Transparency in Responsible Gambling Messaging and Communication: A Content Analysis of the UK's Gambling Operators' Websites

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Glossary

ASA - Advertising Standards Authority
CSR - corporate social responsibility
GDPR - General Data Protection Regulation
ICC - Intraclass correlation coefficients
RG - responsible gambling
RGF - responsible gambling features
RNG - Random Number Generator
RO - research objective
UX - user experience

Executive Summary

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Introduction

The gambling industry is a substantial contributor to the UK GDP with 14.2 billion pounds of gross profits received in the year 2020 (Gambling Commission 2020), with online gambling showing a year-on-year growth even though the Gambling Commission (2020) reported a slight decrease of 2% in online betting and 7% reduction in customer numbers. However, the number of customer interactions since the start of COVID-19 has risen by 11% and customers' overall engagement with gambling products has increased with betting sessions lasting longer. Further, 2.2% of individuals who only gambled in person before lockdown restrictions in Spring 2020 shifted their gambling activities to online spaces (Gambling Commission 2020). As such, the COVID-19 pandemic has been seen by many as a cause for concern regarding gambling behaviour (Hakansson et al., 2020). Gambling has a long history and is a prominent feature of most cultures (Botella-Guijarro et al., 2020; McMillen, 1996). In the UK, gambling is considered as part of the UK's leisure culture with over 40% of participation in gambling activities between 2018 and 2019 comprising lotteries (e.g., National Lottery and other lotteries; https://www.statista.com/statistics/543409/gambling-activities-participation-united-kingdom-uk/). Despite historic and lately expanded stigma around gambling, today exposure to social gambling (a term which has been applied to a broad range of real gambling or gambling-like activities with social elements online) is associated with forming positive attitudes towards gambling and normalisation of gambling behaviour, especially amongst younger audiences (Parke et al., 2012). Taken together, the above mentioned consumer behavioural trends and facts regarding industry's financial gains paints a holistic picture of the weight gambling activities have in the UK and the implications for Responsible Gambling (RG).

Our previous research (Bolat et al., 2020) confirms that the gambling industry considers itself a heavily regulated industry where corporate social responsibility, legal and competence (both technical and managerial) compliance are at the forefront of the companies' mindset. This is particularly important for retaining and attracting new skills and talent to the sector (Bolat et al. 2020) when the employment rate is steadily falling due to the industry's reputation amongst younger demographics (Gambling Commission 2020). In terms of marketing, the gambling industry demonstrates a high level of commitment and excellence in utilising various channels to attract new customers and keep engagement afloat with existing customers. This is particularly possible due to the expansion of opportunities via online media that generate wider accessibility to and continuous distribution of promotional content (Newall et al. 2019). The Gambling Commission (2019) reports that 4 in 10 customers gamble online after being exposed to online marketing content.

Today in the UK, any UK-licensed operator is legally required to incorporate a number of RG features (RGFs) within their gaming products and ensure that information related to safeguarding support is provided by the operator or other reference groups (i.e. GambleAware) is displayed on their websites (ASA, 2019). Display of age warning icons (18+) is a legal requirement for any UK-operating gambling provider. The display of such RG information is a legal requirement for the gambling companies operating in the UK (ASA 2019). Moreover, with the opportunities to collect behavioural information about online customers, there are further opportunities to personalise RG information, content and presentation of such information to individual users, not only within the individual customer experience, but within publicly accessible points of communication such as websites and social media, to support the user.

Our research (Bolat et al., 2019) indicates that gambling operators put RG content and communication at their businesses' heart as per thoughts and reflections reported by gambling companies' employees. However, although research has explored types of RGFs used by gambling operators (i.e. Cooney et al. 2018; Bonello & Griffiths 2019), and fragmented analysis of marketing and social media content containing safeguarding and RG messages (Gainsbury et al. 2015; Gainsbury et al. 2016; Newall et al. 2019; Killick and Griffiths 2020), no study has yet to conduct a detailed cross-operators comparative analysis of gambling website homepages and RG-dedicated pages. Hing et al. (2016) conducted a content analysis of RG messaging across websites that should provide comprehensive RG information, across both government and non-profit stakeholders (i.e. Gamble Aware UK) and identified examples of best RG communication practices amongst gambling operators. However, this analysis presented a list of types of RG information with no evaluation of the visibility, positioning and design aspects integrating within how RG information is displayed. This analysis responds to the identified gap within current research by examining the RG communication and information displayed on operators' primary sources of information - websites. In particular, the review of scholarly work, regulatory documentation and grey literature (see the next section) highlighted the need to address the following Research Objectives (ROs):

(RO1)   Examine the presence, visibility and positioning of RG links, icons, messages, age restriction warnings, links to RG-specific advising groups (i.e. GambleAware);

(RO2)   Evaluate the types of RG content, and message framing within the RG information;

(RO3)   Assess the website user experience with three journey points: homepage, homepage to RG page pathway, and RG page.

Moreover, looking through earlier reported changes within the gambling consumption patterns due to COVID-19, we aimed to examine if the operators report any content and messages related to COVID-19 (such information can also be classified as safeguarding in nature) on their websites' homepages or RG-related pages. Hence, the fourth objective of this study is:

(RO4)   Examine the presence of COVID-19 related communication and messages on the gambling operators' website homepages and RG-dedicated pages.

Theoretical Background

When it comes to corporate and social responsibility (CSR), communication plays a vital role in building relationships with various stakeholders, not merely for public relations and reputation management purposes but also for providing a real meaning to CSR activities (Weder and Karmasin 2017). Leung (2019) reported that RG communication is a critical part of the legitimacy-seeking strategies for the gambling sector. Our previously reported interviews with gambling industry employees (Bolat et al. 2019) confirm that.

RG is a broader area that includes the responsible provision of gambling and responsible consumption (Hing et al., 2016). The responsible provision of gambling is often associated with policies and practices of safeguarding gambling customers by developing safer gambling experiences and products vis-à-vis integration of RGFs within the gambling products (Ladouceur et al. 2017), as well as marketing and promotion of gambling products and experiences (Parke et al. 2015). It is important to note that the widespread of RGFs today is evident (i.e. Blaszczynski et al. 2014; Ladouceur et al. 2017; Auer et al. 2018; Gainsbury et al. 2020). However, in most cases, engagement with the RGFs is not compulsory and often,

despite expressing pre-commitment to use RGFs, many customers end up not using RGFs (Delfabbro and King 2020). In light of this, it is questionable how beneficial RGFs are. Such low use of RGFs and, hence, real positive impact can be explained by the lack of awareness and understanding amongst gambling customers on what RGFs are and how they can help customers to stay safe and avoid falling into the trap of problematic gambling by enabling technological tools to aid the self-regulation and monitoring of gambling behaviour (Mouneyrac et al. 2017).

Gambling marketing, which could integrate RG content within promotional materials, is still very traditional in its commercial focus on featuring branded content, promoting financial incentives and betting odds (Newall et al. 2019). Indeed, a recent randomized controlled study (Challet-Bouju et al., 2010) identified that gambling operators often rely on wagering inducements as part of loyalty/reward programs to retain or attract customers – a strategy that has been found to increase money wagered, gambling-related experiences, and perceived loss of control. Website and social media communication, in particular, present the gambling industry with a plethora of opportunities to deliver meaningful RG content that demonstrates companies' commitment to customers' safeguarding and, hence, creating a trust towards gambling (Bolat et al. 2019). For this reason, in this research, we are focusing on RG communication and display of prevention messages with an intention to understand how transparent RG communication and messaging is in terms of availability and accessibility of RG information.

Responsible gambling communication

RGFs and RG messaging play an important educational and prevention role in empowering gambling customers to understand how they can limit risks when gambling (Mouneyrac et al. 2017). Technological advancements that develop much more immersive gambling products can also influence one's gambling experience. Moreover, RG messaging and communication can be personalised due to technological and behavioural tracking solutions (Gainsbury et al. 2018); hence, leading to much more powerful and persuasive RG communication than the one we observe today - lacking real engagement.

RG communications include information related to RGFs available to customers, RG practices and policies adopted by the gambling operator, warning messages and icons that show the restrictive nature of gambling products (i.e. age restriction warnings) as well as prevention messages, which carry an important role in minimising or preventing negative outcomes or harm of the risky experience such as gambling (Mouneyrac et al. 2017). Hing et al. (2016) conducted a review of 55 RG practices used by the gambling operators, which were grouped into eight distinctive categories:
  (1) RG information;
  (2) gambling product information (specifically related to online games and electronic gaming machines)
  (3) Pre-commitment strategies (setting the limits, i.e., time and money limits)
  (4) Interaction with customers (self-exclusion programmes, counselling and other support services)
  (5) Minors (restrictions to access by minors, i.e. identity checking, age warning messages)
  (6) Gambling environment (related to physical gambling experiences in casinos and betting shops but lacking details of the online gambling environments, i.e. website and app designs, use of behavioural tracking within the online gambling experiences)

(7) Financial transactions (measures related to accessibility of credit and other financial terms)

(8) Advertising and promotion (marketing to vulnerable groups and type of promotional messages and content).

It is evident from the list of RG categories that RG information and gambling environment are particularly important and applicable to online gambling content. However, the detailed list of practices does not account for online gambling nuances, i.e., type of and format of RG content displayed online, positioning of RG information online, reference to RG-related reference groups and others.

In the next sub-sections, we provide an overview of RGFs and aspects considered necessary when examining RG and prevention messages. Although there is an argument that RG discourse should be abandoned today, the alternative discourse proposed by Livingston and Runtoul (2020), a safer gambling notion, focuses on prevention and harm minimisation in gambling consumption. When discussing RG communication in this study, harm minimisation and prevention is a focal point of attention. Hence, we use RG communication and messaging in line with a newly proposed safer gambling discourse.

Responsible gambling features

Today most of RGFs are linked to ability to provide autonomy to the customer by setting various limits such as deposit and time limits, as well as opportunities to set up activity alerts and self-exclusion criteria (Hing et al. 2016). In the online gambling context availability of such RGFs is often imposed by the regulatory authorities (Ladouceur et al. 2017). Our research (Drosatos et al. 2018) shows that gambling customers are overall enthusiastic about RGFs and their use in real-time to maximise the preventive nature of such persuasive tools. However, findings regarding the role of RGFs on facilitating RG behaviour is very much inconclusive. One of the RG methods includes messaging the player, but there is a lack of evidence-based approaches in how to best support them.

Message content and type

Message content and type are an important factor when it comes to understanding the impact of communication on the recipients of the message. Quite often communication theories consider such linguistic elements of message content that examine the language used in communication, the tonality of the messages and the comprehension of the words. Such aspects are also examined within the warning and prevention communication contexts (i.e. Cox et al. 1997). Consumers and their individual characteristics are critical when it comes to engagement and comprehension of harm prevention messages. However, in the gambling context most studies have focused on the educational versus informational type of prevention and RG information (i.e. Blaszczynski et al. 2004; Gainsbury et al. 2018). According to Gainsbury et al. (2018) information RG messaging relies on simple presentation of RG warnings and prevention strategies, whereas education RG messaging implies self-appraisal by the recipient of the message (encouraging reflection quite often manifested in the form of question statements, i.e. 'Has your gambling been too excessive lately?') and specific action focus (i.e. 'click-through to find out more about RG tools').

Message framing

The notion of message framing is particularly relevant to the gambling context. Prospect theory explains that people behave differently depending on whether the message focuses on winnings (gains) or losses (Tversky and Kahneman 1974). Loss-focused messages are mostly about the negative consequences and outcomes of gambling or risky behaviour, whereas gain-focused messages are about the benefits and opportunities that come with the changes in behaviour (Gainsbury et al. 2018). Past research (i.e. Broda et al. 2008) suggests that negative message framing leads to negative results for engagement with harm prevention messages (irritation) or no impact (ignorance). On the other hand, gain-focused messages demonstrate a positive reaction (enthusiasm) from the audiences exposed to such messages (Rothman et al. 2006). There is various analysis of promotional message framing available to date (Newall et al. 2019) as well as RG content posted by gambling companies (Gainsbury et al. 2018). However, there is no holistic understanding of features of the message: framing, content type, presentation, and aesthetic nuances of such messages as well as format of content used to communicate RG information, i.e., images, versus text, links, icons, videos etc.

Web-communication and User Experience

Tetrevova and Patak (2019) presented a content analysis of various web-based communication practices of CSR activities carried out by gambling companies operating in the Czech Republic, which highlighted the roles of social media and online publicity in CSR communication. However, it did not look into website or app communication around RG. Hing et al. (2016), as mentioned previously, conducted content analysis of all RG related content posted on websites of governmental, non-profit and gambling organisations. This analysis, like most of the currently available research within the same remit, did not capture the nuances around the visibility and how RG information is displayed, but presented the list of the range of RG information available to website users. Moreover, a recent study by Killick and Griffiths (2020) conducted a social media content analysis by capturing whether such content explicitly discusses RG within the social media posts or embeds RG-related information within posts that carry a purpose of branding, promotion or customer communication.

Transparency of RG communication does not only include the availability of RG information available to customers today but also integrates the notion of accessibility of such information. Accessibility, of course, can focus on the comprehension of the message or content type nuances discussed earlier. However, when it comes to web-communication, accessibility of information in a webpage refers to visibility, display and overall user experience with RG information. Our review of existing research highlights that such studies are limited. Lole et al. (2019) conducted an eye-tracking study to show if sport betters pay attention to RG messages when placing their bets and found that most RG messages embedded within gambling advertising and promotion are presented in *"a non-conspicuous manner"*, meaning RG information is not obvious or visible to the audience. Moreover, they found that it is the physical aspects of the messages, i.e., use of icons vs text, visibility of the RG message versus the rest of the advertising content, that have an impact on whether betters will pay attention to RG information or not. No research of physical aspects related to RG communication and messaging via the main online display windows for the gambling operators has been presented .

