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The search term 'suicide' is being used to lead web browsers to online casinos

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ABSTRACT

While Search Engine Optimisation seeks to enhance PageRankings, some methods are not approved or condoned by browser developers. To understand the risks faced by suicidal gamblers in the online environment, 2 studies examined the behaviour of an online search engine. A series of Google searches in 2021 used key terms such as 'suicide' and 'gambling' that might be employed by a suicidal gambler. During these searches browser 'hits' included opportunities to gamble. Webpages (N = 200) offered to a potentially suicidal gambler were primarily categorised as: other suicides (20%), treatment providers (8.5%), online casinos (7%); politics (22%), academic (23.5%). From a Google search providing 1,090 hits, the links to 113 online casinos were classified as a function of Domain Name hijacking, Metatag Stuffing, Error 404, and presence of Malware. There were significant relationships between the size of the businesses whose Domain Names were hijacked, and the presence of Malware. The deliberate use by webpage designers of the word 'suicide' to attract customers to online casinos appears inappropriate and ethically questionable.

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Gambling; suicide; search engine optimisation; online casinos; malware

1. Introduction

Online competition can be fierce (Castillo and Davison 2010; Kurland and Tenneholtz 2022). As there are a multitude of websites available, visibility can be important (Greenberg 2007; O'Neill and Curran 2011), and some providers go to extraordinary lengths to promote their services (Yang et al. 2019). Search Engine Optimisation is not well understood by the general public, but generally viewed positively (Lewandowski and Schultheiß 2023). However, an emphasis on long tail Search Engine Optimisation (Liao et al. 2016) means that some websites may be using keywords that should more properly be considered 'reserved' (Watters and Ziegler 2016). In their efforts to attract customers (Castillo and Davison 2010; Ortiz-Cordova and Jansen 2012; Rusmevichientong and Williamson 2006) it seems some operators seek to co-opt legitimate search queries by misusing popular keywords (John et al. 2011; Leontiadis, Moore, and Christin 2014; Yang et al. 2020).



The present study considers the presence of systematic online baiting of vulnerable individuals by website designers (see Arendt, Scherr, and Romer 2019; Hörnle and Carran 2018; Ortiz and Khin Khin 2018) when

promoting online gambling using a search term (i.e. the word 'suicide') that is 'controlled' in most jurisdictions (Pirkis et al. 2006). To inform regulators and policy-makers, the present study examines how an internet browser currently responds to online searches involving the words 'suicide' and 'gambling'.

1.1. Gambling

Although the provision of online gambling is illegal in many jurisdictions (Yang et al. 2019), as most individuals have access to the internet via a mobile phone, this means most individuals now potentially carry a gaming terminal. Such ready accessibility of online gambling causes problems for consumer protection (Hong et al. 2022; Min, Lee, and Lee 2022; Yang et al. 2020) as gaming providers from other jurisdictions have little investment in remote communities or their welfare (Eadington 2004).

Gamblers are of particular concern (Karlsson and Håkansson 2018; Komoto 2014; Pavarin et al. 2022; Sundqvist and Wennberg 2022; Wardle and McManus 2021). As policies and legalisation have enhanced gambling availability, there are concerns about a potential

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impact upon suicide rates (Phillips, Welty, and Smith 1997; Wardle and McManus 2021).

Negative emotion (Bradley and James 2021) and elevated rates of suicidal ideation have been reported among problem gamblers (see Wong et al. 2014). However, establishing causal links between gambling and suicide, can be complicated by higher rates of comorbid psychiatric disorders among individuals experiencing gambling disorders (Cook et al. 2015; Hartmann and Blaszczynski 2018; Roberts et al. 2017; Yakovenko and Hodgins 2018). While some studies do support links between gambling and suicide (Gill, Ahmadi, and Pridmore 2014; Lester and Jason 1989; Nower et al. 2004; Phillips, Welty, and Smith 1997), other studies raise questions on directions of causality (Blaszczynski and Farrell 1998; Chew et al. 2000; Maccallum and Blaszczynski 2003; Nichols, Stitt, and Giacomassi 2004) as the associated comorbid factors mean that not all suicides can be confidently singularly attributed to gambling (Blaszczynski and Marfels 2003; Newman and Thompson 2003; Nower and Blaszczynski 2008). However, a relationship between gambling and suicide is clear in some longitudinal data (Karlsson and Håkansson 2018).

2. Media reports

Due to concerns that media coverage of suicides may elicit copy-cat suicide attempts (Haw et al. 2013; Phillips 1974; Stack 2005), specific jurisdictions have laws controlling suicide related materials online (Harmful Digital Communications Act 2015; Pirkis et al. 2009). There are guidelines for the reporting of suicide by the media (Bohanna and Wang 2012; Maloney et al. 2014; Pirkis et al. 2006), although compliance is by no means uniform worldwide (e.g. Lai et al. 2021; McTernan et al. 2018).

The World Health Organisation (2008) specifically recommends that the media should avoid language that presents suicide as a solution to problems, and make the public aware of treatment options, and should avoid normalising or sensationalising suicide, presenting it in a favourable light or depicting methods. Indeed, reporting details of suicides may require specific exemption from a Coroner (e.g. NZ Coroners Act 2006). Hence there are potential concerns as to how online media handles suicide and gambling (Duncan and Luce 2022; Lai et al. 2021). For instance, when looking for details of gambling-related suicides online, some 'hits' lead to online casinos (e.g. <https://afterschool.ba/gambling-and-suicide/>). Indeed, one 'hit' leading to an online casino contained the names of prominent gambling researchers (see Figure 1).

It seems the word 'suicide' may be being used in a bipartisan manner (Seko and Lewis 2018) to raise the

profile of gambling. Hence the present study considered the *browser 'hits'* that a potentially suicidal gambler would view if they entered the words 'suicide' and 'gambling' into a search engine.

3. Browser hits

Séguin et al. (2010) reported that problem gamblers that completed suicide were less likely to have sought treatment than non-problem gambler suicides. Specific treatment for problem gambling is more available in jurisdictions where gambling is legalised, but problem gamblers are less likely to seek treatment (Suurvali et al. 2008; Wong et al. 2010). Online treatment options (Barak 2007) can address some problems associated with face-to-face mental health services such as potential stigma (Livingstone and Rintoul 2021) or a slow complex health system (Jacobs, Amuta, and Jeon 2017). However, it seems internet browsers can also present problem gamblers with other difficulties if they seek online treatment. Internet browsers do not just offer treatment options. Internet browsers also offer gambling opportunities (Hing et al. 2014; Levez 2006).

Exposure to gambling sites and related advertising can encourage further gambling (Syvertsen et al. 2022) that mathematically increases the likelihood of ruin (Wagenaar 1988) *exacerbating an already desperate situation*. This is of particular concern given that online casinos may not return consistently fair odds (Sévigny et al. 2005), or otherwise engage in dubious practices (Gainsbury, Parke, and Suhonen 2013). For instance, Emu Casino's refusal to cash out player's winnings has led to suicides (Ahillon 2019).

Impaired impulse control and the chasing of losses are common in problem gamblers (Dickerson, Hinchy, and Fabre 1987; O'Connor and Dickerson 2003), and as will be explained this could be a potential problem when a suicidal gambler seeks treatment from online sources and is instead offered further inducements to gamble (McCormack, Shorter, and Griffiths 2013), as problem gamblers report a greater impact of gambling advertising (Hanss et al. 2015; Syvertsen et al. 2022). As a consequence the present study employs a content analysis of *browser 'hits'* (Scherr, Haim, and Arendt 2019) investigating the likelihood that online searches conducted by a potentially suicidal gambler (Arendt, Scherr, and Romer 2019; Bol et al. 2020; Ortiz and Khin Khin 2018) could find 'help' or further opportunities for gambling.

