seeing them (Binde, 2007; Hønsi, Mentzoni, Molde, & Pallesen, 2013; Lamont, Hing, & Gainsbury, 2011).

Australian gambling operators claim to take efforts to reduce the impact of social media on vulnerable populations (Gainsbury, King et al., 2015). However, the lack of responsible gambling messages displayed questions whether social media is used according to codes of conduct for gambling advertising (Gainsbury, Delfabbro et al., 2015). The higher rates of engagement amongst moderate-risk/problem gamblers suggest that operators are not as vigilant at detecting users with gambling problems as claimed or that it is difficult to detect gambling problems based on social media interactions. The results suggest that for at least some vulnerable gamblers social media may play a role in the development or exacerbation of problems (Binde, 2014; Sproston et al., 2015).

Non-problem and low-risk gamblers were less interested in engaging with operators via social media, which was consistent with this group being more likely to report that there are too many unsolicited promotions from gambling operators. A minority of low-risk and non-problem gamblers reported that their gambling had changed based on these promotions, consistent with previous research that most gamblers report a minimal impact of advertising on their gambling (Binde, 2014). However, advertising messages are often processed subconsciously such that repeated exposure to advertising can lead to formation of preferences, even if viewers cannot consciously recall the exposure (Du Plessis, 1994; Zajonc, 2001). The third-person effect (Davison, 2003) asserts that people are likely to perceive advertising as influencing others more than themselves. Therefore, gamblers may underestimate the impact of marketing on themselves.

The majority of respondents had no recall of seeing responsible gambling messages on social media. This is consistent with research that few responsible gambling or warning messages are promoted by gambling operators on social media (Gainsbury, Delfabbro et al., 2015; Gainsbury, King et al., 2015). Moderate-risk and problem gamblers were more likely to have noticed these

messages, which may indicate that they are more attentive to these or that they viewed more content promoted by gambling operators. Given the impact of social media marketing on vulnerable gamblers, the inclusion of responsible gambling messages on these platforms is important.

Moderate-risk and problem gamblers were not likely to use social media to seek information, ask for advice, or share their opinion about responsible and problem gambling on social media. The public nature of social media platforms may present a disadvantage given the high level of stigma associated with problem gambling (Gainsbury, Hing, & Suhonen, 2014; Hing, Holdsworth, Tiyce, & Breen, 2014; Hing, Nuske, Gainsbury, & Russell, 2015; Hing, Russell, Gainsbury, & Nuske, 2015). Moderate-risk and problem gamblers are an appropriate target audience for responsible gambling messages and were more receptive to the use of these platforms, indicating that at least a proportion of relevant users could be targeted through social media. Future research is needed to evaluate whether social media can be used to promote desirable behavioural change in target populations of people dealing with gambling-related problems.

This research is limited by the use of self-report measures to investigate the impact of social media promotions on problem gambling among Australian gamblers. Exposure was measured based on recall, which may be biased and inaccurate, for example due to the third-person effect. Problem gamblers may be more aware of advertising's impacts on their behaviour than non-problem gamblers because of their insights and awareness with controlling their gambling (Binde, 2007). It is possible that moderate-risk and problem gamblers prefer to assign blame for their problems externally. It is also not possible to infer causality in studies of this nature and difficult to differentiate to what extent higher risk gamblers are more receptive to advertising as opposed to being more exposed to it. It would logically follow that the ability to recall seeing advertising and to have a strong view about its impact would be related to familiarity. More involved gamblers may have pre-existing positive attitudes towards gambling and its marketing, and are therefore more likely to selectively attend to and recall advertisements. More involved gamblers may also be more likely to have greater exposure to promotions as they may be targeted by online campaigns. There is limited research on how advertising affects consumer choice between gambling products and services, which should be addressed. Future studies should also attempt to employ more objective indicators of marketing impacts, such as behavioural data that link social media use to gambling activity. Research should aim to examine the mechanisms at work including understanding how social media marketing reduced the gambling problems for a minority of the current participants.

CONCLUSIONS

With the amplified use of digital advertising it is important to understand the online interactions of vulnerable gamblers with social media and gambling companies and the influence of these on

Gainsbury – Gambling marketing in social media

gambling problems. Social media is likely to be increasingly used by gambling operators given the presence of targeted consumers accessible through these platforms (Gainsbury, Delfabbro et al., 2015). This study found that moderate-risk/problem gamblers were significantly more likely to recall or report being exposed to gambling promotions via social media, and this vulnerable population were more likely to be actively engaged with operators through these platforms. Notably, a substantial proportion of the moderate-risk/problem gamblers reported that their problems worsened as a result of exposure to and engagement with social media advertisements for gambling. Policy makers should consider how gambling is being promoted via social media, who is the target audience, and whether the type of content is appropriate, with consideration of its impact on vulnerable populations. Further research is needed to evaluate the type of content promoted by gambling companies on social media, the impact of this on attitudes about gambling and whether adequate safeguards are in place.