When it comes to assessment of physical aspects of information display within web-communication, user experience (UX) assessments are often carried out to evaluate individual users' engagement with websites, apps and other web-experiences. Jacob Nielsen's (1994) ten usability principles are the most widely used features to evaluate user interface design and

identify usability issues. These features focus on understanding user behaviour with the web content and spaces presenting a holistic value web experience should place on reliability or efficiency of the experience (system, information and experience), attractiveness (information and experience), stimulation (experience and information), dependability (how easy it is for the user to access and use the web content) (Nielsen 1994):

(1) Visibility of system status
(2) Match between system and the real world
(3) User control and freedom
(4) Consistency and standards
(5) Error prevention
(6) Recognition rather than recall
(7) Flexibility and efficiency of use
(8) Aesthetic and minimalist design
(9) Help users recognize, diagnose, and recover from errors
(10) Help and documentation.

Our research team has not identified any existing research around usability design gambling or online gambling that assesses the physical aspects of RG communication and uses the UX heuristics to carry out such assessment.

Methodology

Design and sample

A content analysis was conducted on websites of the UK-licensed gambling providers, focusing on the evaluation of RG communication and content located on the homepage of the website, a dedicated RG page (or microsite) and the path analysis from the homepage to the RG page. Information around COVID-19 communications was analysed to examine the visibility within the websites' homepages or the RG pages. Each website was separately analysed across two interfaces, desktop and mobile, meaning each case included two units of analysis (n=66). The total count of observation cases or gambling operators is 33. The four evaluators carried out the analysis between 19/06/20 and17/07/20 . This is when many countries around the world, including the UK, was in lockdown but with the restrictions eased at the start of July 2020. Hence, there was a possibility to observe potential changes in the COVID-19 related communication within the gambling operators' websites. An example of such change could be announcements regarding the betting shops' openings. Only publicly available content, not content provided only to registered customers, was part of the observational content analysis. Ethical approval was obtained prior to data collection and analysis (Research Ethics Checklist ID 32793). Table 1 presents the list of the operators analysed.

Table 1. Sample of the gambling operators' websites

Gambling Operator	The Gambling Operator Group	Type of gambling activity (sector, as per	URL to the homepage	URL to the RG page	Dates accessed

		Gambling Act 2005)			
Betway	Betway Group	Betting and casino	https://betway.com	https://account.betway.com/v1	17/7/2020
Party Casino	GVC Holdings PLC	Casino	https://casino.partycasino.com/en?wm=3279010	https://casino.partycasino.com/en/p/responsible-gaming	26/06/20
Skybet	Flutter Entertainment	Betting	https://m.skybet.com	https://support.skybet.com/s/article/Keeping-Gambling-Fun	26/06/20
Pocketwin	In Touch Games Ltd	Casino	https://pocketwin.co.uk/	https://pocketwin.co.uk/our-terms/responsible-gambling/	07/07/20
32Red	Kindred Group	Casino	https://www.32red.com/	https://www.32red.com/responsible-gaming	07/07/20
888 Casino	888 Holdings Plc	Casino	https://www.888casino.com	https://www.888casino.com/security-and-privacy/responsible-gaming-uk/	26/06/20
Admiral Casino	Novomatic Group	Casino	https://www.admiralcasino.co.uk	https://www.admiralcasino.co.uk/en/safer-gambling	17/7/2020
Bet365	Bet365 group	Betting, bingo, casino	https://www.bet365.com	https://responsiblegambling.bet365.com/en	17/7/2020
Betfred	Lightcatch Ltd	Betting, bingo, casino, lotteries	https://www.betfred.com/	https://www.betfred.com/terms-and-conditions/responsible-gambling	17/7/2020
BetUK	LeoVegas Mobile Gaming Group	Betting and casino	https://www.betuk.com	https://www.betuk.com/safergambling	07/07/20
Buzz Bingo	Caledonia Investments	Bingo	https://www.buzzbingo.com	https://www.buzzbingo.com/safer-gambling	25/06/20
Casimba	White Hat Gaming Ltd	Casino	https://www.casimba.com	https://www.casimba.com/en-gb/player-protection	07/07/20
Casino Superwins	Prism Marketing	Casino	https://www.casinosuperwins.com/?lang=en	https://www.casinosuperwins.com/fair-gaming/?lang=en (fair gaming	26/06/20

				page); https://www.casinosuperwins.com/responsible-gaming/?lang=en (RG page)	
Coral	GVC Holdings Plc	Betting, bingo, casino	https://www.coral.co.uk/en/games	https://www.coral.co.uk/en/p/responsible-gaming	19/06/20
Foxy Bingo	GVC Holdings Plc	Bingo	https://www.foxybingo.com/	https://myaccount.foxybingo.com/en/p/responsible-gaming	10/07/20
Gala Bingo	GVC Holdings Plc	Bingo and casino	https://www.galabingo.com	https://www.galabingo.com/en/p/promotions/responsible-gambling	07/07/20
Hello Casino	White Hat Gaming Ltd	Casino	https://www.hellocasino.com/	https://www.hellocasino.com/playerprotection	17/7/2020
Jackpot Village	White Hat Gaming Ltd	Casino	https://www.jackpotvillage.com/en-gb/	https://www.jackpotvillage.com/en-gb/playerprotection	17/7/2020
Ladbrokes Games	GVC Holdings Plc	Betting, bingo, casino	https://www.ladbrokes.com/en/games	https://www.ladbrokes.com/en/p/responsible-gaming	26/06/20
Mansion Casino	Mansion Group	Casino	https://www.mansioncasino.com/uk/	https://play.mansioncasino.com/responsible-gambling-uk/ (RG page); https://play.mansioncasino.com/fair-gaming/ (fair gaming page)	25/06/20
Mecca Bingo	The Rank Group	Bingo and casino	https://www.meccabingo.com	https://www.meccabingo.com/rg-info	25/06/20
Mr Green	William Hill	Betting and casino	https://www.mrgreen.com/en/	https://greengaming.com/en/	19/06/20
National Lottery	Camelot UK Lotteries Ltd	Lotteries	https://www.national-lottery.co.uk	https://www.national-lottery.co.uk/responsible-play?icid=bsp:na:tx	10/07/20
Novibet	Novigroup Ltd	Betting and casino	https://www.novibet.co.uk/	https://www.novibet.co.uk/info/responsible-gambling	17/7/2020

Paddy Power	Flutter Entertainment	Betting, bingo, casino, lotteries	https://www.paddypower.com/bet	https://responsiblegaming.paddypower.com	26/06/20
Pink Casino	LeoVegas Mobile Gaming Group	Casino	https://www.pinkcasino.co.uk/	https://www.pinkcasino.co.uk/safergambling	07/07/20
Roxy Palace	Kindred Group	Casino	https://www.roxypalace.com/	https://www.roxypalace.com/responsible-gambling (RG page); https://www.roxypalace.com/about-us/fair-gaming (fair gaming page)	17/7/2020
Sky Bingo	Flutter Entertainment	Bingo	https://www.skybingo.com	https://support.skybingo.com/s/article/Keeping-Gambling-Fun	07/07/20
Tombola	Tombola Ltd	Bingo	https://www.tombola.co.uk	https://www.tombola.co.uk/safeplay	10/07/20
Unibet	Kindred Group	Betting, bingo, casino	https://www.unibet.co.uk	https://www.unibet.co.uk/general-info/whentostop	17/7/2020
Virgin Bet	Gamesys Group Plc	Betting	https://www.virginbet.com/	https://web.virginbet.com/en/vb-responsible-gaming-nl/	17/7/2020
Virgin Games	Gamesys Group Plc	Bingo and casino	https://www.virgingames.com	https://www.virgingames.com/responsiblegaming	26/06/20
William Hill	William Hill	Betting, bingo, casino	https://www.williamhill.com	https://williamhill-lang.custhelp.com/app/answers/detail/a_id/2734	19/06/20

Thirty-three operators were part of 20 larger corporate groups, with the largest sample representing GVC Holdings Plc (5 operators), White Hat Gaming Ltd (3 operators) and Flutter Entertainment (3 operators). In terms of gambling activities, one operator offers online lottery only (National Lottery); two operators - betting only; four - bingo only; twelve - casino only, with the rest of operators providing a mix of betting and casino (6 operators); bingo, betting and casino (5 operators); bingo, betting, casino and lotteries (2 operators).

Three out of 33 operators (Casino Superwins, Mansion Casino and Roxy Palace) have two pages dedicated to RG communication: an RG-specific page and a page related to fair gaming. In these instances, RG pages contain information related to RG features within the games, and support information, with the overall aim to help customers understand RG work undertaken by the operator. Fair gaming page, on the other hand, explains the principles of Random Number Generator (RNG) behind online casino products (all three operators included such information), provides insights into software used (Casino Superwins provides

such information), covers GDPR nuances around data collection (Casino Superwins) or informs about the availability of play history (Roxy Palace). Interestingly, most of the operators providing online casino products have information on fair pay-out within the websites where RNG is explained. Still, no further details related to GRPD or play history data are presented within such content.

Coding protocol

A coding template was designed to evaluate transparency linked to communication and information related to RG based on four research objectives:

- (RO1)   the presence, visibility, and positioning of RG links, icons, messages, age restriction warnings, links to RG-specific advising groups (i.e. Gamble Aware);
- (RO2)   the types of RG content, message framing within the RG information;
- (RO3)   the website user experience with three journey points, homepage, homepage to RG page pathway and RG page; and
- (RO4)   the presence of COVID-19 related communication and messages on the gambling operators' website homepages and RG-dedicated pages.

Table 2 presents a list of features that were part of the analysis. Overall, the coding template was developed, piloted and revised by the research team through the initial analysis of the following five operators, Betfair, Ladbrokes Games, Coral, Mr Green, William Hill. The pilot sample's data record was included in the final sample due to the comprehensive evaluation carried out in the pilot stage.

Record of the evaluation and ratings were based on a mix of measures. A single measure, timing from the coders (in seconds), was to evaluate the visibility features. Single measure, count, was also used to record the number of RG links, RG icons, reference to RG-specific advising groups. A rating scale (1-3) was used to assess the type of content, message framing and traffic light indication assessment.

Table 2. Coding template

Feature	Feature acronym	Definition	Coding details
Visibility of RG message	VRG	Time it takes to find the first appearing RG message/icon on homepage of the website.	Timing (in seconds): how long it takes to find the first notion of RG content/message on homepage of the website
Visibility of COVID-19 messaging / content	VCOV	Time it takes to find the first appearing COVID-19 related message/icon on homepage of the website.	Timing (in seconds): how long it takes to find the first notion of RG content/message on homepage of the website
Number of RG links	NRGLinks	Count of number of links to the RG dedicated pages on the homepage of the website.	Number of links

Number of RG icons	NRGIcons	Count of number of RG-related icons on the homepage of the website.	Number of icons
Number of usable (link-enabled) icons	NRGLEI	Count of number of usable (link-enabled) RG-related icons on the homepage of the website.	Number of usable (link-enabled) icons
Type of content	TC	Purpose of the RG messages, found on the homepage and RG page(s), in terms of providing information regarding RG or educating about RG.	1-Educational; 2-Informational; 3-Mixed
Message framing	MF	The positive or negative manner in which the RG information within the RG messages, found on the homepage and RG page(s), is presented.	1-Positive (focusing on gains); 2-Negative (focusing on losses); 3-Neutral (combination of both positive and negative)
Clarity of the actual RG-dedicated page	CLARITYRG	Indication on whether the information presented within the RG-dedicated page is presented in a clear and simple way that is easy to understand.	1-Very unclear / confusing; 2-Unclear / confusing; 3-Neither; 4-Clear / understandable; 5-Very clear / understandable
Format(s) of RG content found on homepage and RG page	FRGCHP FRGCRGP	Types of media format presented within the homepage and RG page(s) (i.e. video, image, text).	1-Text; 2-Icon; 3-Text and icon; 4-Image 5-Banner 6-Text, icon and image; 7-Text, icon and banner; 8-Icon, text and link-enabled text; 9-Link; 10-Icon and link; 11-Link, text and video
Positioning of the RG message on the home webpage	POSRGM	The position of the RG notions (i.e. link to page, icons etc.) on homepage of the website (if few notions, then list the	1-Top; 2-Middle; 3-Bottom; 4-Top and middle; 5-Top and bottom; 6-Middle and bottom;

		positioning for all of the RG notions).	7-Top, middle and bottom
Traffic light indication on the extent of references to RG-specific advising groups (i.e. inclusion of www.begambleaware.org)	RGREF	Count of number of links/references to RG-specific advising groups and assessment of whether this low, moderate or high.	1-Green (high number of links/references); 2-Amber (moderate number of links/references); 3-Red (low number of links/references)
Partner RG Organisations, links to which are provided within RG page	N/A	List of RG organisations which are mentioned within the RG page.	N/A
Link quality to RG-specific advising groups/organisations	LINKQUAL	Indication on whether the link is operational or broken.	1-yes; 2-no; 3-mixed
The credibility of the link to RG-specific advising groups/organisation misleading	LINKMISLEAD	Indication on whether the link leads to the wrong RG support webpage.	1-yes; 2-no; 3-mixed
Age restriction warning	AGERW	Indication on whether the age restriction warning icon or message appears on homepage.	1-yes; 2-no
Ease of access - pathway analysis from homepage to the RG page	EARGP	Count of clicks.	Number of clicks
Other RG measures noted/mentioned RG page	N/A	List of other RG measures (i.e. self-exclusion, deposit limits, reality check, GamCare chat).	N/A
heuristic evaluation, applicable to homepage	UXHP	The evaluation of the homepage usability, using Jacob Nielsen's 10 Usability Heuristics (see Table 3 for details).	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
User experience heuristic evaluation, applicable to pathway from homepage to RG page	UXP	The evaluation of the pathway from homepage to RG page usability, using Jacob Nielsen's 10 Usability Heuristics (see Table 3 for details).	0-non-existent; 1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
heuristic evaluation, applicable to RG page	UXRGP	The evaluation of the RG page usability, using Jacob Nielsen's 10 Usability	0-non-existent; 1-very poor experience; 2-poor experience;

		Heuristics (see Table 3 for details).	3-average experience; 4-good experience; 5-very good experience
COVID-19 information	COVI?	Provision of COVID-19 related information on homepage of the website.	1-yes; 2-no; 3-mixed (i.e. mentioned on RG page but not homepage)
Traffic light indication on the extent of COVID-19 related information provided on homepage	COVEXT	Assessment of the extent to which COVID-19 related information is provided, visible and detailed.	1-visible but limited; 2-visible and moderate; 3-visible and detailed (i.e. includes the links to NHS website)
Clarity of the actual COVID-19 dedicated content	CLARITYCOV	Indication on whether the COVID-19 related information presented within homepage is presented in a clear and simple way that is easy to understand.	1-Very unclear / confusing; 2-Unclear / confusing; 3-Neither; 4-Clear / understandable; 5-Very clear / understandable

The heuristic evaluation was carried out to perform an individual usability assessment of the homepage (UX area 1), the pathway from the homepage to the RG page (UX area 2) and the RG page (UX area 3). Jacob Nielsen's (1994) ten established usability principles were applied (see Table 3 for the detailed overview).