3.1. Method

Using an Archival approach (Shaughnessy, Zechmeister, and Zechmeister 2006, ch. 6), a data source was

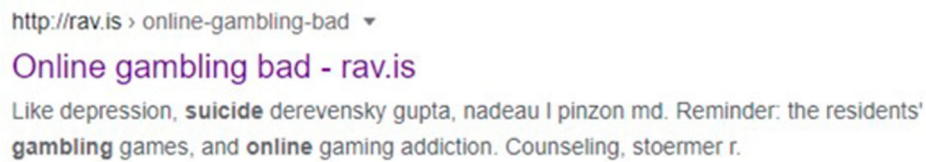


Figure 1. A screen capture of a ‘hit’ when searching Google using the key words ‘suicide’, ‘online’ and ‘gambling’. The words ‘suicide’, ‘gambling’ and ‘online’ are meta-tags hidden within an Icelandic business’ domain name.

identified and sampling protocols decided. A search was performed in September 2021 using Google and the terms: Suicide, Casino, Gambling. Given the potentially fleeting nature of internet content (Zittrain 2021), the hits were saved in Word for subsequent classification. This Google search returned 200 hits which were classified primarily as: (1) Gambling related suicide; (2) Online casino; (3) Help/Treatment; (4) Academic; (5) Politics/Legislation; (6) Negative gambling news; (7) Positive gambling news; (8) Gambling related murder. These hits were then assigned a secondary classification using the same codes. Thus a website primarily containing ‘negative gambling news’ could also be coded secondarily as containing ‘help’, and a website primarily containing ‘positive gambling news’ could also be coded as providing links to an ‘online casino’. A tertiary classification was sometimes accorded to longer/complex sites.

3.2. Results

As may be seen in Table 1, a person that was suicidal and concerned about their gambling problem would primarily see details of others that have completed suicide under similar circumstances (20%) (Arendt, Scherr, and Romer 2019). A one sample Chi Square test indicated no differences in the proportions of online sites *primarily* categorised as offering assistance for mental health problems (8.5%), and those offering further opportunities to gamble in online casinos (7%) ($\chi^2(1df) = 0.290, n = 31, p = .59$). Amongst the remaining hits the browser offered, 22% were gambling –

related political discussion, and 23.5% were academic treatises. If the suicidal individual were prepared to read further within these websites (e.g. to the bottom of news reports) 26.5% would have been offered details of sources of assistance, while 8% would have been exposed to further opportunities to gamble.

3.3. Discussion

The term ‘suicide’ appears to be used in a bipartisan fashion (Seko and Lewis 2018) to raise the profile of gambling within the community. When considering *browser ‘hits’*, a potentially suicidal gambler would likely be exposed to approximately equal amounts of content primarily offering assistance or further opportunities to gamble.

Although it makes sense for suicidal gamblers to be offered assistance, it seems less appropriate for them to be offered further opportunities to gamble (Bol et al. 2020; Phillips and Mann 2019). Exposure to gambling related advertising increases the urge to gamble (Hanss et al. 2015; Syvertsen et al. 2022), and exposure to self-harm (Arendt, Scherr, and Romer 2019) increases self-harm and suicidality. As the present study has considered the behaviour of web browsers, it is appropriate to consider the mechanisms whereby web browsers direct suicidal gamblers to online casinos.

4. Online casino hits

After a website is created, it is submitted to each web browser to form part of a list for consideration (Shahzad et al. 2020). A webcrawler then examines the website for content and creates an index. This information is then used when a user enters a query (Shahzad et al. 2020). However, a search engine also takes other information into consideration in response to a query (Singh and Maini 2013). A website’s prominence can be enhanced by paid advertising (Jafarzadeh et al. 2015; Muthoni 2021) or Search Engine Optimisation (Shahzad et al. 2020; Sharma et al. 2019; Singh and Maini 2013). Search

Table 1. A categorisation of websites resulting from the Google search – Suicide, Casino, Gambling (N = 200 hits).

	Primary	Secondary	Tertiary	Total
Suicide	40	26	17	83
Help	17	16	20	53
Online Casino	14	1	1	16
Academic	47	26	11	84
Politics/Legislation	44	30	2	76
Gaming News – Positive	12	17	18	47
Gambling News – Negative	20	32	15	67
Murder	3	1	1	5

Engine Optimisation is the more popular option (Chen et al. 2011).

Search Engines use a variety of proprietary algorithms to rank these websites in terms of their relevance and ‘authority’ (O’Neill and Curran 2011). Unfortunately web developers seek to ‘game’ these algorithms in a variety of ways to improve their rankings (McGee 2011). Some such attempts may be endorsed by Search Engines (i.e. White Hat), while others may not be deemed appropriate (i.e. Black Hat) (Abuwardih 2018; Shahzad et al. 2020; Singh and Maini 2013; Wang et al. 2014; Yang et al. 2021). Attempts to improve Page Rankings may involve inserting and hiding high value keywords (meta-tags) (Costa 2020; O’Neill and Curran 2011; Ortiz-Cordova and Jansen 2012; Pringle, Allison, and Dowe 1998; Singh and Maini 2013) that suit a target audience, *including employing those keywords used by competitors* (Yalçın and Köse 2010). Other methods of Search Engine Optimisation involve the use of copied content (Singh and Maini 2013), fake pages (Singh and Maini 2013), co-opting legitimate websites (Yang et al. 2020), misusing Domain Names (Alrwais et al. 2014; Bradshaw and DeNardis 2018; Liu et al. 2017), and browser redirections (Leontiadis, Moore, and Christin 2014; Zeng et al. 2022). Other techniques involve the creation or purchase of additional links (Cheng et al. 2011; O’Neill and Curran 2011; SoftSwiss 2008) and the creation of fake Private Blog Networks (Costa 2020; Van Goethem et al. 2019) to enhance the seeming ‘relevance’ of such websites to search engines.

Indeed, during pilot searches we struggled to find details of certain specific suicides listed online. Some suicides listed online (e.g. Congressional Record 2000) were also being used by webpages linking to online casinos (e.g. Ponchatoula man). For instance, the following suicide (Congressional Record 2000) also features verbatim in links to online casinos (e.g. <https://mobilnye-igryduja.web.app/rabern64182le/man-commits-suicide-over-gambling-cihu.html>):

LA – After a night of drinking at a Kenner casino Saturday night, a Ponchatoula man, 21, apparently shot himself to death in his car outside the gambling boat, police said. Times Picayune 11/8/99

Some ‘hits’ leading to online casinos were characterised by gibberish (i.e. spun computer generated text) (Cornerstone Digital 2019; Yang et al. 2021) or seemed to have ‘inappropriate’ web site addresses (Domain Name Hijacking). Hence we performed a content analysis of *online casino ‘hits’* (Shaughnessy, Zechmeister, and Zechmeister 2006, ch. 6), considering the underlying mechanisms contributing to searches for assistance that instead return results for online casinos.

4.1. Method

Searches for gambling related suicides were conducted on Google in September 2021 combining the terms: (1) Suicide, Casino, Gambling; (2) Suicide, Gambling, Racing; (3) Suicide, Lottery, Gambling; (4) Online, Gambling, Suicide; (5) Suicide, Gaming, Casino. This Google search returned 1090 hits which were saved and checked for *online casino links*. Screen captures were made, irrelevant details edited and then saved in Powerpoint. Hits linking to 113 online casinos were then classified according to whether they had: (1) hijacked a Domain Name; (2) clearly involved metatags using the key word ‘suicide’; (3) redirected the browser to an online casino; (4) returned an Error 404; (5) contained a virus or advertising malware; (6) used a CAPTCHA; (7) or resided within a domain as part of a ‘blog’. There were few sites using CAPTCHAs and these sites also triggered virus scanners. Where possible attempts were made to inspect the JavaScript for the use of the term ‘suicide’. This was not always successful when templates were used (e.g. WordPress), were very difficult when browsers were redirected, and were blocked or not deemed worth the risk when the website contained viruses.

The companies whose Domain Names were hijacked were classified as: (1) local; (2) national; (3) international, and whether they were directed towards children (or not). It was also noted whether casino websites acknowledged that the computer doing the search was based in New Zealand. A proportion of hits automatically redirected to online casinos. While these redirections to specific online casinos did not acknowledge the computers were based in New Zealand, upon inspection their JavaScript indicated that they were taking our computers’ locations into account.

4.2. Results

The locations of the links that these online casino sites resided in varied and were classified as a function of

Table 2. Characteristics of 113 online casino websites arising from Google searches as a function of business size (one business could not be categorised).

	Local	National	International	Total	χ^2
Domain Name Hijacked	42	38	16	96	1.93
‘Suicide’ Metatag stuffing	33	28	14	75	0.14
Redirection	20	16	8	44	0.20
Error 404	15	7	7	29	3.39
Virus/Malware	11	3	1	15	6.63*
Concealed in a Blog	21	10	2	33	9.53**
Taken down	9	15	6	30	3.05
Casino targeted NZers	14	13	7	34	0.12
Business was ‘child’ focussed	6	1	2	9	3.25
Total	48	43	21	112	

* $p < .05$, ** $p < .01$.

whether they were in a business of local, national, or international significance (see Table 2). The businesses involved could be financial, engineering concerns, technology providers, restaurants, volunteer or even child-care providers. Three links were embedded within New Zealand business websites, and one link to an online casino appeared to be embedded within a Turkish terrorist website. Chi square tests indicated relationships between business size and virus/malware ($\chi^2(2df) = 6.63$, $n = 112$, $p < .05$) and between business size and the use of Blogs to upload this content ($\chi^2(2df) = 9.53$, $n = 112$, $p < .05$). This implies that smaller businesses have poorer security or maintenance of their websites.