References

- Abrams, D. B., Monti, P. M., Carey, K. B., Pinto, R. P., & Jacobus, S. I. (1988). Reactivity to smoking cues and relapse: two studies of discriminant validity. *Behaviour Research and Therapy*, 26(3), 225-233.
- Binde, P. (2007). Selling dreams - causing nightmares? *Journal of Gambling Issues*, 20, 167–192. <http://dx.doi.org/10.4309/jgi.2007.20.5>
- Binde, P. (2009). Exploring the impact of gambling advertising: An interview study of problem gamblers. *International journal of mental health and addiction*, 7(4), 541-554.
- Binde, P. (2014). Gambling advertising: A critical research review. *Report prepared for the Responsible Gambling Trust*. Available at: http://www.responsiblegamblingtrust.org.uk/user_uploads/binde_rgt_report_gambling_advertising_2014_final_color_115p.pdf
- Burton, S., Dadich, A., & Soboleva, A. (2013). Competing voices: Marketing and counter-marketing alcohol on Twitter. *Journal of Nonprofit & Public Sector Marketing*, 25(2), 186-209.
- Currie, S. R., Hodgins, D. C., & Casey, D. M. (2013). Validity of the problem gambling severity index interpretive categories. *Journal of Gambling Studies*, 29(2), 311-327.
- Davison, W. (2003). The third-person effect in communication. *Public Opinion Quarterly*, 47, 1-15.
- Derevensky, J. L., Sklar, A., Gupta, R., & Messerlian, C. (2010). An empirical study examining the impact of gambling advertisements on adolescent gambling attitudes and behaviors. *International Journal of Mental Health and Addiction*, 8, 21–34. <http://dx.doi.org/10.1007/s11469-009-9211-7>
- Du Plessis, E. (1994). Recognition versus recall. *Journal of Advertising Research*, 100(2), 92-106.
- Ferris, J., & Wynne, H. J. (2001). *The Canadian Problem Gambling Index final report*. Ottawa, ON: Canadian Centre on Substance Abuse.
- Gainsbury, S., & Blaszczynski, A. (2011). Online self-guided interventions for the treatment of problem gambling. *International Gambling Studies*, 11(3), 289-308.
- Gainsbury, S., Delfabbro, P., King, D.L., & Hing, N. (2015). An exploratory study of gambling operators' use of social media and the latent messages conveyed. *Journal of Gambling Studies*. DOI 10.1007/s10899-015-9525-2
- Gainsbury, S., Hing, N., & Suhonen, N. (2014). Professional help-seeking for gambling problems: Awareness, barriers and motivators for treatment. *Journal of Gambling Studies*, 30(2), 503-519. DOI: 10.1007/s10899-013-9373-x

- Gainsbury, S. M., King, D. L., Hing, N., & Delfabbro, P. (2015). Social media marketing and gambling: An interview study of gambling operators in Australia. *International Gambling Studies*, (ahead-of-print), 1-17. DOI: 10.1080/14459795.2015.1058409
- Gainsbury, S., Russell, A., Wood, R., Hing, N., & Blaszczynski, A. (2015). How risky is Internet gambling? A comparison of subgroups of Internet gamblers based on problem gambling status. *New Media & Society*, 17(6), 861-879. doi:10.1177/1461444813518185
- Gardner, J. (2013, April 18). Ad growth puts pressure on Tabcorp. *Australian Financial Review*. Retrieved from <http://www.afr.com/business/ad-growth-puts-pressure-on-tabcorp-20130417-j0wlr>
- Gordon, R., McDermott, L., Stead, M., & Angus, K. (2006). The effectiveness of social marketing interventions for health improvement: what's the evidence?. *Public health*, 120(12), 1133-1139.
- Hanss, D., Mentzoni, R. A., Griffiths, M. D., & Pallesen, S. (2015). The impact of gambling advertising: Problem gamblers report stronger impacts on involvement, knowledge, and awareness than recreational gamblers. *Psychology of Addictive Behaviors*, 29, 483-491.
- Hing, N., Cherney, L., Blaszczynski, A., Gainsbury, S. M., & Lubman, D. I. (2014). Do advertising and promotions for online gambling increase gambling consumption? An exploratory study. *International Gambling Studies*, 14(3), 394-409.
- Hing, N., Holdsworth, L., Tiyce, M., & Breen, H. (2014). Stigma and problem gambling: Current knowledge and future research directions. *International Gambling Studies*, 14(1), 64-81. DOI:10.1080/14459795.2013.841722
- Hing, N., Lamont, M., Vitartas, P., & Fink, E. (2015). Sports-embedded gambling promotions: A study of exposure, sports betting intention and problem gambling amongst adults. *International Journal of Mental Health and Addiction*, 13(1), 115-135.. doi:10.1007/s11469-014-9519-9
- Hing, N., Vitartas, P., Lamont, M., & Fink, E. (2014). Adolescent exposure to gambling promotions during televised sport: An exploratory study of links with gambling intentions. *International Gambling Studies*, 14, 374-393. doi:10.1080/14459795.2014.902489
- Hing, N., Nuske, E., Gainsbury, S.M., & Russell, A.M.T. (2015). Perceived stigma and self-stigma of problem gambling: Perspectives of people with gambling problems. *International Gambling Studies*. DOI: 10.1080/14459795.2015.1092566
- Hing, N., Russell, A.M.T., Gainsbury, S.M., & Nuske, E. (2015). The public stigma of problem gambling: Its nature and relative intensity compared to other health conditions. *Journal of Gambling Studies*. (DOI) 10.1007/s10899-015-9580-8