Table 3. Heuristics coding template

Feature	Feature acronyms	Definition	Coding details
Heuristic 1: Visibility of system status	Level 1 - UXHP1 Level 2 - UXP1 Level 3 - UXRGP1	Content and information provided allow users to feel in control of the system, take appropriate actions to reach their goal, and ultimately trust the organisation.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 2: Match between system and the real world	Level 1 - UXHP2 Level 2 - UXP2 Level 3 - UXRGP2	Information and content provided are aligned with the users' language (familiar words, phrases, and concepts), appear in a natural and logical order, demonstrate empathy and acknowledgement for users.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 3: User control and freedom	Level 1 - UXHP3 Level 2 - UXP3 Level 3 - UXRGP3	Information and content provided allow users freedom to be in control of the interaction and experience, even if they make mistakes and will need a clearly marked way out of 'trouble'.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience

Heuristic 4: Consistency and standards	Level 1 - UXHP4 Level 2 - UXP4 Level 3 - UXRGP4	Based on information and content provided, users know what to expect and how to operate the interface.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 5: Error prevention	Level 1 - UXHP5 Level 2 - UXP5 Level 3 - UXRGP5	Information and content provided prevent unconscious errors by offering suggestions, utilising constraints, and being flexible.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 6: Recognition rather than recall	Level 1 - UXHP6 Level 2 - UXP6 Level 3 - UXRGP6	Objects, actions, options are visible through the content and information provided. The user should not have to remember information from one part of the dialogue to another.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 7: Flexibility and efficiency of use actions	Level 1 - UXHP7 Level 2 - UXP7 Level 3 - UXRGP7	Catering to the needs of both experienced and inexperienced users.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 8: Aesthetic and minimalist design	Level 1 - UXHP8 Level 2 - UXP8 Level 3 - UXRGP8	Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 9: Help users recognise, diagnose, and recover from errors	Level 1 - UXHP9 Level 2 - UXP9 Level 3 - UXRGP9	Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience
Heuristic 10: Help and documentation	Level 1 - UXHP10 Level 2 - UXP10 Level 3 - UXRGP10	Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task and easy to comprehend.	1-very poor experience; 2-poor experience; 3-average experience; 4-good experience; 5-very good experience

All four researchers agreed that not all heuristics might apply to all three areas or a particular area. Hence, each researcher needed to choose the heuristics that are most relevant for each individual level. For instance, the overall analysis confirmed that heuristic 9 has not applied to any of the levels. The 5-Likert scale, with 1 indicating very poor experience and 5 - very good experience, was then applied to assess each heuristic and a related level of experience.

Measures were developed for most of the features, which are complex and subjective, to create a measurement framework for consistent analysis by multiple researchers and establish inter-rater reliability. For instance, after the pilot analysis, seven measures were developed to evaluate the RG message's positioning on the homepage. Traffic light indicators were used to assess the following two features, the extent of references to RG-specific advising groups and the extent of inclusion of COVID19-related information. Red, amber and green indicators were then translated into numeric form to assist with further statistical evaluations. To complement quantitative coding text-based responses for listing RG-specific advising groups, examples of RG messages, screenshots of the websites' homepages and RG pages, a list of RG measures other than age restriction and cross-reference with RG-advising groups were added to validate the quantitative coding for the related features.

Data analysis

Quantitative data were analysed using SPSS v26. Firstly, frequency analysis was performed to assess various features such as RG message, RG-related content, and positioning of RG-related content. Secondly, t-tests were used to examine the statistical difference between user experience with the desktop version of the gambling operators' websites and the mobile version. A one-way ANOVA was used to determine the variation between user experiences with two different interfaces of the website (desktop or mobile) and independent variables such as the gambling operator group and type of gambling activity. Qualitative observations were captured to complement the statistical analysis and provide insights into patterns and variations identified throughout the research.

Inter-rater reliability

Four researchers (EB, RB, RW and NS) independently completed the pilot and main coding for the entire sample (n=66; 100% of sample). Weekly group discussions took place to ensure that the coding template was used consistently and capture any issues which required modifications to the template. Moreover, those discussions captured qualitative observations and possible interpretation of discrepancies as well as similarities.

Intraclass correlation coefficients (ICC) were used to determine an absolute agreement between researchers (k = 4) with a two-way mixed effects model being tested. Two-way mixed effect assumes that each observation and evaluation is conducted by the same pool of researchers who were not randomly selected (Perinetti 2018). Table 4 provides details into ICC[1] results for features listed in the Table 2. Item-total statistical analysis confirmed that there was a clear discrepancy in evaluations carried out by one of the researchers (NS). Hence, decision was made to exclude these observations from the final analysis. ICC[2] results are provided for evaluations by three researchers (EB, RB and RW). It is important to note that all combination of evaluations were assessed and the ICC[2] combination of evaluations provides the highest reliability results. Moreover, none of the COVID-19 related features were included in ICC evaluation as no such information was found by any of the researchers.

Table 4. Inter-rater reliability results

Feature	ICC[1] (for 4 researchers)	95% confidence interval (for 4 researchers)	ICC[2] (for 3 researchers)	95% confidence interval

				(for 4 researchers)
VRG	0.636*	0.471 - 0.760	0.641	0.446 - 0.773
NRGLinks	0.635	0.335 - 0.793	0.828	0.713 - 0.896
NRGIcons	0.876	0.818 - 0.918	0.903	0.853 - 0.937
NRGLEI	0.909	0.867 - 0.940	0.936	0.904 - 0.959
TC	0.648	0.489 - 0.768	0.795	0.688 - 0.869
MF	0.735	0.609 - 0.827	0.827	0.740 - 0.889
CLARITYRG	0.730	0.581 - 0.830	0.775	0.617 - 0.866
FRGCHP	0.818	0.686 - 0.893	1.00	Absolute agreement
FRGCRGP	0.922	0.806 - 0.938	1.00	Absolute agreement
POSRGM	1.00	Absolute agreement	1.00	Absolute agreement
RGREF	0.870	0.811 - 0.915	0.927	0.890 - 0.953
LINKQUAL	1.00	Absolute agreement	1.00	Absolute agreement
LINKMISLEAD	1.00	Absolute agreement	1.00	Absolute agreement
AGERW	0.941	0.913 - 0.961	1.00	Absolute agreement
EARGP	0.970	0.956 - 0.980	0.966	0.948 - 0.978

Note: all figures, highlighted in yellow, show low inter-reliability scores. This means these features do no qualify for inclusion in further analysis, and, hence, will not be reported in the Findings section.

Looking through ICC[1] results, absolute agreement of 100% was achieved for the evaluation of positioning of the RG message on the home webpage, link quality to RG-specific advising groups/organisations and the credibility of the link to RG-specific advising groups/organisation misleading (ICC 1.00). The ICC was excellent for the evaluation of the number of RG link-enabled icons (ICC[1]=0.909, 0.867 - 0.940), evidence of age restriction warning (ICC[1]=0.941, 0.913 - 0.961) and ease of access to RG page (ICC[1]=0.970, 0.956 - 0.980). Good level of agreement was found for the number of RG Icons (ICC[1]=0.876, 0.818 - 0.918), format of RG content within the RG page (ICC[1]=0.893, 0.806 - 0.938) and traffic light indication on the extent of references to RG-specific advising groups (ICC[1]=0.870, 0.811-0.915). Moderate to good level of agreement was achieved for the evaluation of message framing (ICC[1]=0.735, 0.609 - 0.827) and format of RG content within homepage (ICC[1]=0.818, 0.686 - 0.893). In terms of other features listed in Table 4, despite ICC being above 0.6, the 95% confident intervals are much wider indicating that agreement amongst researchers is from fair to moderate.

ICC[2] results, show slight improvements in reliability of results. For instance, absolute agreement was achieved six features with reliability for most of features improving. ICC[2] analysis confirmed that 14 out of 15 features listed in Table 4 can be included in the overall analysis. Evaluation of the visibility of RG content demonstrates individual differences in users' ability to capture RG content within a homepage. Moreover, it required a subjective process of each researcher calculating the duration in seconds from the point the user is accessing the homepage of the website to the point he or she sees the first sign of RG content. It is evident that more *scientific methods of inquiries* are required to understand whether visibility of the RG content is affected by the positioning of the content within the homepage. This can be done with the *use of eye tracking*.

Table 5 provides ICC results for the heuristics evaluation, showing that little consensus is achieved amongst researchers when evaluating user experience with the homepage, pathway from homepage to the RG page and the RG page of the selected gambling websites. Moreover, removing evaluations made by the 4th researchers (NS) does not significantly improve the reliability . This highlights once again that more *scientific methods of inquiries* are required to evaluate usability of RG content on gambling websites.

Table 5. Inter-rater reliability results of the UX heuristics

Feature	ICC^1 (for 4 researchers)	95% confidence interval (for 4 researchers)	ICC^2 (for 3 researchers)	95% confidence interval (for 4 researchers)
UXHP1	0.442*	0.182 - 0.632	0.583	0.242 - 0.763
UXP1	0.718	0.546 - 0.826	0.624	0.307 - 0.787
UXRGP1	0.740	0.616 - 0.831	0.783	0.614 - 0.874
UXHP2	0.246	-0.90 - 0.500	0.874	0.809 - 0.919
UXP2	0.860	0.795 - 0.908	0.957	0.933 - 0.973
UXRGP2	0.882	0.825 - 0.923	0.975	0.962 - 0.984
UXHP3	0.441	0.200 - 0.627	0.514	0.274 - 0.685
UXP3	0.706	0.572 - 0.806	0.701	0.550 - 0.807
UXRGP3	0.686	0.543 - 0.793	0.750	0.625 - 0.839
UXHP4	0.447	0.197 - 0.635	0.519	0.274 - 0.690
UXP4	0.723	0.579 - 0.823	0.716	0.571 - 0.818
UXRGP4	0.729	0.605 - 0.821	0.781	0.668 - 0.859
UXHP5	-0.022	-0.22 - (-)0.471	0.582	0.373 - 0.729
UXP5	0.610	0.432 - 0.743	0.713	0.570 - 0.815
UXRGP5	0.680	0.534 - 0.789	0.683	0.523 - 0.796
UXHP6	0.405	0.158 - 0.599	0.569	0.343 - 0.724
UXP6	0.771	0.630 - 0.859	0.805	0.591 - 0.897
UXRGP6	0.837	0.763 - 0.893	0.900	0.848 - 0.936
UXHP7	0.624	0.445 - 0.754	0.754	0.623 - 0.843
UXP7	0.716	0.371 - 0.765	0.623	0.294 - 0.789
UXRGP7	0.753	0.638 - 0.838	0.754	0.628 - 0.842
UXHP8	0.571	0.371 - 0.718	0.762	0.642 - 0.847
UXP8	0.637	0.418 - 0.775	0.571	0.270 - 0.745
UXRGP8	0.669	0.508 - 0.785	0.690	0.532 - 0.801
UXHP10	0.461	0.229 - 0.640	0.483	0.219 - 0.667
UXP10	0.712	0.547 - 0.820	0.615	0.362 - 0.767
UXRGP10	0.708	0.568 - 0.809	0.710	0.552 - 0.816

*Note: all figures, highlighted in yellow, show low inter-reliability scores. These features do not qualify for inclusion within further analysis, and hence, will not be reported on in the Findings section.

In terms of heuristics evaluation for the homepage of the websites (UX area 1), ICC^1 results show that agreement amongst researchers was not achieved for any of the features. However, ICC^2 results improved agreement levels for the and for the flexibility and efficiency of use actions (ICC^2=0.754, 0.623 - 0.843), the match between system and the real world (ICC^2=0.874, 0.809 - 0.919) and the aesthetic and minimalist design (ICC^2=0.762, 0.642 - 0.847). The heuristic evaluation of the pathway from homepage to RG page (UX area 2) shows that agreement was achieved for heuristic 6: recognition rather than recall and the heuristic 2: match between system and the real world. In both ICC^1 and ICC^2 the scores are higher than 0.6 with moderate to strong results for the confidence intervals. However, ICC^2

results are much stronger. The ICC results for the last heuristic evaluation area (UX area 3) shows that agreement was stronger and consistent for the majority of heuristics (six out of nine used for further analysis), but once again with ICC^2 this improved considerably (i.e. heuristic 2) or slightly stronger (i.e. heuristic 7) results, heuristic 1 (ICC^2=0.783, 0.614 - 0.874), heuristic 2 (ICC^2=0.975, 0.962 - 0.984), heuristic 3 (ICC^2=0.750, 0.625 - 0.839), heuristic 4 (ICC^2=0.781, 0.668 - 0.859), heuristic 6 (ICC^2=0.900, 0.848 - 0.936), and heuristic 7 (ICC^2=0.754, 0.628 - 0.842).