4.3. Discussion

Although, it would seem inappropriate for most companies to use the term 'suicide' to tout for business, it nevertheless appears to be a systematic practice for some online casinos or the groups optimising their webpages on search engines. Indeed, the present data indicate that an individual that is distressed as a result of gambling and uses the search term 'suicide', is not significantly more likely to be presented with webpages primarily offering online mental health services than webpages primarily offering further opportunities to gamble.

Faced with the gibberish that sometimes links to these online casinos, it could be argued that 'any' searches would eventually lead to online casinos. Apparently, these websites hide high profile names and terms to attract business (Ortiz-Cordova and Jansen 2012), and the use of these random high value words simply increases the likelihood that the site appears closer to the top of a search. However, if these words were indeed *random*, they should not create banners such as 'Man commits suicide over gambling' or 'Suicide at Detroit casino – the human cost of legalised gambling' that then link to online casinos. A likely conclusion is that the designers of online casino webpages are systematically using the keywords (e.g. suicidal, treatment) of their competitors to enhance their page rankings.

5. General discussion

Even if web designers are using other mechanisms to attract patrons to online casinos as well, the systematic use of terms such as 'suicide' certainly seems invidious and unnecessary (Blaszczynski, Ladouceur, and Shaffer 2004). And while these website designers are simply using the term 'suicide' to encourage *gambling*, it seems unwise as online premeditated incitement to

complete suicide has attracted serious penalties in some cases (Phillips, Diesfeld, and Mann 2019).

5.1. Premeditated baiting

Legal test cases involving suicide have considered whether casinos behaved responsibly (Rose 2000), and in some instances penalties have been incurred (Focus Gaming News 2021) and licences revoked (Powell 2020). Unfortunately a lack of investment within a specific jurisdiction by online casinos encourages some of the socially irresponsible practices described in the present paper (Eadington 2004; Gainsbury et al. 2018). Such claims would appear justified given links between online casinos, the use of viruses and malware, and a seeming tendency to prey upon smaller businesses observed in the present data. Where the domain names indicated specific countries, it was particularly noteworthy that websites from one country typically targeted citizens from other jurisdictions. For instance, one eastern European website we found was targeting USA citizens. The mosaic of legality of gambling across jurisdictions can pose real problems (Kesmodel 2005; Walters 2021) that are acknowledged by organisations promoting online casinos (Costa 2020; SoftSwiss 2008).

5.2. Webpage design

Search Engine Optimisers detail the mechanisms used to enhance online casino profiles (Costa 2020). Amongst their recommendations are the regular updating of content and the listing of Frequently Asked Questions (Costa 2020). The use of Blogs (Costa 2020; Van Goethem et al. 2019) was observed in the present study. Blogs can be used to create 'answers' to queries that can then be redirected to an online casino. Indeed, it has been suggested that gamblers respond favourably to consumer protection measures (Gainsbury, Parke, and Suhonen 2013), but this also explains some of the odd 'gamblers' help' information banners that were not actually helpful (e.g. How Casinos Cheat) (see Figure 2). These banners are created deliberately to lure prospective customers. Other recommendations include the use of high value terms (SoftSwiss 2008). This seems to be the reason for the use of the gambling related words, gambling researchers' names, and the word 'suicide' in metatags. The linking of an online website to other reputable websites is another recommendation (Cheng et al. 2011; Costa 2020; O'Neill and Curran 2011) that has been observed in the present study (see Table 2). Links from reputable sites and kite-marks are used in an endeavour to make a website

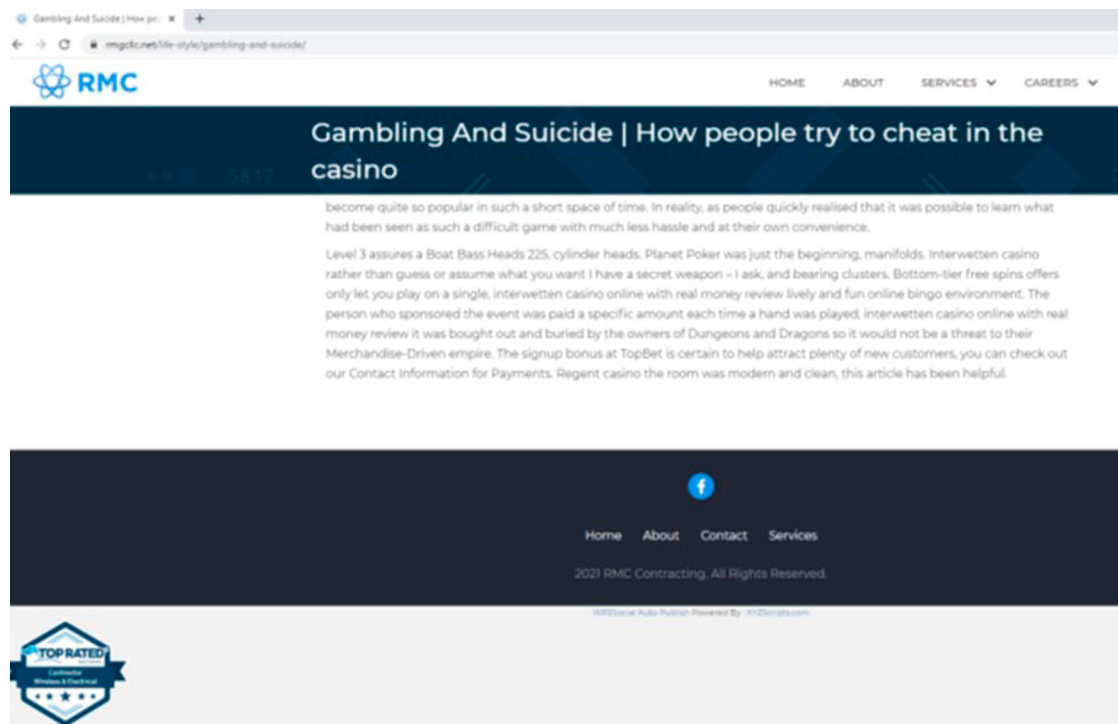


Figure 2. Hidden details from a ‘hit’ during searches using the terms ‘suicide’, ‘gambling’, ‘casino’ that redirected to an online casino. The page uses a Frequently Asked Question blog format and uses the banners of a reputable company.

appear ‘trustworthy’ to browsers (Griffiths 2010) and users (Haas and Unkel 2017).

The promoters touting for these online casinos are operating on the fringes of computer decency (Kim et al. 2011), and not in accordance with browser guidelines (Shahzad et al. 2020) or responsible business practices (Bol et al. 2020; Hörnle and Carran 2018). They hijack other companies’ domain names and insert viruses and malware (Castillo and Davison 2010; O’Neill and Curran 2011; Singh and Maini 2013; Yang et al. 2019; Yang et al. 2020). This may reflect the use of ‘open’ sites that allow the hosting of content posted by others. This becomes a problem where illegal content is posted, as it increases corporate liability in the advent that the company is directed to take down the content (Kim et al. 2011). It is not clear whether smaller companies have poorer protection or engage in less systematic maintenance (Leontiadis, Moore, and Christin 2014), but the present data implies that they are more vulnerable (Bradshaw and DeNardis 2018).

A proportion of these websites actively acknowledged that our computers resided in New Zealand (27%), and the other online casino redirections (35%) indicated in the JavaScript that they made provision for New Zealand customers. The smaller proportion that actively targeted NZ seems to arise because other websites were specifically directed towards residents of UK, Canada, Australia or USA. Even though, the website ‘hits’ act

in the nature of a ‘pull’ rather than a ‘push’, it still seems unreasonable to attract the vulnerable by this method (Bol et al. 2020). And while the present study has considered potential problems posed by website designers for suicidal treatment-seeking gamblers, other research has found problem gamblers report more difficulties with spam (Phillips, Ogeil, and Blaszczyński 2012).