- Hønsi, A., Mentzoni, R. A., Molde, H., & Pallesen, S. (2013). Attentional bias in problem gambling: A systematic review. *Journal of Gambling Studies*, 29, 359–375.
<http://dx.doi.org/10.1007/s10899-012-9315-z>
- Joint Select Committee on Gambling Reform (JSCGR). (2013). *The advertising and promotion of gambling services in sport*. Canberra: Commonwealth of Australia.
- Korda, H., & Itani, Z. (2013). Harnessing social media for health promotion and behavior change. *Health Promotion Practice*, 14(1), 15-23.
- Lamont, M., Hing, N., & Gainsbury, S. (2011). Gambling on sport sponsorship: A conceptual framework for research and regulatory review. *Sport Management Review*, 14, 246–257.
<http://dx.doi.org/10.1016/j.smr.2011.04.004>
- Lee, H.-S., Lemanski, J. L., & Jun, J. W. (2008). Role of gambling media exposure in influencing trajectories among college students. *Journal of Gambling Studies*, 24, 25–37.
<http://dx.doi.org/10.1007/s10899-007-9078-0>
- Loss, J., Lindacher, V., & Curbach, J. (2014). Online social networking sites—a novel setting for health promotion?. *Health & Place*, 26, 161-170.
- Maher, C. A., Lewis, L. K., Ferrar, K., Marshall, S., De Bourdeaudhuij, I., & Vandelanotte, C. (2014). Are health behavior change interventions that use online social networks effective? A systematic review. *Journal of Medical Internet Research*, 16(2).
- Martin, I. M., Kamins, M. A., Pirouz, D. M., Davis, S. W., Haws, K. L., Mirabito, A. M., ... & Grover, A. (2013). On the road to addiction: The facilitative and preventive roles of marketing cues. *Journal of Business Research*, 66(8), 1219-1226.
- McCreanor, T., Lyons, A., Griffin, C., Goodwin, I., Moewaka Barnes, H., & Hutton, F. (2013). Youth drinking cultures, social networking and alcohol marketing: implications for public health. *Critical Public Health*, 23(1), 110-120.
- Nicholls, J. (2012). Everyday, everywhere: alcohol marketing and social media—current trends. *Alcohol and Alcoholism*, 47(4), 486-493.
- Orford, J., Wardle, H., Griffith, M., Sproston, K., & Erens, B. (2010). PGSI and DSM-IV in the 2007 British Gambling Prevalence Survey: Reliability, item response, factor structure and inter-scale agreement. *International Gambling Studies*, 10, 31–44.
- Sproston, K., Hanley, C., Brook, K., Hing, N., & Gainsbury, S. (2015). *Marketing of sports betting and racing*. Report commissioned by Gambling Research Australia. ORC International, Melbourne.
- Stead, M., Gordon, R., Angus, K., & McDermott, L. (2007). A systematic review of social marketing effectiveness. *Health Education*, 107(2), 126-191.

Gainsbury – Gambling marketing in social media

Williams, R. J., & Volberg, R. A. (2009). Impact of survey description, administration format, and exclusionary criteria on population prevalence rates of problem gambling. *International Gambling Studies*, 9(2), 101-117.

Zajonc, R. (2001). Mere exposure: A gateway to the subliminal. *Current Directions in Psychological Science*, 10(6), 224-228.