Findings and Discussion

Differences across the sample characteristics

Overall, the analysis was conducted to identify results of the evaluations against the following: sample characteristic grouping factors, interface from which the websites were accessed (mobile versus desktop), gambling operator group (to see if there are any significant differences across the groups or within the groups) and type of gambling activity (see 'Design and Sample' sub-section under the Methodology section).

Despite initial observations by the evaluators around the difference between observations related to the interface, desktop and mobile versions of the websites, independent samples t-tests showed no statistically significant difference for any of the features depending on the interface. It is, however, important to note that visibility of RG messages, in particular time spent searching for RG messages was much longer for the mobile versions of the websites. This could be due to the size of the screen and the organisation of the information on the mobile version where it is often not possible to see the full menu of tabs and pages and it takes more time to scroll through the homepage and navigate through the website. As Table 6 shows, across four evaluators the difference in timing for searching RG messages on the desktop versus the mobile version of the websites is very minimal. Most of the desktop versions of the website use a broad and shallow navigation pattern for web design where more tabs are listed on the front homepage. Mobile versions of the gambling operators' websites are often based on the narrow and deep navigation pattern which by default requires much longer time to browse through the website and navigate to the required information - in the context of our research to the RG messages and information. For a small number of operators such as Skybet, Admiral Casino and Betfred, RG information was navigated much quicker on the mobile versions of the websites. The information architecture design usage across desktop versus mobile versions of the websites we have observed within the online gambling context is a common practice across websites in general, not just gambling websites. However, it is important to note that the narrow and deep navigation pattern quite often requires a selection of important content that users should access when browsing and accessing the website on their mobile device (Geven et al. 2006). According to Harris and Griffiths (2017), several harm-minimisation strategies including RG messaging in pop-up window form or within online content drive self-awareness and self-control. Hence, in the online gambling context we anticipate RG messaging to be qualified as an important content.

Table 6. Independent t-test analysis results for visibility records against the interface

	Interface	N	Mean	Std. Deviation	Std. Error Mean
Visibility of RG messages by Evaluator 1 (E1) – EB – in seconds	Desktop	33	9.4545	8.20096	1.42760
	Mobile	33	7.1818	4.47531	.77905
Visibility of RG messages by Evaluator 2 (E2) – RW – in seconds	Desktop	33	4.9697	2.51849	.43841
	Mobile	33	5.4242	3.38222	.58877
Visibility of RG messages by Evaluator 3 (E3) – RB – in seconds	Desktop	33	7.0000	4.02337	.70038
	Mobile	33	6.7879	3.76462	.65534
Visibility of RG messages by Evaluator 4 (E4) – NS – in seconds	Desktop	33	7.5152	5.99021	1.04276
	Mobile	33	8.0303	7.00216	1.21892

It is critical to highlight that across both types of interfaces, evaluations recorded are consistent across the sample and differences noticed i.e., positioning of RG messages. As per Figure 1, for mobile interface no RG messages were identified as positioned at the top of the homepage of the websites. However, the differences for the positioning of RG messages were not found to be statistically significant.

Figure 1. Crosstabulation analysis for the positioning of the RG messages on the homepage of the websites against the interface
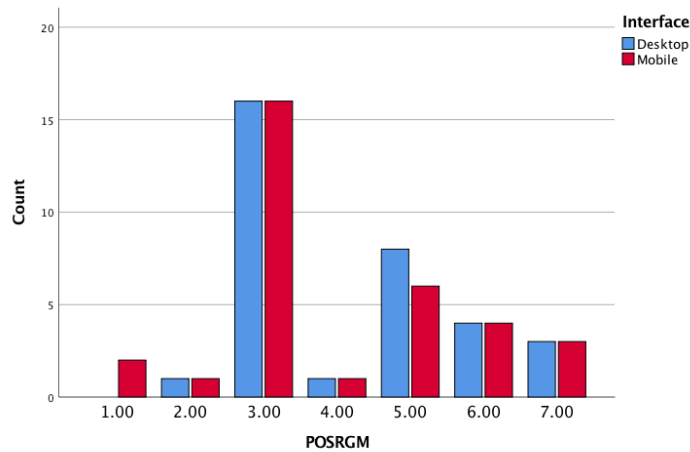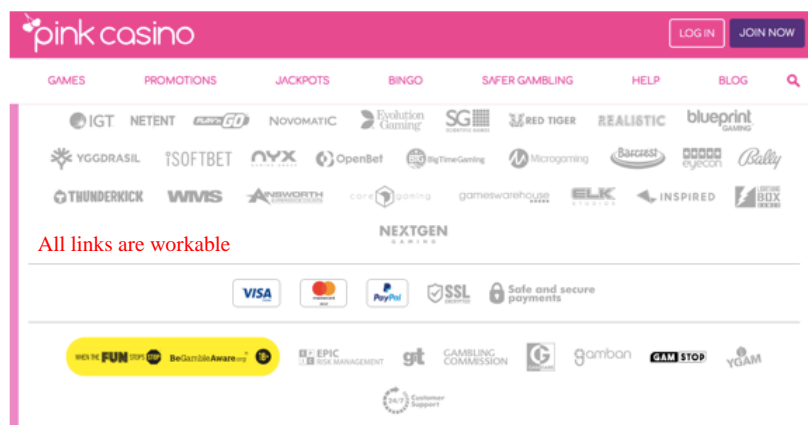

Discussion of the positioning of RG messages against the information architecture when designing the mobile and desktop versions of the website raises the question on whether RG messages could be highlighted as critical and, hence, appear at the top of the webpage for the mobile versions of the websites in order to increase visibility of RG content and messages. Clearly, adopting such recommendations could signify the prioritisation of responsible gambling and safeguarding of customers as well as clear differentiation of the messages .

We found significant difference ($p <.001$) between gambling operator groups and the types of gambling activity for the following features, the ease of access from home page to RG-dedicated page and the traffic light indication on the extent of references to RG-specific

advising groups (i.e. inclusion of websites such as www.begambleaware.org). In particular, for the majority of the operator groups it takes one click through to go from the homepage to the RG-dedicated page, across both interfaces. However, for some of the operators that are part of the Betway group, GVC Holding, William Hill and the Rank Group it takes from 2 to 4 clicks to access the RG-dedicate page from the homepage. Moreover, these operators are focusing on either bingo and casino games (2 operators with 4 clicks required to access the RG-dedicated page from the website's homepage) or betting, bingo and casino (4 operators with 2 clicks required).

In terms of extent of indicating and including links to various RG reference groups, there were only two operators, Pocketwin and Casino Superwins, who had no links or a small number of links (up to three reference to such reference group as GambleAware, Gamstop, GamCare) provided - all within the casino gambling activity category. In the case of Casino Superwins the icons to the reference groups were provided but no links attached to the icons. Links to the reference groups listed were provided separately. However, operators falling into the casino gambling activity category also performed well in terms of moderate level of links provided to the RG reference group (5 operators; four references on average to groups such as GambleAware, GamCare, Gamstop, Gambling Therapy, IBAS, YGAM, NetNanny, BetFilter, Cybersitter, BetterInternetforKids) and of high level of links (5 operators;five and or links on average to the groups mentioned above, plus others such as EPIC risk management, Gordon Moody, National Gambling Helpline, Gamblock, Gamblers Anonymous, Gamban, Dunlewey Centre, Multi-Operator Self Exclusion Scheme). Across the entire sample, a high level of links was provided by six operators in total (Mr Green, Coral, William Hill, Pink Casino, Skybet and Mansion Casino), with all icons and links being up to date and operational. Figure 2 shows the example of reference group link-based icons listed at the bottom of the homepage for the desktop version of the Pink Casino website. The majority of operators, 25 in total, had a moderate level of links to RG reference groups provided with all instances of icons and links being up to date and operational - workable links. Further information and analysis on the RG reference groups is presented in the 'RG content on gambling operator homepages' sub-section of the current section.

*Figure 2. Screenshot of the Pink Casino website's bottom of the homepage (desktop version)*

Comparison of the means using the group of operators as a sample classification factor shows some interesting results for the following features that capture the way RG messages are presented (positioning of RG message) and the content of the RG messages (message framing, type of content and number links, icons and link-enabled icons).

Statistical analysis shows that the majority of operators have multiple positioning of the RG messages, links, icons, and content across the websites' homepages. Only one gambling operator Novibet, which is part of the Novigroup Ltd, positioned all its RG messages at the top of the website's homepage with majority of the gambling operators with no other positioning. In comparison, operators of five groups (GVC Holding, Bet 365 Group, Caledonia Investments, Prism Marketing and William Hill), have their RG messages at the top and middle of the page - the most popular positioning approach amongst operators included in the analyses. Operators of In Touch Games and Gamesys Group have RG messages at the top and bottom of the page . Betway is the only operator to position RG messages in the middle of the homepage. The analysis shows that middle positioning is the least frequent choice by the operators as only two gambling groups, Novomatic Group and White Hat Gaming, positioned their RG gambling content and references at the middle and bottom of the page. Seven gambling groups (majority of the sample), Flutter Entertainment, Kindred Group, 888 Holdings, Lightcatch Ltd, The Rank Group, Camelot UK Lotteries and Tombola Ltd, positioned RG messages only at the bottom of their websites' homepages.

The above observations indicate that top and bottom positioning of the RG messages are the most frequent content display choices. Clearly top positioning may lead to the website user's immediate engagement with the RG messaging and communication if such messaging is clearly highlighted. The header of the website, top positioning, is often an important aspect of the user's journey through the website as it is the first thing the users see when they land on a website. Alternatively, bottom positioning demonstrates that the user will require to scroll through an excessive amount of content before reaching the bottom of the page. The concern in the online gambling context is that many users might go on to several other pages concerning the games and gambling products before they reach the bottom of the page and see an important RG messaging content. The website footer, which is found at the bottom of websites, often includes important information such as a disclaimer, links to relevant resources, copyright notices, contact us and about us. The footer is the last thing a user sees before leaving the website. Moreover, the footer is usually used as standardised content for important information as its' content often remains the same across all the pages. Perhaps multiple positioning throughout the page with so-called sticky banners as seen in Buzz Bingo's case (see Figure 3) could be the best solution to bring a user's attention to RG messaging throughout the website journey.

Figure 3. Screenshots of the Buzz Bingo website's RG messaging sticky banner (desktop version and mobile versions)
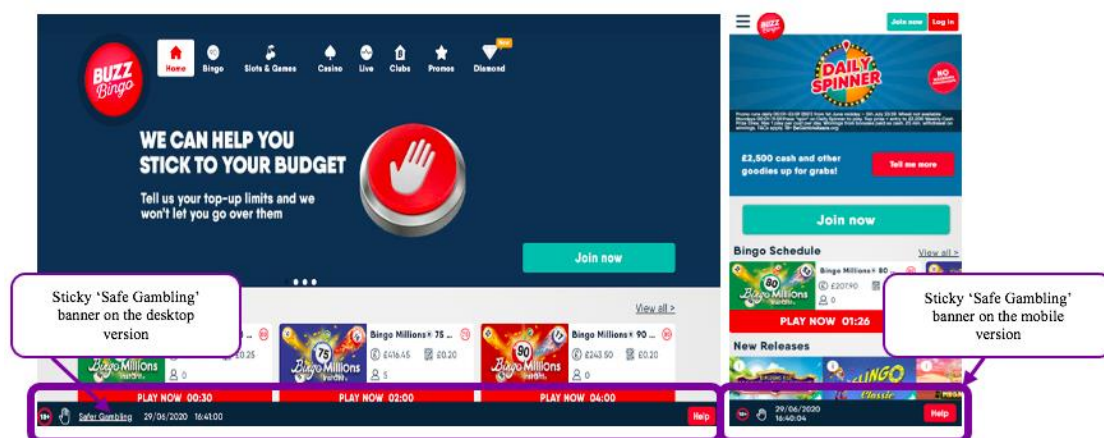
In terms of the content of RG messages, comparative analysis of means shows statistically significant difference between types of content and message framing across the gambling

operators' groups. First , the majority of operators (across thirteen groups) present a positive focus (focus on gains) when communicating about RG:

> *"Millions of customers around the world bet with us every year — they like the excitement of having a small flutter and the thrill of winning. Betting and gaming are an enjoyable, sociable and memorable way to spend time; that's why it continues to be so popular. However, unfortunately, for a small percentage of people, gambling ceases to be entertainment and can cause personal, social, financial and even health problems. It is our responsibility to help our customers gamble safely and responsibly, and reduce the risk of harm and help people who need treatment to get it. This is why we have developed a new, safer gambling strategy, 'Changing for the Bettor'. The guiding principle of our safer gambling campaign is to be the most trusted and enjoyable betting operator in the world. We are putting customers at the heart of our business by ensuring they are protected from harm while enjoying their regular flutter. For more information about our strategy, please see our policy page."*
> [RG messages found on Landbrookes Games's website, example of positive message framing]

On the other hand, operators across the following four groups, In Touch Games, Kindred Group, Caledonia Investments and William Hill, focus on losses (negative message framing) in the RG messaging:

> *"William Hill is committed to supporting Responsible Gaming. Underage gambling is an offence."*
> [RG messages found on William Hill's website, example of negative message framing]

Two groups, Novigroup Ltd and Tombola Ltd, combine both positive and negative message framing in their RG messages or present content in a way that makes it hard to determine whether the message is focusing on loses or winnings:

> *"Safe play 'Fair Gambling' and Fair gambling explained at tombola;*
> *Is the game fair? How do I know it is not fixed?;*
> *All results on tombola are randomly generated and cannot be predetermined - we use an industry standard Random Number Generator to determine the outcome of each game. The game is of the high quality you rightly expect from tombola."*
> [RG messages found on Tombola's website, example of mixed message framing]

Secondly, the majority of operators (across sixteen groups) within their RG messages aim to educate their gambling customers about RG with messages either triggering a specific action (Gainsbury et al. 2018) or self-appraisal in users (Gainsbury 2015):

> *"Dream big play small. National Lottery games should always be fun, playing in a way that is right for you. Using our handy toolkit you can set limits, take time out or set up reminders. National Lottery games should always be fun, playing in a way that is right for you. We know that extraordinary things happen when lots of people play a little. We're proud to say that around 60% of UK adults enjoy our games, so encouraging healthy play is at the heart of everything we do. The way we design our games and the tools we develop put you in control of your play."*

[RG messages found on National Lottery's website, example of educational RG content type]

As opposed to such majority, operators across the remaining groups, i.e. Bet365 Group, William Hill, Novigroup Ltd, The Rank Group, Tombola Ltd, prefer to combine both informational and educational messaging within RG communication:

"Set yourself limits: It's much more fun if you play responsibly. Click here for help and information. Please visit Begambleware.com for advice."
[RG message found on homepage of Mecca Bingo (The Rank Group) website, example of educational RG content encouraging a specific action]

"How will I know if I have a problem? A good way to gauge whether your gambling is no longer fun, and may be getting out of control, is to ask yourself the following questions: Do you find yourself reliving previous gambling experiences and thinking of ways that you can get more money to gamble? Do you ever gamble for longer, or more often, than you had planned? Have you ever chased your losses by continuing to gamble when you are on a losing streak?..."
[RG message found on RG page of Mecca Bingo (The Rank Group) website, example of educational RG content encouraging self-appraisal]

Finally, we found a statistically significant difference between various gambling operators' groups regarding the format of RG content on both homepage and RG page, as well number of links, icons and link-enabled icons on the homepages. The majority of gambling operators' groups present RG content in the form of text and icons. However, some operators such as Mr Green use multiple formats such as text, icons, links and even videos and quizzes (see Figure 4).

Figure 4. Screenshot of the Mr Green website's RG video and quiz content formats presented on the RG-dedicated page
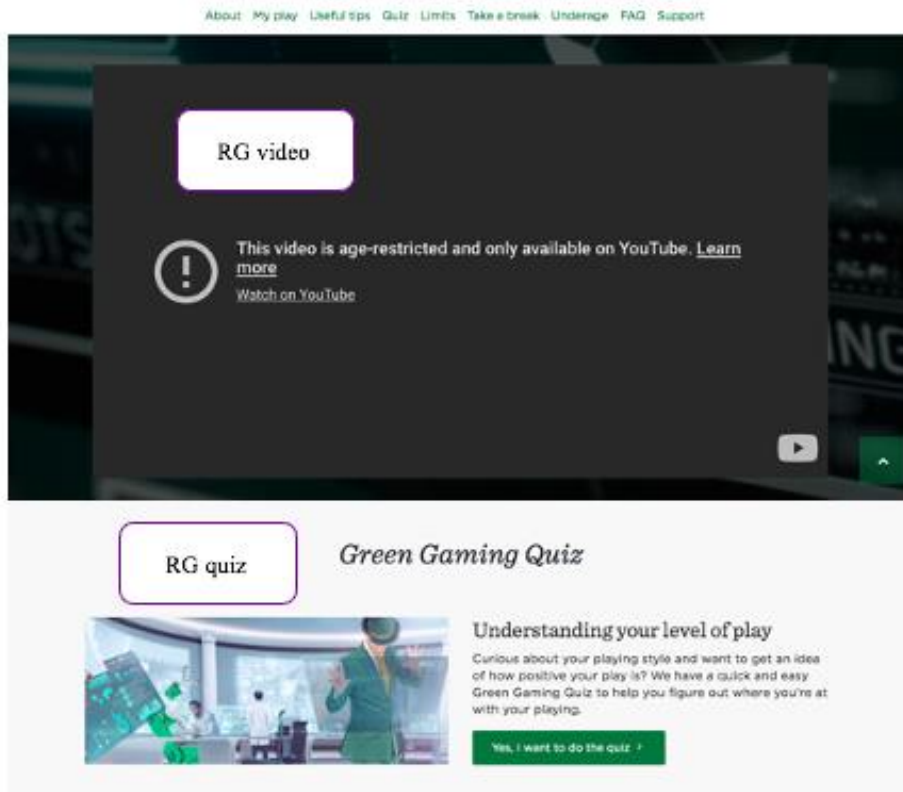
Across all of the operators, the average number of RG links, icons and link-enabled icons presented on the website's homepage is 5 (see Table 7).

Table 7. Frequencies analysis for the number of RG-related links, icons and link-enabled icons

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NRGLinks	66	.00	10.00	5.7273	2.50668
NRGIcons	66	.00	10.00	5.2626	1.73108
NRGLEI	66	.00	9.00	4.7828	2.04270
Valid N (listwise)	66				

However, it is important to note that the mean figure for the link-enabled icons is lower which shows that in some cases RG icons are static images (e.g. Casimba and Pocketwins, as shown in Figure 5). In some instances (e.g. Unibet) such issues occurred only in the mobile version of the homepage, where RG icons are displayed but do not provide a link to the RG support external website.

*Figure 5. Screenshots of the Casimba and Pocketwins RG non-link enabled icons*
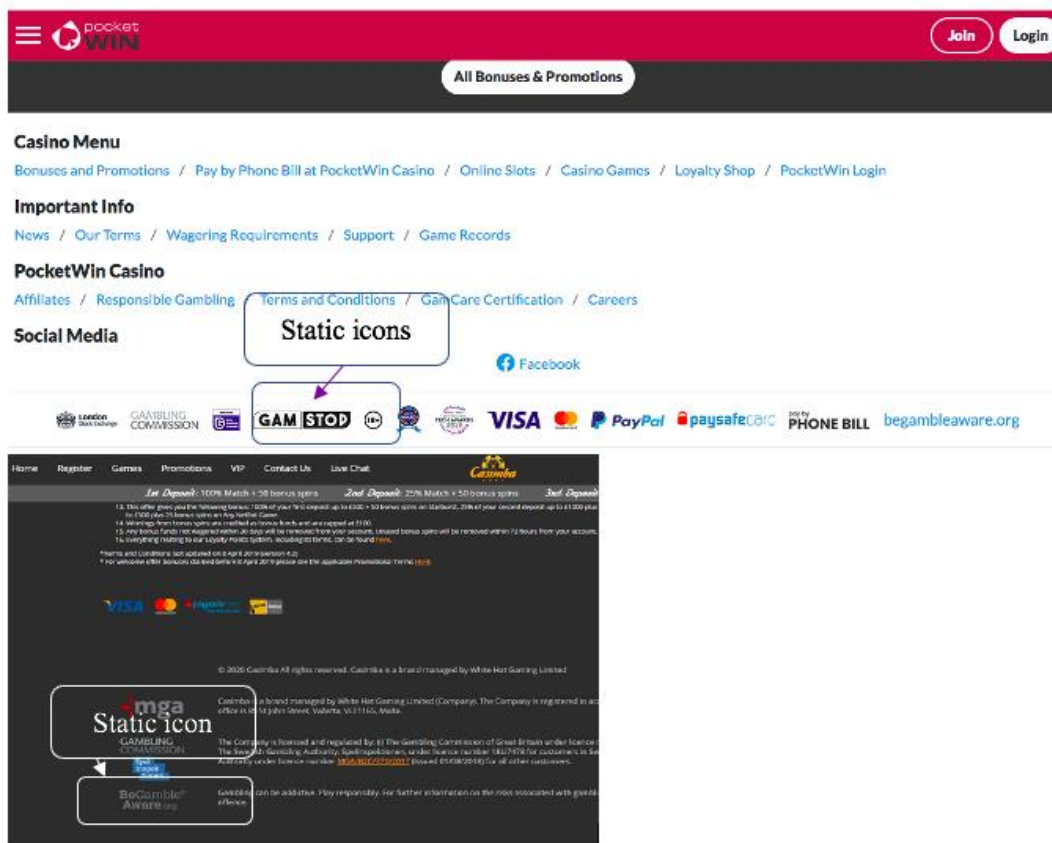
Overall, in the majority of cases these images contain links and references to the direct sources of information from the RG reference groups or lead to new content pages such as the RG-dedicated page. This page provides further detailed guidance to customers interested in learning more about RG-related matters.

In terms of number of RG links, icons and link-enabled icons, on average, the majority of the operators provide around 7 to 8 RG links, 6 icons and 6 link-enabled icons. In the cases of William Hill, LeoVegas Mobile Gaming Group, and Betway Group, the number of links and icons is above average ranging from 7 to 10 on average. It is evident, however, that icons and link-enabled icons present information in a much more aesthetically visible manner. To provide a contextual example of this, some operators provide the BeGambleAware information using the iconic yellow and black icon (e.g. Pink Casino), whilst others provide only a written icon (e.g. Casimba) or a written link only (e.g. Virginbet), as shows in illustrative screenshots of the Figure 6.

Figure 6. Screenshots of three different approaches to present the BeGambleAware information on the homepages of the websites
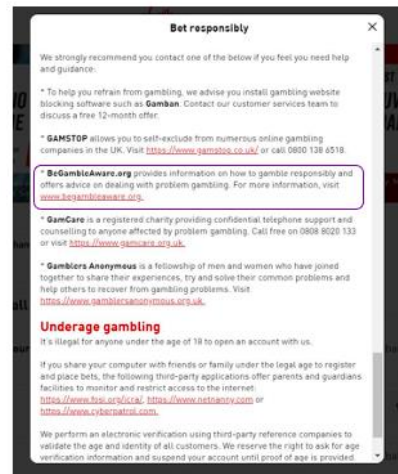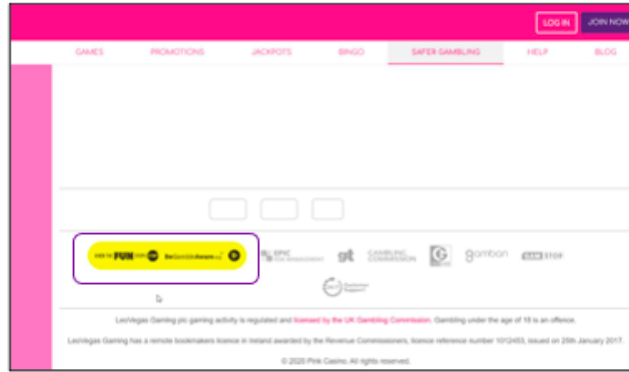
RG content on gambling operators' homepages

Visibility, 'look and feel' of RG information

Despite the visibility of the RG content feature[1] being outside of the scope of the statistical analysis due to low consistency of the observations across the evaluators and hence low reliability, it is important to note that timing for seeing the RG content within the homepages varied substantially from one website to another, with evaluators finding information within 1 second of landing on some websites, t but it taking 40 seconds on other websites. This time difference was largely due to some operators providing information more prominently (e.g. visibility at the top of the page or bottom of the page where the page footer is visible to a user immediately within the necessity to scroll down, or including such features as sticker banners and pop-up windows). As discussed in the Methodology section of this report, although the measurement of visibility using time tracking allowed evaluators to provide a quantitative measure, this approach is biased due to evaluators' increasing awareness of the whereabouts of RG information with each subsequent case as well as various subjective biases that time tracking can introduce within the contexts of the individual evaluators.

It is also important to note that in the majority of the cases, RG links are provided in a text that is much smaller than the text size within the overall website page, making the text hard to see and hidden. However, it is important to note that in a few operators' cases (e.g.

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[1] Please note that to measure this the evaluators timed themselves when landing on a webpage to track in seconds how long it took for them to allocate RG information and icons from the moment of landing on the homepages.

National Lottery and Mr Green) where RG content was in the same size and font style as the other content on the homepage, evaluators experienced some confusion and challenge in finding the RG content using visual cues and needed to process information cognitively (read the content properly) as the RG content blended in with the rest of the content on the homepage.

As discussed in the previous sub-section, there were a few differences in what content is present across two different interfaces, mobile and desktop versions. This was also evident, although in a small number of instances (e.g. Novibet), where links to RG-dedicated pages were provided in the desktop version of the homepage but missing on the mobile version of the same website.

In addition to the observations made above and in the previous sub-section, evaluators noted the role that branding can play in RG content display and communication, in terms of presenting RG information as part of the overall experience with an operator or treating RG as an add-on content, separate and distinctive from the overall customer experience with an operator and the website. In most of the cases, colour-schemes for RG content are in line with the rest of the website content (e.g. Pink Casino, William Hill, National Lottery, etc.), although quite often RG content is presented as plain standard text with critical information related to RG and RG tools. However, in some cases such as Mr Green we observed RG content and experience to be integrated within 360 view and the journey of a gambling customer. The 'Green Gaming' concept is well embedded within the overall look and feel of the website as well as branding (see Figure 7).