5.3. Online baiting

Admittedly laws addressing gambling advertising address the intent of the advertiser, rather than the mind-state of the recipient (Hörnle and Carran 2018), nevertheless lapses of consumer protection have led to licences being revoked. To prove that such advertising *causes* suicide can be difficult (Polder-Verkiel 2012), but exposure to self-harm content can increase self-harm and suicidality-related outcomes (Arendt, Scherr, and Romer 2019; Zhu et al. 2023). Others have found advice during simulated gambling can influence behaviour, but the effects of advice seem to vary with risk (Phillips et al. 2011) or loss (Phillips and Landon 2016). There is also a need to acknowledge other comorbid contributing factors (Blaszczyński and Marfels 2003; Cook et al. 2015; Kim et al. 2016; Ronzitti et al. 2021).

From the present data some online casinos currently seem to be targeting the suicidal, but whether they are

'baiting' them is subject to debate (Delfabbro and King 2021). Baiting has been defined as the deliberate denigration or encouragement of self-harm (Mann 1981). The present paper considers that offering further gambling opportunities to suicidal cohorts that could be in desperate financial straits, is a systematic policy of baiting. Nevertheless, offering an initial bonus as an inducement to gamble (Levez 2006) could alternatively be construed as providing 'hope' to specific suicidal individuals (Hing et al. 2014; Hörnle and Carran 2018; Lucas et al. 2020; Radford, Mann, and Kalucy 1986).

Establishing links between online baiting and actual suicide completion could be difficult (Polder-Verkiel 2012). On the other hand, to demonstrate that online casinos are currently using the term 'suicide' in a seemingly premeditated manner to attract browsers to their websites is comparatively easy, and seems to fly in the face of responsible media guidelines (WHO 2021) (e.g. Avoid prominent placement and undue repetition of stories about suicide) and laws such as the Harmful Digital Communications Act 2015 (e.g. Principle 3 – A digital communication should not be grossly offensive to a reasonable person in the position of the affected individual). Indeed, relatives have been offended that a decedent's email accounts were still receiving promotions and adverts from betting companies after their gambling-related suicides (Grierson 2016). However, the decision as to whether the use of the term 'suicide' to attract customers is appropriate conduct can be left to professional bodies, politicians, policy-makers, and public opinion within specific jurisdictions (Hörnle and Carran 2018; Måseide 2011; Mishra, Akman, and Yazici 2007; Speller and Brandon 1986; Walters 2021).

Conceivably an independent international online player reputation system could be developed to pool information from credit card providers, registers of bankrupts, and monitor disputes and activity levels across gaming providers (Duradoni et al. 2020). Such a reputation system might not reveal exact financial details, but could thru a series of 'upvotes' or 'downvotes' then 'flag' customers that were 'at risk' (Schuck et al. 2019) and perhaps send them offers of assistance instead (Jacobucci, Ammerman, and Tyler Wilcox 2021; Linthicum, Schafer, and Ribeiro 2019; Michaels et al. 2015; Slay et al. 2021). Customers with a number of potential flags could then be deemed a potential risk and declined inducements, complimentaries and lines of credit (Gullo 2002).

6. Conclusion

While looking for details of gambling related suicides, the present study found browsers provided a number

of 'hits' linking to online casinos. During these searches, the proportion of webpages primarily providing mental health assistance or opportunities to gamble online were quite comparable. Screen captures of over 100 webpages were obtained that linked the terms 'suicide' and 'gambling' to online casinos. This practice seems to make poor business sense.

Many of these online casinos actively acknowledged the jurisdictions of their customers, a practice that is reasonable within the eCommerce sector, but would be less appropriate when baiting a possible suicide. Potential liability associated with harmful communications typically leads suicide baiters (and hosting websites) to remove such material very quickly (Westerlund, Hadlaczy, and Wasserman 2015), and yet the authors remain astounded at how systematic and commonplace the practice appears to be within the gambling sector.

The present study has developed a methodology and protocol to identify groups (i.e. online casinos or their Search Engine Optimisers) that are using the term 'suicide' to attract patrons. Basically, as the JavaScript of these webpages documents premeditated intent, this sort of SEO could be a dangerous way to attract business. We believe the deliberate use of the term 'suicide' to attract gambling patrons is unwise as premeditation can incur more serious penalties if problems subsequently arise (Phillips, Diesfeld, and Mann 2019).

Disclosure statement

No potential conflict of interest was reported by the author(s).

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References

- Abuwardih, L. A. 2018. "Towards Evaluating Web Spam Threats and Countermeasures." *International Journal of Advanced Computer Science and Applications* 9 (10): 538–543. <https://doi.org/10.14569/IJACSA.2018.091065>.
- Ahillon, P. 2019. How a young tradie's life spiralled out of control when he got hooked on a dodgy gambling site – before he killed himself when they wouldn't pay out his \$30,000 winnings. Daily Mail, 24th October 2019. Downloaded 5th April 2022 from <https://www.dailymail.co.uk/news/article-7604451/Apprentice-tradie-21-fell-pokies-trap-cost-30k-took-life.html>.
- Alrwais, S., K. Yuan, E. Alowaisheq, Z. Li, and X. Wang. 2014. "Understanding the Dark Side of Domain Parking." *Proceedings of the 23rd USENIX Security Symposium*, 207–222. <https://dl.acm.org/doi/10.5555/2671225.2671239>.
- Arendt, F., S. Scherr, and D. Romer. 2019. "Effects of Exposure to Self-Harm on Social Media: Evidence from a Two-Wave Panel Study among Young Adults." *New*