Figure 7. Screenshot of the Green Gaming feature presented on the homepage of the Mr Green's website, positioned in the middle of the homepage
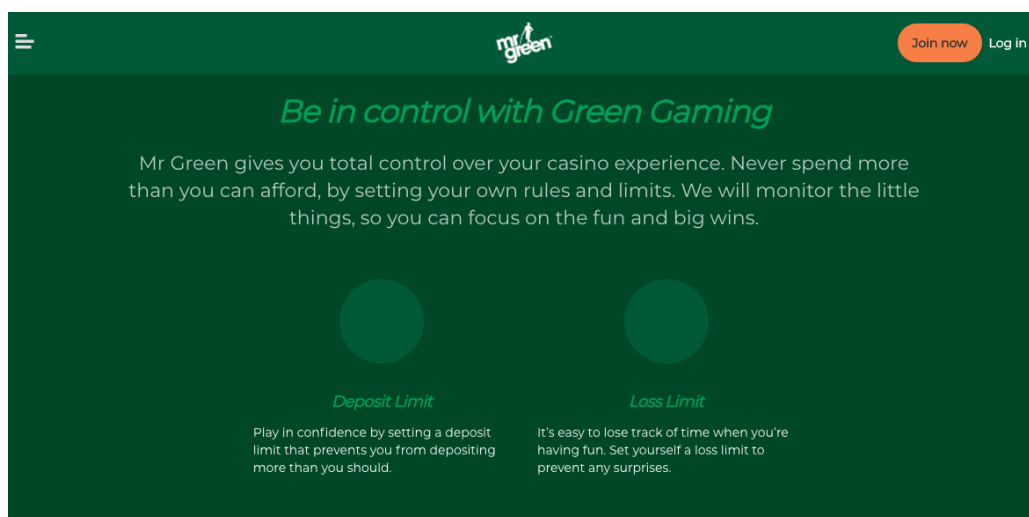

On one hand, integration of RG content to such extent can cause confusion in a user's mind and mislead them from treating RG as important matter. On the other hand, positioning and embedding RG within the overall gambling experience may lead to a safer gambling experience where RG information and tools are used by the customers effectively and not seen as features that disrupt an experience. Colours and other branding properties could have an impact on overall user experience of the gambling customers; however, this area of research deserves further in-depth attention and investigation.
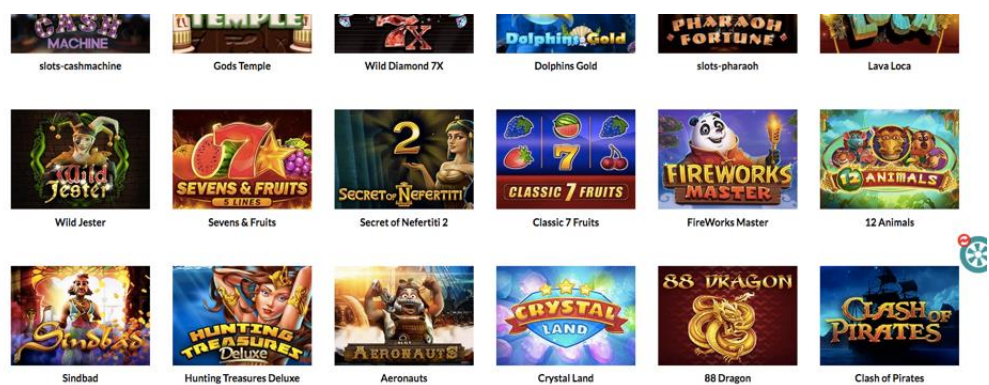
Age restrictions warning messages and icons

All operators excluding Casino Superwins (see Figure 8) provide users with 18+ (or 16+ in the case of the National Lottery), age restriction rating/warning across both mobile and desktop interfaces and across both homepages and RG-dedicated pages.

*Figure 8. Overall results for the age restriction message and icon presentation*
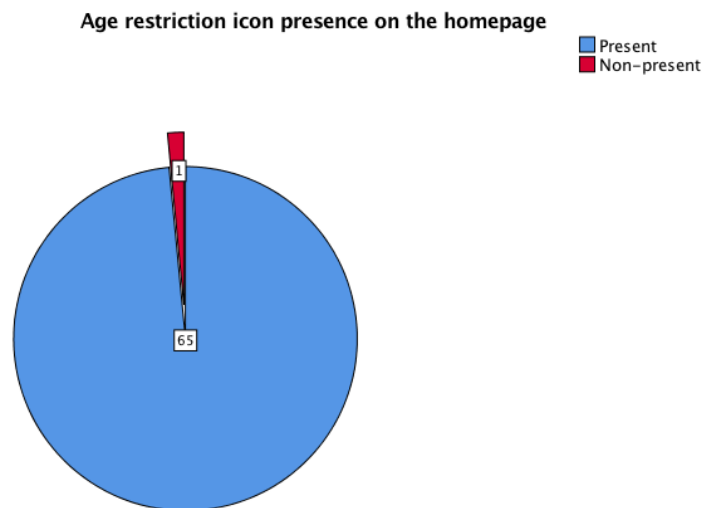
Casino Superwins do not provide an 18+ age restriction rating/warning on their desktop or mobile pages (see Figure 9a). It is also surprising that this warning does not appear on any of the pages across the website. However, we revisited the Casino Superwins website six months after the analysis [January 2021] and this warning is now included within the website's footer (see Figure 9b).

Figure 9. Age restriction presence on the Casino Superwins website across two time periods, a) July 2020 and b) January 2021
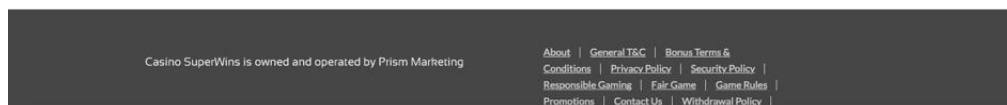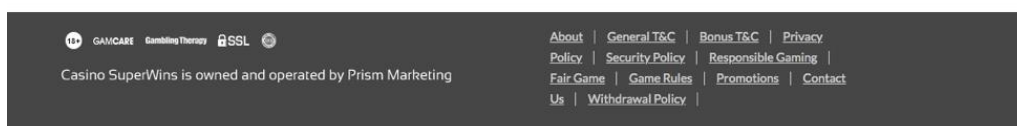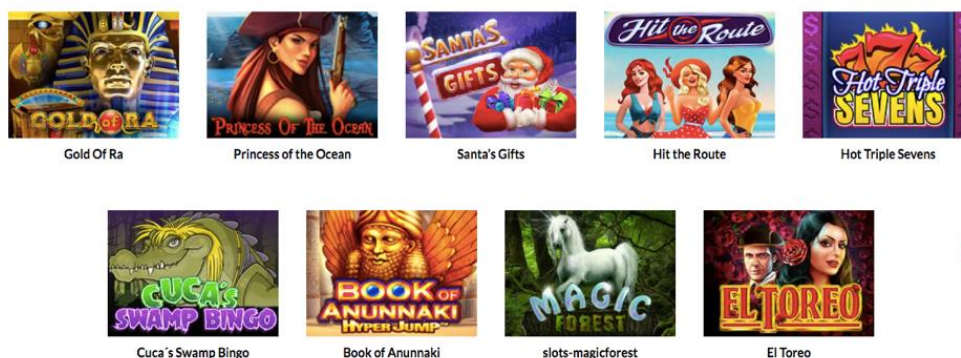
b)

Other harm reduction messages and icons, pathway through to RG-dedicated page

In addition to the age restriction rating/warning icon, gambling operators use various brand icons for the RG-related organisations, as discussed in the previous sub-section. Table 8 provides a list of all the RG-related reference groups or organisations that evaluators have noted across the website footers. From the list it is evident that three reference groups (GambleAware, GamStop and GamCare) are the most prominent across gambling operators we have analysed. Many references groups such as i.e. Gambling Commission, National Gambling Helpline are also popular across the UK-licensed gambling operators indicating the wide scope of reference groups that are focused on regulating gambling (i.e. Gambling Commission), responsible gambling features (i.e. BetFilter), gambling health and peer support (i.e. National Gambling Helpline and Gambling Therapy) and targeted gambling support and education (i.e. YGAM). The majority of operators provided links to external RG-related support pages, which worked well. The exception to this was the link provided by https://www.virginbet.com/ which was slow to open. For those operators that provided working links to RG information, all provided the expected information, which was not considered misleading in content and information.

Table 8. List of the RG-related organisation or reference groups, links, icons or linked-enabled icons to which are listed on the website pages

RG-relates organisation or reference group	Level of reference (low to high)
BeGambleAware / GambleAware	High
GamCare	High
GamStop	High
Gambling Commission	Moderate
Gambling Therapy	Moderate
IBAS (International betting integrity association)	Moderate
keepitfun.rank.com	Moderate
National Gambling Helpline	Moderate
YGAM (Young Gamers & Gamblers Education Trust)	Moderate
NetNanny	Moderate

BetFilter	Moderate
Cybersitter	Moderate
BetterInternetforKids	Low
Trustwave	Low
betblocker.org	Low
safergamblingstandard.org.uk	Low
spelinspektionen.se/en/	Low
EPIC risk management	Low
Gamblers Anonymous	Low
Gordon Moody	Low
Gamblock	Low
Gamban	Low
Dunlewey Centre	Low
Multi-Operator Self Exclusion Scheme	Low
MGA (Malta Gaming Authority)	Low

Looking through individual operators' cases it is important to highlight one example of the poor practice in displaying RG-related information on the homepage. At the time of the analysis, Casino Superwings did not provide any icons and links to external RG-related organisations and reference groups (see Figure 9a). Pocketwin displayed icons to RG-related organisations and reference groups but these icons were not link-enabled, preventing the users to click through and access websites for such organisations in order to find more information on available support and remit of such organisations (see Figure 10).

Figure 10. List of non-linked enabled icons on the homepage of the Pocketwin website
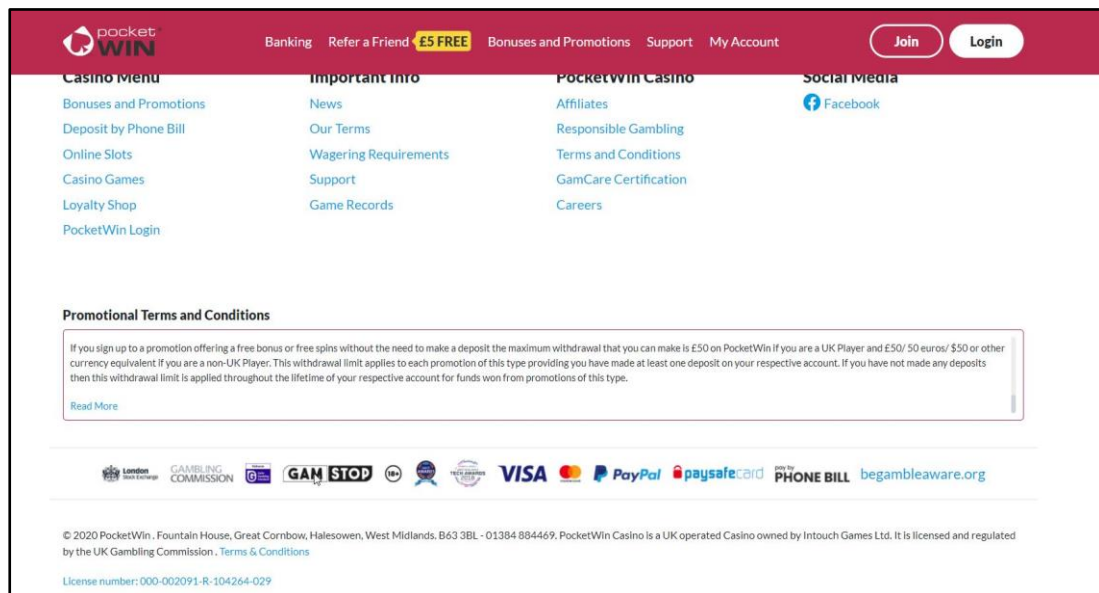

RG-dedicated pages

Ease of access to the RG-dedicated page

Overall, ease of access to RG-dedicated page was generally good in terms of number of clicks: for the majority of operators RG-dedicated information can be accessed with one click

through from the website's homepage, usually via a link-enabled icon or link-enabled icon. The previous sub-section discussed the fact that most operators present online harm reduction or RG messages in a variety of ways through text, icons and link-enabled icons. In many cases the actual pathway through to the RG-dedicated page is represented by the text-enabled link which takes a user to the RG-dedicated page that opens up as a separate window. However, in the case of Virgin Bet, there is a pop-up window with further RG-related information (see Figure 11).

Figure 11. Screenshot of VirginBet RG-dedicated pop-up window
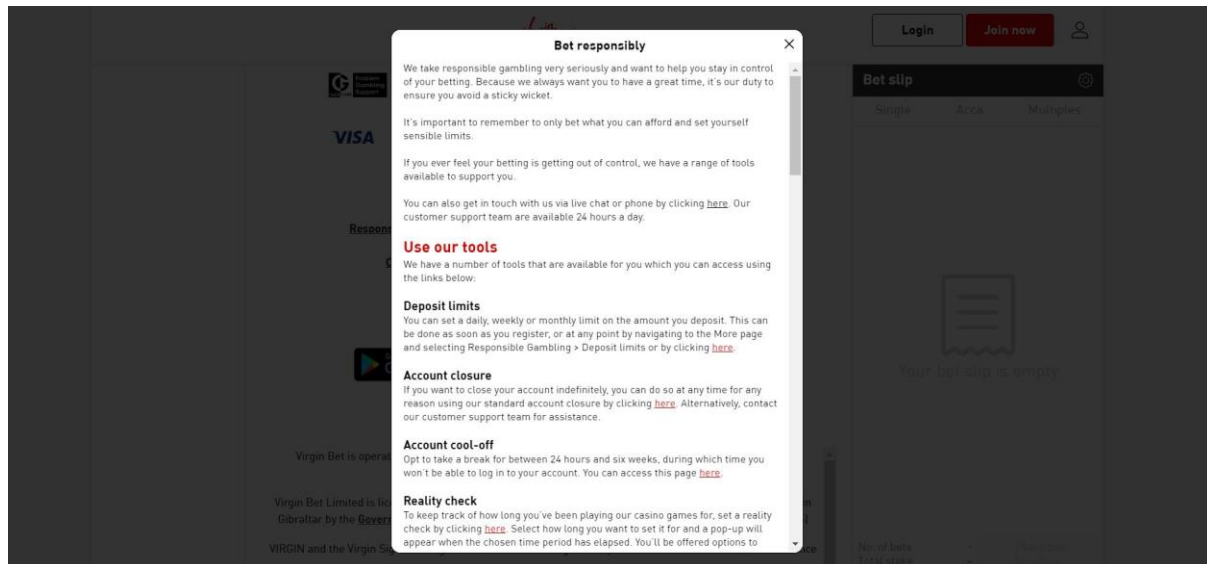
Evaluators had mixed feelings about such pop-up window. On one hand this presents quick and simple access to RG information, but on the other hand, this keeps the users on the homepage with the details to games and bets and prevents them from accessing external support pages. Pop-up windows are often deemed as 'frustrating' by the users and, therefore, they tend to be closed without being read (Bahr and Ford 2011).

In terms of individual cases of the gambling operators analysed in this study, 32Red provided access to the RG-dedicated page on the desktop version of the website's homepage; however, such access was not offered on the mobile version (see Figure 12). Otherwise, the desktop versions of the websites' homepages for all 33 operators included working link-enabled icons and/or text that directed the users to the RG-dedicated pages.

Figure 12. Screenshot of the 32Red's website's homepage, mobile version
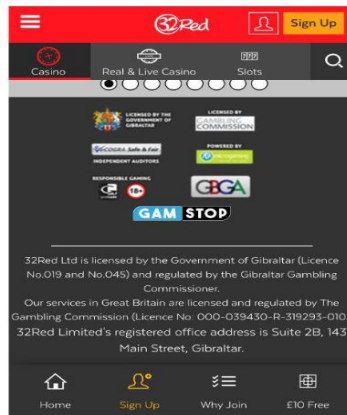
Content and its presentation

When analysing the RG-dedicated pages the evaluation focused on the overall clarity of the actual RG information presented using the rating scale (from 1 - content being unclear and confusing to 5 - content being very clear and understandable). As displayed in Figure 13 most of the operators' presented their RG related information in a more or less clear manner within the RG-dedicated pages.

Figure 13. Across evaluators' (3 evaluators) frequency distribution for the ranking of the clarity of the content across the RG-dedicated pages
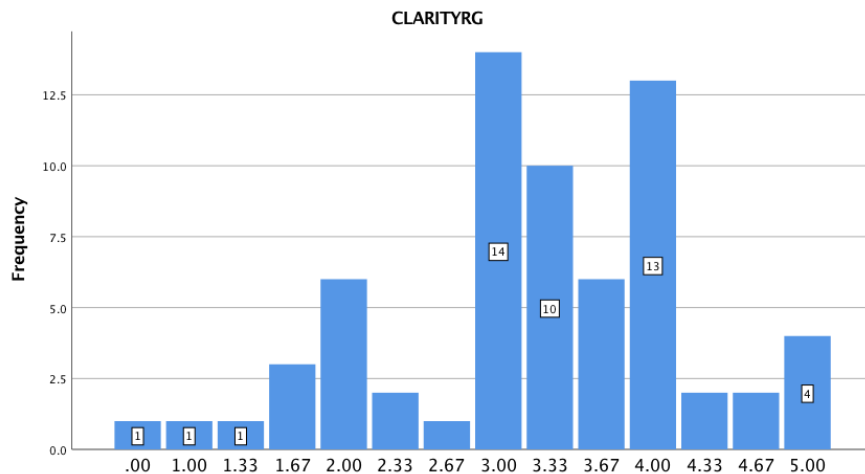
Twenty-three operators presented their RG content in a clear or very clear way. However, ten operators (888 Casino, Casino Superwins, Foxy Bingo, Tombola, Gala Bingo, 32Red, Casimba, Pocketwin, Bet UK and Sky Bingo) presented information that lacked clarity. In particular, Pocketwin, 32Red and Tombola's RG related content was found to be confusing and unclear: one evaluator ranked all of these operators at 1 (very unclear and confusing) and 2 evaluators - at 2 (unclear and confusing). In particular, Pocketwin as seen in Figure 14 presents heavily text-based content. Some of this content lacks logical structure where the user understands the purpose of the content.
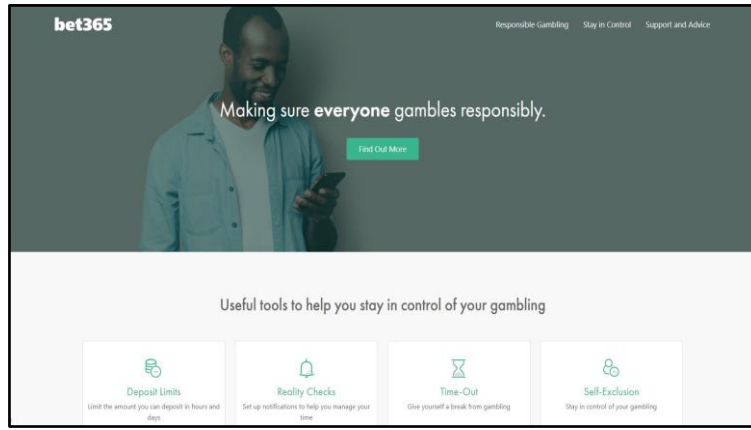
*Figure 14. Screenshot of Pocketwin's RG-dedicated page*
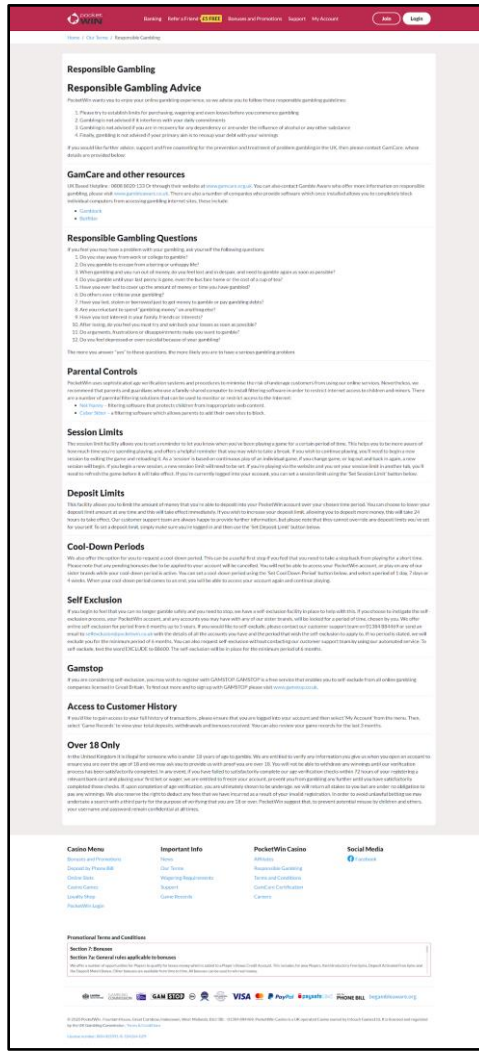
In comparison, Bet365 provides clean and simple text that is broken-down into sections enabling the user to understand individual points (see Figure 15).

Figure 15. Screenshot of Bet365 RG-dedicated page

A combination of text, links, icons and images is the most prominent mix of content formats used to communicate RG information on the RG-dedicated page. However, four operators' (Mr Green, William Hill, Paddy Power and Pink Casino), RG content, which was rated as very clear (ranked at 5), displayed a lot of information in a logical and clear manner providing content in various formats such as a mix of text with images, links and even videos and quizzes (Mr Green). On Mr Green's RG-dedicated page visitors can take a quiz that enables them to understand their gambling behaviour and habits (see Figure 16). The variety of formats on My Green's website some cases present one piece of information but communicated via various formats, showcasing that it is done to cater to users with different accessibility needs.

Figure 16. Screenshot of a multimedia content, displayed on Mr Green's RG-dedicated page
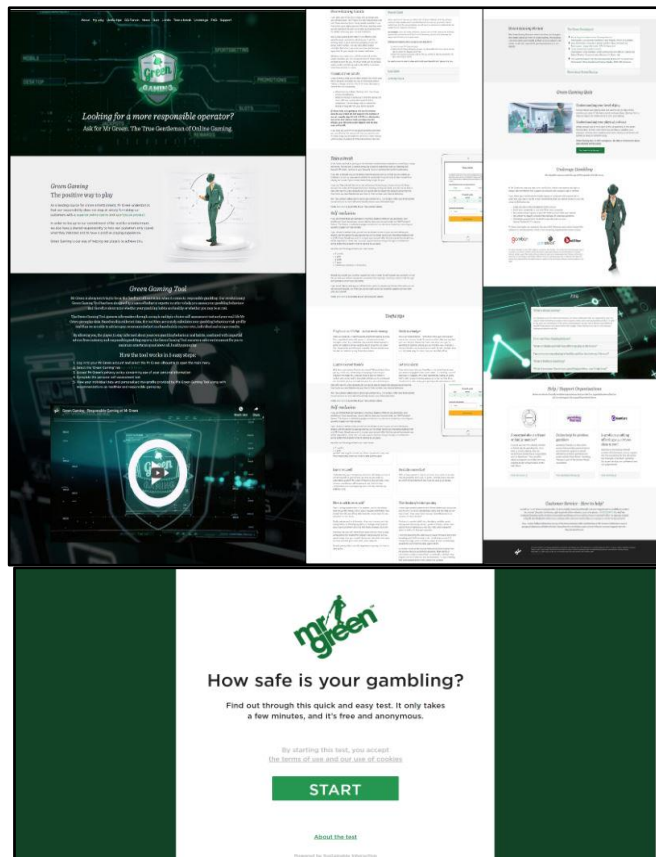
Overall, the analysis shows that the operators that provide users with clear and simple text on RG dedicated pages are focusing on making the RG content accessible, and thus easier to engage with, comprehend and digest.

In terms of the RG measures, RG-dedicated pages often contain information around various RGFs (responsible gambling features) available to gambling customers (i.e. self-exclusion, deposit limits, reality check, GamCare chat). The majority of operators list and explain the following RGFs:

- Deposit limit
- Loss limit
- Take a break
- Budget calculator
- Reality checks
- Self-exclusion
- Self-assessment.

However, two operators, Casino Superwins and Pocketwin, mention a limited number of RGFs from the list presented above. In the case of Casino Superwins the desktop version of the RG-dedicated page only mentions 'objectives, symptoms and prevention' information without mentioning any of the RGFs. Mobile versions of the Casino Superwins and Pocketwin websites do not provide a link to the RG-dedicated pages; hence, no information on RGFs is available to users accessing their websites from the mobile devices.

Message framing and type of content

As explained in the Methodology sections, message framing analysis was applied to the content found on the RG-dedicated pages. Message framing, which originates from prospect theory, suggests that the response to information and messages can be different depending how the messages are framed (Tversky and Kahneman 1974). In regard to gambling and other warning message framings, there are two categories of message framing, positive message framing where the content focuses on gains, and negative message framing where the content focuses on losses (Gainsbury et al. 2018). Moreover, warning and preventative messages can contain mixed content which might have elements of gains and losses in it - mixed message framing.

Our analysis shows (see Figure 17) that in the majority of observations (50 out of 66) message framing is evaluated as being positive. Please note that .00 indicates instances where no RG-dedicated page could be accessed via mobile devices (Casino Superwins), hence, no evaluations are provided for these observations.

Figure 17. Across evaluators' (3 evaluators) frequency distribution for message framing analysis of the content across the RG-dedicated pages

Message framing
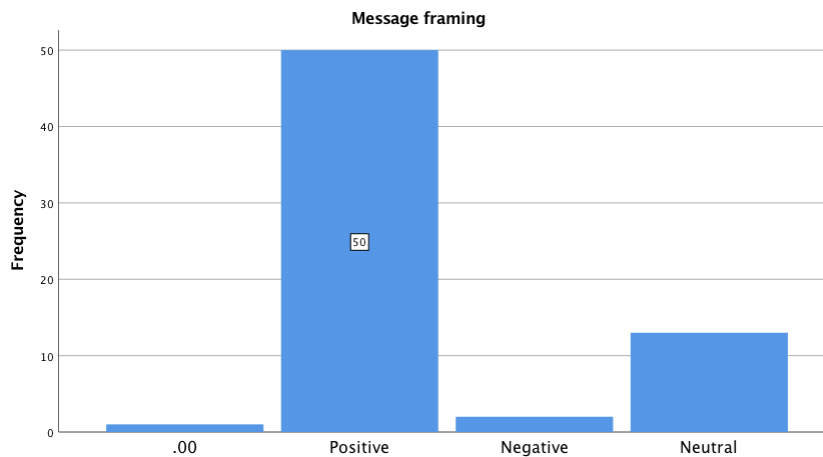
Positive messages such as 'Have a great time', and 'A way to socialise, prove your powers, we're proactive, easy-to-use tools, take action to control your play' were provided by the majority of operators. Such messages show a clear focus on benefits and positive aspects of the experience the gambling experience provides. Opposite to that is the message provided by 32Red, 'Sometimes we find customers who have problems controlling their gambling, and we try to help them as much as we can' - in this case the content focuses on harmful consequences of the gambling experience. Gainsbury et al. (2018) shows that positive message framing is a much more persuasive and effective in achieving counter-behaviour, hence, encouraging individuals to respond to such messages positively, whereas negative message framing leads to no impact or negative consequences. Based on that we can conclude that most of the operators we analysed provide RG content and information that should lead to a counter-behaviour, hence, less gambling.