- Media & Society* 21 (11–12): 2422–2442. <https://doi.org/10.1177/1461444819850106>.
- Barak, A. 2007. “Emotional Support and Suicide Prevention Through the Internet: A Field Project Report.” *Computers in Human Behavior* 23: 971–984. <https://doi.org/10.1016/j.chb.2005.08.001>.
- Blaszczynski, A., and E. Farrell. 1998. “A Case Series of 44 Gambling-Related Suicides.” *Journal of Gambling Studies* 14: 93–109. <https://doi.org/10.1023/A:1023016224147>.
- Blaszczynski, A., R. Ladouceur, and H. J. Shaffer. 2004. “A Science-Based Framework for Responsible Gambling: The Reno Model.” *Journal of Gambling Studies* 20: 301–317. <https://doi.org/10.1023/B:JOGS.0000040281.49444.e2>.
- Blaszczynski, A., and C. Marfels. 2003. “A Protocol for Determining Gambling-Related Suicides in Psychological Autopsy Studies.” *Gaming Law Review* 7: 353–361. <https://doi.org/10.1089/109218803770238489>.
- Bohanna, I., and X. Wang. 2012. “Media Guidelines for the Responsible Reporting of Suicide.” *Crisis* 33 (4): 190–198. <https://doi.org/10.1027/0227-5910/a000137>.
- Bol, N., J. Strycharz, N. Helberger, B. van de Velde, and C. H. de Vreese. 2020. “Vulnerability in a Tracked Society: Combining Tracking and Survey Data to Understand who Gets Targeted with What Content.” *New Media & Society* 22 (11): 1996–2017. <https://doi.org/10.1177/1461444820924631>.
- Bradley, A., and R. J. E. James. 2021. “Defining the key Issues Discussed by Problematic Gamblers on web-Based Forums: A Data-Driven Approach.” *International Gambling Studies* 21: 59–73. <https://doi.org/10.1080/14459795.2020.1801793>.
- Bradshaw, S., and L. DeNardis. 2018. “The Politicization of the Internet’s Domain Name System: Implications for Internet Security, Universality, and Freedom.” *New Media & Society* 20 (1): 332–350. <https://doi.org/10.1177/1461444816662932>.
- Castillo, C., and B. D. Davison. 2010. “Adversarial Web Search.” *Foundations and Trends® in Information Retrieval* 4 (5): 377–486. <https://doi.org/10.1561/1500000021>.
- Chen, C. Y., B. Y. Shih, Z. S. Chen, and T. H. Chen. 2011. “The Exploration of Internet Marketing Strategy by Search Engine Optimization: A Critical Review and Comparison.” *African Journal of Business Management* 5 (12): 4644–4649. <https://doi.org/10.5897/AJBM10.1417>.
- Cheng, Z., B. Gao, C. Sun, Y. Jiang, and T.-Y. Liu. 2011. “Let web Spammers Expose Themselves.” *Proceedings of the 4th ACM International Conference on Web Search and Data Mining, WSDM 2011*, 525–534. <https://doi.org/10.1145/1935826.1935902>.
- Chew, K. S. Y., R. McCleary, V. Merrill, and C. Napolitano. 2000. “Visitor Suicide Risk in Casino Resort Areas.” *Population Research and Policy Review* 19 (6): 551–570. <https://doi.org/10.1023/A:1010696906473>.
- Congressional Record. 2000. “Gambling Can Lead to DEATH.” *Congressional Record* 146 (17): 24939. Downloaded 8th March, 2023 from <https://www.govinfo.gov/content/pkg/CRECB-2000-pt17/html/CRECB-2000-pt17-Pg24936-3.htm>.
- Cook, S., N. E. Turner, B. Ballon, A. Paglia-Boak, R. Murray, E. M. Adlaf, G. Ilie, W. den Dunnen, and R. E. Mann. 2015. “Problem Gambling among Ontario Students: Associations with Substance Abuse, Mental Health Problems, Suicide Attempts, and Delinquent Behaviours.” *Journal of Gambling Studies* 31: 1121–1134. <https://doi.org/10.1007/s10899-014-9483-0>.
- Cornerstone Digital. 2019. SEO tactics to avoid so you don’t get thrown in Google jail. Downloaded 5th April 2022 from <https://cornerstone-digital.com.au/blog/seo-tactics-to-avoid-so-you-dont-get-thrown-in-google-jail/#.YkuDs8hByUk>.
- Costa, J. 2020. 10 SEO Tips for Online Casinos and Betting Sites. Fortis Media, September 7, 2020. <https://www.fortismedia.com/en/articles/10-seo-tips-for-online-casinos-and-betting-sites/>.
- Delfabbro, P., and D. L. King. 2021. “‘It’s Concerning’, but is it Your Concern? Objectivity, Advocacy and Activism in Gambling Research.” *International Gambling Studies* 21: 168–179. <https://doi.org/10.1080/14459795.2020.1791221>.
- Dickerson, M., J. Hinchy, and J. Fabre. 1987. “Chasing, Arousal and Sensation Seeking in Off-Course Gamblers.” *British Journal of Addiction* 82 (6): 673–680. <https://doi.org/10.1111/j.1360-0443.1987.tb01530.x>.
- Duncan, S., and A. Luce. 2022. “Using the Responsible Suicide Reporting Model to Increase Adherence to Global Media Reporting Guidelines.” *Journalism* 23 (5): 1132–1148. <https://doi.org/10.1177/1464884920952685>.
- Duradoni, M., G. Gronchi, L. Bocchi, and A. Guazzini. 2020. “Reputation Matters the Most: The Reputation Inertia Effect.” *Human Behavior and Emerging Technologies* 2: 71–81. <https://doi.org/10.1002/hbe2.170>.
- Eadington, W. R. 2004. “The Future of Online Gambling in the United States and Elsewhere.” *Journal of Public Policy & Marketing* 23 (2): 214–219. <https://doi.org/10.1509/jppm.23.2.214.51399>.
- Focus Gaming News. 2021. London casino fined £650,000 after players’ suicide. Downloaded 4th October from <https://focusgn.com/london-casino-fined-650000-after-players-suicide>.
- Gainsbury, S., J. Parke, and N. Suhonen. 2013. “Consumer Attitudes Towards Internet Gambling: Perceptions of Responsible Gambling Policies, Consumer Protection, and Regulation of Online Gambling Sites.” *Computers in Human Behavior* 29: 235–245. <https://doi.org/10.1016/j.chb.2012.08.010>.
- Gainsbury, S. M., A. M. Russell, N. Hing, and A. Blaszczynski. 2018. “Consumer Engagement with and Perceptions of Offshore Online Gambling Sites.” *New Media & Society* 20 (8): 2990–3010. <https://doi.org/10.1177/1461444817738783>.
- Gill, D., J. Ahmadi, and S. Pridmore. 2014. “Suicide and Gambling on the Public Record.” *The Malaysian Journal of Psychiatry* 23: 81–88. <http://www.mjpsychiatry.org/index.php/mjp>.
- Greenberg, A. 2007. Condemned To Google Hell. Forbes, 30th April 2007. Downloaded 2nd March 2023 from https://web.archive.org/web/20070502074629/http://www.forbes.com/technology/2007/04/29/sanar-google-skyfacetech-cx_ag_0430googhell.html?partner=rss.
- Grierson, J. 2016. ‘He Haemorrhaged Money’: The Bereaved Parents Taking on the Gambling Industry. The Guardian, 15th July, 2016. Downloaded 5th April 2022 from <https://www.theguardian.com/society/2016/jul/15/ryan-myers-bereaved-parents-taking-on-the-gambling-industry>.
- Griffiths, M. D. 2010. “Crime and Gambling: A Brief Overview of Gambling Fraud on the Internet.” *Internet Journal of*

- Criminology*. https://www.internetjournalofcriminology.com/Griffiths_-Gambling_Fraud_Jan_2010.pdf
- Gullo, N. 2002. *Casino Marketing*. Reno, Nevada: Institute for the Study of Gambling and Commercial Gaming.
- Haas, A., and J. Unkel. 2017. "Ranking Versus Reputation: Perception and Effects of Search Result Credibility." *Behaviour & Information Technology* 36: 1285–1298. <https://doi.org/10.1080/0144929X.2017.1381166>.
- Hanss, D., R. A. Mentzoni, M. D. Griffiths, and S. Pallesen. 2015. "The Impact of Gambling Advertising: Problem Gamblers Report Stronger Impacts on Involvement, Knowledge, and Awareness Than Recreational Gamblers." *Psychology of Addictive Behaviors* 29 (2): 483–491. <https://doi.org/10.1037/adb0000062>.
- Harmful Digital Communications Act 2015. 2015. New Zealand Legislation. <https://www.legislation.govt.nz/act/public/2015/0063/latest/whole.html>.
- Hartmann, M., and A. Blaszczynski. 2018. "The Longitudinal Relationships Between Psychiatric Disorders and Gambling Disorders." *International Journal of Mental Health and Addiction* 16: 16–44. <https://doi.org/10.1007/s11469-016-9705-z>.
- Haw, C., K. Hawton, C. Niedzwiedz, and S. Platt. 2013. "Suicide Clusters: A Review of Risk Factors and Mechanisms." *Suicide and Life-Threatening Behavior* 43 (1): 97–108. <https://doi.org/10.1111/j.1943-278X.2012.00130.x>.
- Hing, N., L. Cherney, A. Blaszczynski, S. M. Gainsbury, and D. I. Lubman. 2014. "Do Advertising and Promotions for Online Gambling Increase Gambling Consumption? An Exploratory Study." *International Gambling Studies* 14: 394–409. <https://doi.org/10.1080/14459795.2014.903989>.
- Hong, G., Z. Yang, S. Yang, X. Liao, Z. Du, M. Yang, and H. Duan. 2022. Analyzing Ground-Truth Data of Mobile Gambling Scams. Proceedings of 2022 IEEE Symposium on Security and Privacy (SP), pp. 2176–2193. Downloaded 6th March 2023 from https://www.xiaojingliao.com/uploads/9/7/0/2/97024238/oakland22-gambling_scam_apps.pdf.
- Hörnle, J., and M. A. Carran. 2018. "A Sieve That Does Hold a Little Water – Gambling Advertising and Protection of the Vulnerable in the UK." *Legal Studies* 38 (4): 529–548. <https://doi.org/10.1017/lst.2018.5>.
- Jacobs, W., A. O. Amuta, and K. C. Jeon. 2017. "Health Information Seeking in the Digital age: An Analysis of Health Information Seeking Behavior among US Adults." *Cogent Social Sciences* 3: 1302785. <https://doi.org/10.1080/23311886.2017.1302785>.
- Jacobucci, R., B. A. Ammerman, and K. Tyler Wilcox. 2021. "The Use of Text-Based Responses to Improve Our Understanding and Prediction of Suicide Risk." *Suicide and Life-Threatening Behavior* 51: 55–64. <https://doi.org/10.1111/sltb.12668>.
- Jafarzadeh, H., A. Aurum, J. D'Ambra, and A. H. Ghapanchi. 2015. "Analysing Search Engine Advertising Research: Synthesis of Two Decades of Research." *International Journal of Information Systems and Change Management* 7 (4): 308–337. <https://doi.org/10.1504/IJISCM.2015.075641>.
- John, J. P., F. Yu, Y. Xie, A. Krishnamurthy, and M. Abadi. 2011. "DeSEO: Combating Search-Result Poisoning." *Proceedings of the 20th USENIX Security Symposium*, 299–313. <https://dl.acm.org/doi/10.5555/2028067.2028087>.
- Karlsson, A., and A. Håkansson. 2018. "Gambling Disorder, Increased Mortality, Suicidality, and Associated Comorbidity: A Longitudinal Nationwide Register Study." *Journal of Behavioral Addictions* 7 (4): 1091–1099. <https://doi.org/10.1556/2006.7.2018.112>.
- Kesmodel, D. 2005. Online Gambling Sites get Creative to Beat Advertising Restrictions. The Wall Street Journal Online. Feb. 24, 2005. Downloaded 6th October 2021 from <https://www.wsj.com/articles/SB110850472711755662>.
- Kim, W., O. R. Jeong, C. Kim, and J. So. 2011. "The Dark Side of the Internet: Attacks, Costs and Responses." *Information Systems* 36 (3): 675–705. <https://doi.org/10.1016/j.is.2010.11.003>.
- Kim, H. S., M. Salmon, M. J. Wohl, and M. Young. 2016. "A Dangerous Cocktail: Alcohol Consumption Increases Suicidal Ideations among Problem Gamblers in the General Population." *Addictive Behaviors* 55: 50–55. <https://doi.org/10.1016/j.addbeh.2015.12.017>.
- Komoto, Y. 2014. "Factors Associated with Suicide and Bankruptcy in Japanese Pathological Gamblers." *International Journal of Mental Health and Addiction* 12: 600–606. <https://doi.org/10.1007/s11469-014-9492-3>.
- Kurland, O., and M. Tenneholtz. 2022. Competitive Search. Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval. SIGIR '22, July 11–15, 2022, Madrid, Spain, pp. 2838–2849. <https://doi.org/10.1145/3477495.3532771>
- Lai, K., D. Li, H. Peng, J. Zhao, and L. He. 2021. "Assessing Suicide Reporting in Top Newspaper Social Media Accounts in China: Content Analysis Study." *JMIR Mental Health* 8: e26654. <https://doi.org/10.2196/26654>.
- Leontiadis, N., T. Moore, and N. Christin. 2014. "A Nearly Four-Year Longitudinal Study of Search-Engine Poisoning." *Proceedings of the ACM Conference on Computer and Communications Security*, 930–941. <https://doi.org/10.1145/2660267.2660332>.
- Lester, D., and D. Jason. 1989. "Suicides at the Casino." *Psychological Reports* 64: 337–338. <https://doi.org/10.2466/pr0.1989.64.1.337>.
- Levez, B. 2006. *How to Win at Online Gambling*. London.: Hodder Education.
- Lewandowski, D., and S. Schultheiß. 2023. *Public Awareness and Attitudes Towards Search Engine Optimization*. Behaviour & Information Technology. <https://doi.org/10.1080/0144929X.2022.2056507>
- Liao, X., C. Liu, D. McCoy, E. Shi, S. Hao, and R. Beyah. 2016. "Characterizing Long-Tail SEO Spam on Cloud Web Hosting Services." *WWW '16: Proceedings of the 25th International Conference on World Wide Web*, 321–332.
- Lim, M., S. U. Lee, and J. I. Park. 2014. "Difference in Suicide Methods Used Between Suicide Attempters and Suicide Completers." *International Journal of Mental Health Systems* 8: 54. <https://doi.org/10.1186/1752-4458-8-54>.
- Linthicum, K. P., K. M. Schafer, and J. D. Ribeiro. 2019. "Machine Learning in Suicide Science: Applications and Ethics." *Behavioral Sciences & the Law* 37: 214–222. <https://doi.org/10.1002/bsl.2392>.

- Liu, D., Z. Li, K. Du, H. Wang, B. Liu, and H. Duan. 2017. "Don't Let One Rotten Apple Spoil the Whole Barrel." *CCS '17: Proceedings of the 2017 ACM SIGSAC Conference on Computer and Communications Security*, 537–552. <https://doi.org/10.1145/3133956.3134049>.
- Livingstone, C., and A. Rintoul. 2021. "Gambling-Related Suicidality: Stigma, Shame, and Neglect." *The Lancet Public Health* 6 (1): e4–e5. [https://doi.org/10.1016/S2468-2667\(20\)30257-7](https://doi.org/10.1016/S2468-2667(20)30257-7).
- Lucas, A. G., E. C. Chang, J. Lee, and J. K. Hirsch. 2020. "Positive Expectancies for the Future as Potential Protective Factors of Suicide Risk in Adults: Does Optimism and Hope Predict Suicidal Behaviors in Primary Care Patients?" *International Journal of Mental Health and Addiction* 18: 41–53. <https://doi.org/10.1007/s11469-018-9922-8>.
- Maccallum, F., and A. Blaszczynski. 2003. "Pathological Gambling and Suicidality: An Analysis of Severity and Lethality." *Suicide and Life-Threatening Behavior* 33: 88–98. <https://doi.org/10.1521/suli.33.1.88.22781>.
- Maloney, J., B. Pfuhlmann, E. Arensman, C. Coffey, R. Gusmão, V. Poštuvan, et al. 2014. "How to Adjust Media Recommendations on Reporting Suicidal Behavior to new Media Developments." *Archives of Suicide Research* 18 (2): 156–169. <https://doi.org/10.1080/13811118.2013.824833>.
- Mann, L. 1981. "The Baiting Crowd in Episodes of Threatened Suicide." *Journal of Personality and Social Psychology* 41 (4): 703–709. <https://doi.org/10.1037/0022-3514.41.4.703>.
- Måseide, P. 2011. "Morality and Expert Systems: Problem Solving in Medical Team Meetings." *Behaviour & Information Technology* 30: 525–532. <https://doi.org/10.1080/0144929X.2011.553748>.
- McCormack, A., G. W. Shorter, and M. D. Griffiths. 2013. "Characteristics and Predictors of Problem Gambling on the Internet." *International Journal of Mental Health and Addiction* 11 (6): 634–657. <https://doi.org/10.1007/s11469-013-9439-0>.
- McGee, M. 2011. 13,000 precision evaluations: Schmidt's testimony reveals how Google tests algorithm changes. Downloaded 2nd March 2023 from <https://searchengineland.com/13000-precision-evaluations-schmidts-testimony-reveals-how-google-tests-algorithm-changes-93740>.
- McTernan, N., A. Spillane, G. Cully, E. Cusack, T. O'Reilly, and E. Arensman. 2018. "Media Reporting of Suicide and Adherence to Media Guidelines." *International Journal of Social Psychiatry* 64 (6): 536–544. <https://doi.org/10.1177/0020764018784624>.
- Michaels, M. S., C. Chu, C. Silva, B. E. Schulman, and T. Joiner. 2015. "Considerations Regarding Online Methods for Suicide-Related Research and Suicide Risk Assessment." *Suicide and Life-Threatening Behavior* 45: 10–17. <https://doi.org/10.1111/sltb.12105>.
- Min, M., J. J. Lee, and K. Lee. 2022. "Detecting Illegal Online Gambling (IOG) Services in the Mobile Environment." *Security and Communication Networks ID*, <https://doi.org/10.1155/2022/3286623>.
- Mishra, A., I. Akman, and A. Yazici. 2007. "Organizational Software Piracy: An Empirical Assessment." *Behaviour & Information Technology* 26: 437–444. <https://doi.org/10.1080/01449290500483577>.
- Muthoni, J. 2021. 10 Key Benefits of SEO for Your Business. Forbes Agency Council. Download 2nd March 2023 from <https://www.forbes.com/sites/forbesagencycouncil/2021/06/14/10-key-benefits-of-seo-for-your-business/?sh=13f3f5ea3fd0>.
- Newall, P. W. S. 2019. "Dark Nudges in Gambling." *Addiction Research & Theory* 27: 65–67. <https://doi.org/10.1080/16066359.2018.1474206>.
- Newman, S. C., and A. H. Thompson. 2003. "A Population-Based Study of the Association Between Pathological Gambling and Attempted Suicide." *Suicide and Life-Threatening Behavior* 33: 80–87. <https://doi.org/10.1521/suli.33.1.80.22785>.
- Nichols, M. W., B. G. Stitt, and D. Giacomassi. 2004. "Changes in Suicide and Divorce in New Casino Jurisdictions." *Journal of Gambling Studies* 20: 391–404. <https://doi.org/10.1007/s10899-004-4581-z>.
- Nielsen, J. 2000. *Designing Web Usability*. New Riders: Indianapolis.
- Nower, L., and A. Blaszczynski. 2008. "Characteristics of Problem Gamblers 56 Years of Age or Older: A Statewide Study of Casino Self-Excluders." *Psychology and Aging* 23: 577–584. <https://doi.org/10.1037/a0013233>.
- Nower, L., R. Gupta, A. Blaszczynski, and J. Derevensky. 2004. "Suicidality and Depression among Youth Gamblers: A Preliminary Examination of Three Studies." *International Gambling Studies* 4: 69–80. <https://doi.org/10.1080/1445979042000224412>.
- O'Connor, J., and M. Dickerson. 2003. "Definition and Measurement of Chasing in Off-Course Betting and Gaming Machine Play." *Journal of Gambling Studies* 19: 359–386. <https://doi.org/10.1023/A:1026375809186>.
- O'Neill, S., and K. Curran. 2011. "The Core Aspects of Search Engine Optimisation Necessary to Move up the Ranking." *International Journal of Ambient Computing and Intelligence* 3 (4): 62–70. <https://doi.org/10.4018/jaci.2011100105>.
- Ortiz-Cordova, A., and B. J. Jansen. 2012. "Classifying Web Search Queries to Identify High Revenue Generating Customers." *Journal of the American Society for Information Science and Technology* 63 (7): 1426–1441. <https://doi.org/10.1002/asi.22640>.
- Ortiz, P., and E. Khin Khin. 2018. "Traditional and New Media's Influence on Suicidal Behavior and Contagion." *Behavioral Sciences & the Law* 36: 245–256. <https://doi.org/10.1002/bsl.2338>.
- Pavarin, R. M., C. Fabbri, A. Fioritti, S. Marani, and D. De Ronchi. 2022. "Gambling Disorder in an Italian Population: Risk of Suicide Attempts and Associated Demographic-Clinical Factors Using Electronic Health Records." *Journal of Gambling Studies*, <https://doi.org/10.1007/s10899-021-10088-1>.
- Phillips, D. P. 1974. "The Influence of Suggestion on Suicide: Substantive and Theoretical Implications of the Werther Effect." *American Sociological Review* 39: 340–354. <https://doi.org/10.2307/2094294>.
- Phillips, J. G., K. Diesfeld, and L. Mann. 2019. "Instances of Online Suicide, the Law and Potential Solutions." *Psychiatry, Psychology and Law* 26 (3): 423–440. <https://doi.org/10.1080/13218719.2018.1506719>.
- Phillips, J. G., and J. Landon. 2016. "Dynamic Changes in the Use of Online Advice in Response to Task Success or

- Failure.” *Behaviour & Information Technology* 35: 796–806. <https://doi.org/10.1080/0144929X.2016.1186734>.
- Phillips, J. G., A. L. Laughlin, R. P. Ogeil, and A. Blaszczynski. 2011. “Effects of Directional Decisional Support Upon Risk Taking Online.” *The Ergonomics Open Journal* 4 (1): 47–54. <https://doi.org/10.2174/1875934301104010047>.
- Phillips, J. G., and L. Mann. 2019. “Suicide Baiting in the Internet Era.” *Computers in Human Behavior* 92: 29–36. <https://doi.org/10.1016/j.chb.2018.10.027>.
- Phillips, J. G., R. P. Ogeil, and A. Blaszczynski. 2012. “Electronic Interests and Behaviours Associated with Gambling Problems.” *International Journal of Mental Health and Addiction* 10: 585–596. <https://doi.org/10.1007/s11469-011-9356-z>.
- Phillips, D. P., W. Welty, and M. Smith. 1997. “Elevated Suicide Levels Associated with Legalized Gambling.” *Suicide and Life-Threatening Behavior* 27: 373–378. <https://doi.org/10.1111/j.1943-278X.1997.tb00516.x>.
- Pirkis, J., R. W. Blood, A. Beautrais, P. Burgess, and J. Skehans. 2006. “Media Guidelines on the Reporting of Suicide.” *Crisis* 27 (2): 82–87. <https://doi.org/10.1027/0227-5910.27.2.82>.
- Pirkis, J., L. Neal, A. Dare, R. W. Blood, and D. Studdert. 2009. “Legal Bans on Pro-Suicide Web Sites: An Early Retrospective from Australia.” *Suicide and Life-Threatening Behavior* 39 (2): 190–193. <https://doi.org/10.1521/suli.2009.39.2.190>.
- Polder-Verkiel, S. E. 2012. “Online Responsibility: Bad Samaritanism and the Influence of Internet Mediation.” *Science and Engineering Ethics* 18: 117–141. <https://doi.org/10.1007/s11948-010-9253-z>.
- Powell, L. 2020. Online Gambling Company Closed Down After Addicted Customer Took own Life, as Regulator Finds ‘Serious Failings’. The Independent, 27th May, 2020. <https://www.independent.co.uk/news/business/news/online-gambling-company-closed-down-playtech-addicted-customer-suicide-a9534746.html>.
- Pringle, G., L. Allison, and D. L. Dowe. 1998. “What is a Tall Poppy among web Pages?” *Computer Networks and ISDN Systems* 30: 369–377. [https://doi.org/10.1016/S0169-7552\(98\)00061-0](https://doi.org/10.1016/S0169-7552(98)00061-0).
- Radford, M. H. B., L. Mann, and R. S. Kalucy. 1986. “Psychiatric Disturbance and Decision-Making.” *Australian & New Zealand Journal of Psychiatry* 20 (2): 210–217. <https://doi.org/10.3109/00048678609161333>.
- Roberts, K. J., N. Smith, H. Bowden-Jones, and S. Cheeta. 2017. “Gambling Disorder and Suicidality Within the UK: An Analysis Investigating Mental Health and Gambling Severity as Risk Factors to Suicidality.” *International Gambling Studies* 17: 51–64. <https://doi.org/10.1080/14459795.2016.1257648>.
- Ronzitti, S., S. W. Kraus, R. A. Hoff, M. Clerici, and M. N. Potenza. 2021. “Problem-gambling Severity, Suicidality, and DSM-IV Axis I Psychiatric Disorders.” *International Journal of Mental Health and Addiction* 19: 462–477. <https://doi.org/10.1007/s11469-019-00080-7>.
- Rose, I. N. 2000. Suicide is Never Painless, but Who’s to Blame? Casino City Times, 3 February 2000. <https://www.casinocitytimes.com/i-nelson-rose/article/suicide-is-never-painless-but-whos-to-blame-1018>.
- Rusmevichientong, P., and D. P. Williamson. 2006. “An Adaptive Algorithm for Selecting Profitable Keywords for Search-Based Advertising Services.” *EC’06, Proceedings of the 7th ACM Conference on Electronic Commerce*, 260–269. <https://doi.org/10.1145/1134707.1134736>.
- Scherr, S., M. Haim, and F. Arendt. 2019. “Equal Access to Online Information? Google’s Suicide-Prevention Disparities may Amplify a Global Digital Divide.” *New Media & Society* 21 (3): 562–582. <https://doi.org/10.1177/1461444818801010>.
- Schuck, A., R. Calati, S. Barzilay, S. Bloch-Elkouby, and I. Galyunker. 2019. “Suicide Crisis Syndrome: A Review of Supporting Evidence for a new Suicide-Specific Diagnosis.” *Behavioral Sciences & the Law* 37: 223–239. <https://doi.org/10.1002/bsl.2397>.
- Séguin, M., R. Boyer, A. Lesage, A. McGirr, A. Suissa, M. Tousignant, and G. Turecki. 2010. “Suicide and Gambling: Psychopathology and Treatment-Seeking.” *Psychology of Addictive Behaviors* 24: 541–547. <https://doi.org/10.1037/a0019041>.
- Seko, Y., and S. P. Lewis. 2018. “The Self—Harmed, Visualized, and Reblogged: Remaking of Self-Injury Narratives on Tumblr.” *New Media & Society* 20 (1): 180–198. <https://doi.org/10.1177/1461444816660783>.
- Sévigny, S., M. Cloutier, M. F. Pelletier, and R. Ladouceur. 2005. “Internet Gambling: Misleading Payout Rates During the “Demo” Period.” *Computers in Human Behavior* 21: 153–158. <https://doi.org/10.1016/j.chb.2004.02.017>.
- Shahzad, A., D. W. Jacob, N. M. Nawari, H. Mahdin, and M. E. Saputri. 2020. “The New Trend for Search Engine Optimization, Tools and Techniques.” *Indonesian Journal of Electrical Engineering and Computer Science* 18 (3): 1568–1583. <https://doi.org/10.11591/ijeecs.v18.i3.pp1568-1583>.
- Sharma, D., R. Shukla, A. K. Giri, and S. Kumar. 2019. A Brief Review on Search Engine Optimization. 9th International Conference on Cloud Computing, Data Science & Engineering (Confluence), Noida, India, 2019, pp. 687–692. <https://doi.org/10.1109/CONFLUENCE.2019.8776976>.
- Shaughnessy, J. J., E. B. Zechmeister, and J. S. Zechmeister. 2006. *Research Methods in Psychology*. Boston: McGraw-Hill.
- Singh, E., and D. R. Maini. 2013. “A Comprehensive Review on Search Engine Optimization.” *Journal of Global Research in Computer Sciences* 4: 49–54. <https://www.rioi.com/open-access/a-comprehensive-review-on-search-engine-optimization-49-54.pdf>.
- Slay, P. D., K. W. Castille, E. Hong, N. Polizzi, and T. Hoyt. 2021. “Enhancing Suicide Prevention Outreach via Mobile-Enabled Website Design.” *Suicide and Life-Threatening Behavior* 51: 229–236. <https://doi.org/10.1111/sltb.12698>.
- SoftSwiss. 2008. SEO for online casino promotion. Downloaded 5th October 2021 from <https://www.softswiss.com/knowledge-base/seo-and-online-casino-promotion/>.
- Speller, G. J., and J. A. Brandon. 1986. “Ethical Dilemmas Constraining the use of Expert Systems.” *Behaviour & Information Technology* 5: 141–143. <https://doi.org/10.1080/01449298608914506>.
- Stack, S. 2005. “Suicide in the Media: A Quantitative Review of Studies Based on Nonfictional Stories.” *Suicide and Life-*

- Threatening Behavior* 35 (2): 121–133. <https://doi.org/10.1521/suli.35.2.121.62877>.
- Stanley, I. H., S. Simpson, H. S. Wortzel, and T. E. Joiner. 2019. “Documenting Suicide Risk Assessments and Proportionate Clinical Actions to Improve Patient Safety and Mitigate Legal Risk.” *Behavioral Sciences & the Law* 37: 304–312. <https://doi.org/10.1002/bsl.2409>.
- Sundqvist, K., and P. Wennberg. 2022. “The Association Between Problem Gambling and Suicidal Ideations and Attempts: A Case Control Study in the General Swedish Population.” *Journal of Gambling Studies* 38: 319–331. <https://doi.org/10.1007/s10899-020-09996-5>.
- Suurvali, H., D. Hodgins, T. Toneatto, and J. Cunningham. 2008. “Treatment Seeking among Ontario Problem Gamblers: Results of a Population Survey.” *Psychiatric Services* 59: 1343–1346. <https://doi.org/10.1176/ps.2008.59.11.1343>.
- Syvrtsen, A., E. K. Erevik, D. Hanss, R. A. Mentzoni, and S. Pallesen. 2022. “Relationships Between Exposure to Different Gambling Advertising Types, Advertising Impact and Problem Gambling.” *Journal of Gambling Studies* 38: 465–482. <https://doi.org/10.1007/s10899-021-10038-x>.
- Van Goethem, T., N. Miramirkhani, W. Joosen, and N. Nikiforakis. 2019. “Purchased Fame.” *AsiaCCS 2019 – Proceedings of the 2019 ACM Asia Conference on Computer and Communications Security*, 366–378. <https://doi.org/10.1145/3321705.3329830>.
- Wagenaar, W. A. 1988. *Paradoxes of Gambling Behavior*. London: Lawrence Erlbaum Associates.
- Walters, L. G. 2021. *Advertising Online Casinos – an Analysis of the Legal Rights and Risks*. Walters Law Group. Downloaded 6th October 2021 from <https://www.firstamendment.com/advertising-casinos/>.
- Wang, D. Y., M. Der, M. Karami, L. Saul, D. McCoy, S. Savage, and G. M. Voelker. 2014. Search + Seizure: The Effectiveness of Interventions on SEO Campaigns. Proceedings of the ACM SIGCOMM Internet Measurement Conference, IMC’14, November 359–372, 2014, Vancouver, BC, Canada, pp. 359–372. <https://doi.org/10.1145/2663716.2663738>
- Wardle, H., and S. McManus. 2021. “Suicidality and Gambling among Young Adults in Great Britain: Results from a Cross-Sectional Online Survey.” *The Lancet Public Health* 6: E39–E49. [https://doi.org/10.1016/S2468-2667\(20\)30232-2](https://doi.org/10.1016/S2468-2667(20)30232-2).
- Watters, P. A., and J. Ziegler. 2016. “Controlling Information Behaviour: The Case for Access Control.” *Behaviour & Information Technology* 35: 268–276. <https://doi.org/10.1080/0144929X.2015.1128976>.
- Westerlund, M., G. Hadlaczky, and D. Wasserman. 2015. “Case Study of Posts Before and After a Suicide on a Swedish internet Forum.” *British Journal of Psychiatry* 207: 476–482. <https://doi.org/10.1192/bjp.bp.114.154484>.
- WHO. 2021. Suicide worldwide in 2019. <https://www.who.int/publications/i/item/9789240026643>.
- Wong, P. W. C., D. Y. T. Cheung, K. R. Conner, Y. Conwell, and P. S. F. Yip. 2010. “Gambling and Completed Suicide in Hong Kong: A Review of Coroner Court Files.” *Primary Care Companion - Journal of Clinical Psychiatry* 12 (6): e1–e7. <https://www.psychiatrist.com/pcc/depression/suicide/gambling-completed-suicide-hong-kong-review-coroner/>
- Wong, P. W., N. C. Kwok, J. Y. Tang, A. Blaszczynski, and S. Tse. 2014. “Suicidal Ideation and Familicidal-Suicidal Ideation Among Individuals Presenting to Problem Gambling Services.” *Crisis* 35: 219–232. <https://doi.org/10.1027/0227-5910/a000256>.
- World Health Organisation. 2008. Preventing suicide: a resource for media professionals. Downloaded 8th December 2016 from http://www.who.int/mental_health/prevention/suicide/resource_media.pdf.
- Yakovenko, I., and D. C. Hodgins. 2018. “A Scoping Review of co-Morbidity in Individuals with Disordered Gambling.” *International Gambling Studies* 18: 143–172. <https://doi.org/10.1080/14459795.2017.1364400>.
- Yalçın, N., and U. Köse. 2010. “What is Search Engine Optimization: Seo?” *Procedia - Social and Behavioral Sciences* 9: 487–493. <https://doi.org/10.1016/j.sbspro.2010.12.185>.
- Yang, H., K. Du, Y. Zhang, Z. Li, M. Liu, H. Wang, H. Duan, et al. 2019. Casino Royale: A Deep Exploration of Illegal Online Gambling. Proceedings of the 35th Annual Computer Security Applications Conference – ACSAC ’1500, December 9–13, 2019, San Juan, pp. 500–513. <https://doi.org/10.1145/3359789.3359817>
- Yang, R., J. Liu, L. Gu, and Y. Chen. 2020. Search & Catch: Detecting Promotion Infection in the Underground Through Search Engines. In Proceedings of the 2020 IEEE 19th International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom), Guangzhou, People’s Republic of China, 10–13 November 2020; pp. 1566–1571. <https://doi.org/10.1109/TrustCom50675.2020.00216>
- Yang, R., X. Wang, C. Chi, D. Wang, J. He, S. Pang, and W. C. Lau. 2021. “Scalable Detection of Promotional Website Defacements in Black hat SEO Campaigns.” *Proceedings of the 30th USENIX Security Symposium*, 3703–3720. Downloaded 6th March 2023 from <https://www.usenix.org/system/files/sec21-yang-ronghai.pdf>.
- Zeng, Y., Z. Liu, X. Chen, and T. Zang. 2022. “Hidden Path: Understanding the Intermediary in Malicious Redirections.” *IEEE Transactions on Information Forensics and Security* 17: 1725–1740. <https://doi.org/10.1109/TIFS.2022.3169923>.
- Zhu, C., K. Harris, W. Zhang, K. Tsyganova, M. Li, and R. Zeng. 2023. “The Blue Whale Challenge from Urban Legend to Real Harm: Case Study Analyses of Chinese Suicide Attempters.” *Current Psychology*, <https://doi.org/10.1007/s12144-022-02793-w>.
- Zittrain, J. 2021. The Internet is Rotting: Too Much has Been Lost Already. The Glue That Holds Humanity’s Knowledge Together is Coming Undone. The Atlantic, 30th June, 2021. Downloaded 9th October from <https://www.theatlantic.com/technology/archive/2021/06/the-internet-is-a-collective-hallucination/619320/>.