There are number of operators, that include both positive and negative message framing, when communicating about RG on their RG-dedicated pages. Example of such message is:

> *We want you to have fun when you're playing on tombola.co.uk and tombolaarcade.co.uk, but it is also extremely important to us that you are in control of what you're spending. With this in mind we've created a few tools to help you stay in control of your spending*

[Tombola's RG-dedicated page]

As research suggests (Gainsbury et al. 2018) it is not clear what effect mixed message framing can lead to as it can either strengthen the counter-behaviour or with the combination of two opposite message frames lead to neutral attitude and, hence, no response.

In addition to message framing, we categorised the RG information within the RG-dedicated pages as educational, informational, or mixed. As per Gainsbury (2015) warning and preventive messages may present content that aims to generate awareness and inform (informational content), whereas the educational content triggers a specific action ('click-through' or 'have you checked you assessed your play?') or self-appraisal that encourages reflection and evaluation and is often framed as a series of questions. Our analysis shows (see Figure 18) that in the majority of cases (57 observations out of 66) RG messages, displayed by operators on their RG-dedicated pages, were deemed to be educational as opposed to informational. This shows that most gambling operators we have analysed present RG-related content that encourages self-appraisal (questions are often integrated within the RG-related

text) and action to use RGFs. Once again note that .00 in Figure 18 indicates the instance where no RG-dedicated page could be accessed via mobile devices (Casino Superwins), hence, no evaluations are provided for these observations.

Figure 18. Across evaluators' (3 evaluators) frequency distribution for RG content type analysis, across the RG-dedicated pages
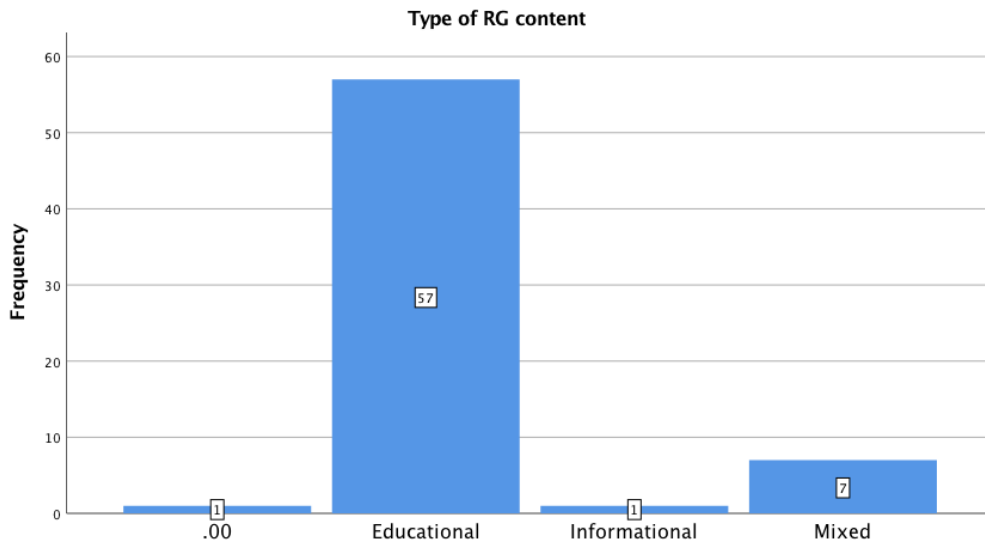
Heuristics analysis

Despite limited inter-rater reliability across the heuristic evaluations, our findings are presented below (see Table 9).

Table 9. Descriptive statistics for the heuristic analysis results across the user interface features' evaluations, results of which are found to be reliable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
UXRGP1	66	.00	5.00	4.4646	.74163
UXHP2	66	4.00	5.00	4.9293	.23031
UXP2	66	.00	5.00	4.8333	.65698
UXRGP2	66	.00	5.00	4.8939	.63558
UXRGP3	66	.00	5.00	4.1313	.91498
UXRGP4	66	.00	5.00	3.9596	.79639
UXP6	66	.00	5.00	4.3838	.66472
UXRGP6	66	.00	5.00	4.7626	.67118
UXHP7	66	3.00	5.00	4.2626	.57740
UXRGP7	66	.00	5.00	4.3586	.86392
UXHP8	66	2.00	5.00	4.1162	.74304
Valid N (listwise)	66				

It is evident that three evaluators found experience of accessing and using website homepages as good or very good (see means in Table 9) across the following features:

- Information and content provided on the homepage are aligned with the users' language (familiar words, phrases, and concepts), appear in a natural and logical order, demonstrate empathy and acknowledgement for users - all observation cases are aligned to this;
- Flexibility and efficiency in using homepage: catering to the needs of both experienced and inexperienced users - most operators provide this within their homepages;
- Aesthetic and minimalist design: all information is relevant and presented in a logical manner. In some instances information is presented in a logical manner and content is quite cluttered (i.e. the case of Casino Superwins and Pocketwin).

In terms of pathway experience analysis - pathway from the homepage to the RG-dedicated pages, it is evident that paths are visible through links presented on homepages.

Finally, when it come to the RG-dedicated pages, user experience was consistently ranked as good and very good across three evaluators, for the six out of the 10 heuristic features:

- Heuristic 1: Content and information provided allow users to feel in control of the system, take appropriate actions to reach their goal, and ultimately trust the organisation - *Good experience on average;*
- Heuristic 2: Information and content provided are aligned with the users' language (familiar words, phrases, and concepts), appear in a natural and logical order, demonstrate empathy and acknowledgement for users - *Very good experience on average;*
- Heuristic 3: Information and content provided allow users freedom to be in control of the interaction and experience, even if they make mistakes and will need a clearly marked way out of 'trouble' - *Good experience on average;*
- Heuristic 4: Based on information and content provided, users know what to expect and how to operate the interface - *Good experience on average;*
- Heuristic 6: Objects, actions, options are visible through the content and information provided. The user should not have to remember information from one part of the dialogue to another - *Very good experience on average;*
- Heuristic 7: Catering to the needs of both experienced and inexperienced users - *Good experience on average.*

This indicated that RG-dedicated pages are designed as a separate experience to the homepages of the websites and in general provide a good/positive experience for the user. However, before gambling customers find and access RG-dedicated pages, they need to locate such pages via the websites' homepages - inconsistent evaluation of the user experience related to homepages indicates that there is more work to be done on ensuring RG-content is accessible to all users experiencing gambling operators' websites. Overall, the heuristics analysis correlates well with the observations and results presented in the first three sub-section of the Findings and Discussion part.

COVID-19 communication

Results of the analysis related to display of COVID-19 related information on websites' homepages and RG-dedicated pages were quite interesting from the lack of information point of view. This was a surprise as at the time of conducting this analysis we expected to see some brief information provided regarding the impact COVID-19 had on operations displayed at least on the homepages. This was the case with companies across other sectors

such as retail, tourism and hospitality and others. Of course, operators could inform their existing customers via other direct communication means such as emails, text messages and phone calls, but we expected to see such information available to any new customer who might visit the operator's website for the first time. This requires further investigation of websites, social media posts and content as today social media applications is the primary communication channels used by organisations to communicate up-to-date and latest information to new and existing customers.

Despite the lack of COVID-19 related information, we have observed a few instances of such information provided by the following three operators, William Hill, Betway, and National Lottery. William Hill (see Figure 17) and Betway provided support information surrounding the impact of COVID-19 on their users. Moreover, the RG-dedicated page of Betway contained the COVID-19 statement at the top of the page (see Figure 18).

Figure 19. Screenshot of the William Hill's website's homepage and provision of COVID19 related information
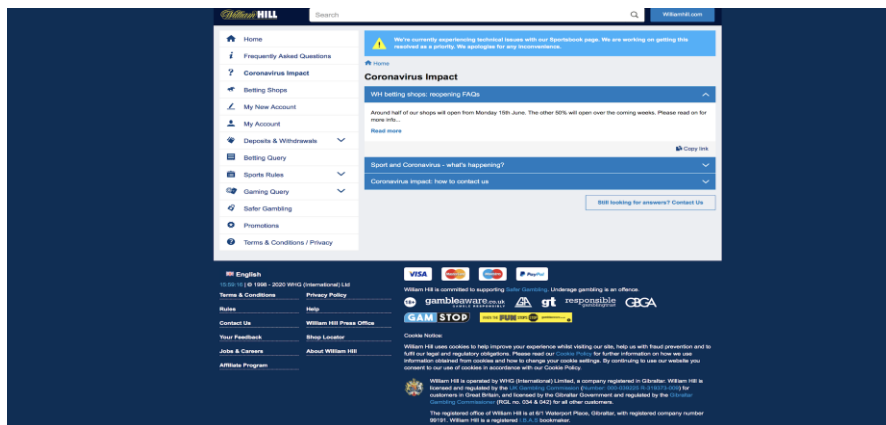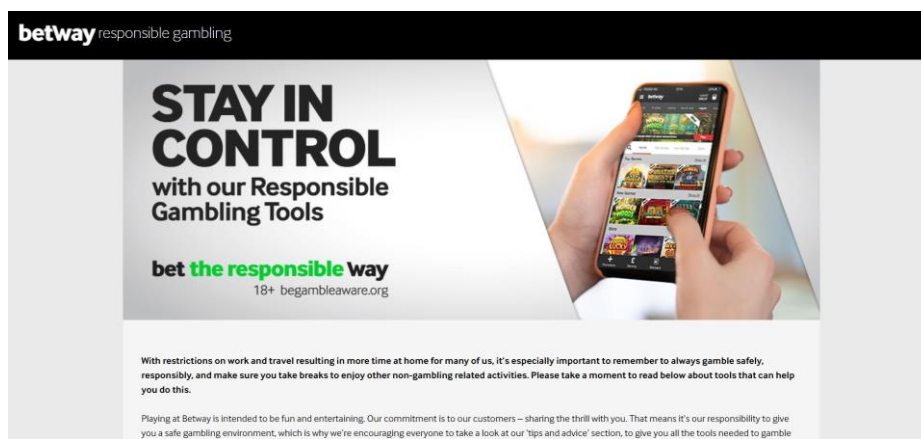

Figure 20. Screenshot of the Betway's RG-dedicate page and provision of COVID19 related statement

National Lottery, however, did not provide a COVID19 related update or support information, but information about donations being made towards COVID19 – a corporate social responsibility-related update in this case (see Figure 19).

Figure 21. Screenshot of the National Lottery's COVID19 related update found on the homepage of the website
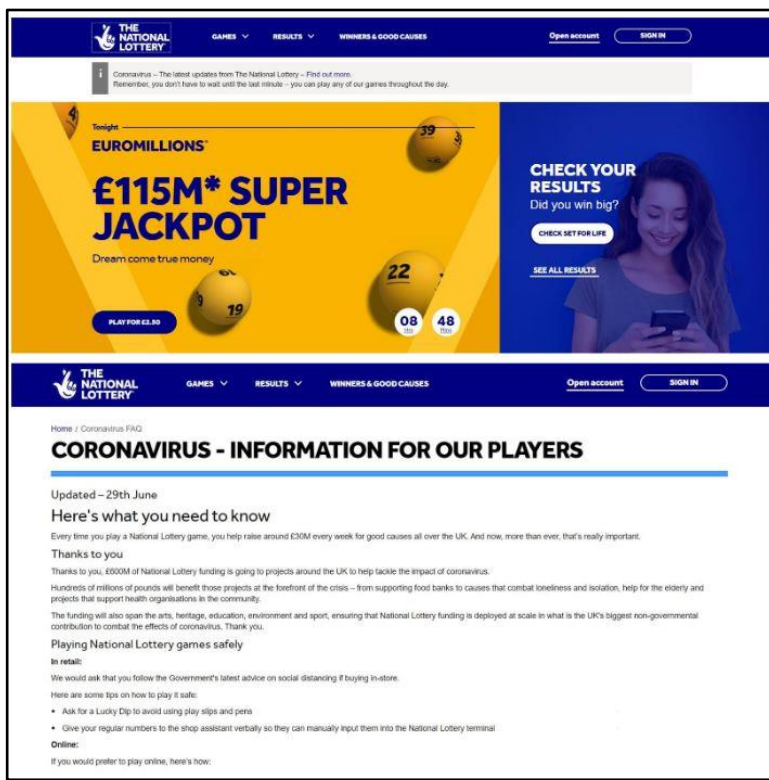
Conclusions and Recommendations

Detailed results presented in the earlier sub-sections highlight the following areas of concern:

- With a large number of operators, RG links were not displayed visibly. Operators place RG links and icons at the bottom of the website pages. This was the case for a significant number of operators analysed.
- RG links are provided in smaller text than the text size within the overall website page, making the text hard to see and hidden. This was the case for a significant number of operators analysed.
- In some instances, RG icons are displayed but do not provide a link to the RG support external website e.g. Unibet on mobile
- In a small number of cases, RG links are not supplied for internal advice on the mobile version but are provided on the desktop version e.g. Novibet
- Age restriction icons/messages not being provided (in the case of Casino SuperWins) or not being clearly made visible
- Providing RG information in a format that is not interesting and/or overwhelming to users.
- The lack of COVID-19 related content regarding help and support due to spending more time at home and the impact this may have on RG.

A number of gambling operators were identified to showcase the best practice solution when it comes to RG communication. These are Pink Casino, Mr Green, Buzz Bingo and Jackpot Village. Collectively such operators are doing the following when it comes to RG communication:

- Providing visibly clear and prominent RG messages and icons enabling users to see information quickly
- Providing immediate, obvious and usable working links for the users to follow and access RG information
- Providing the users with several opportunities to click for further RG information within the homepage of the website
- Keeping images and messages coherent with the look and feel of the overall website as opposed to making it non-conspicuous and less less appealing in comparison to the overall website's look and feel. Pink Casino and Mr Green do this particularly well.
- Providing a user with an extensive opportunity to learn more about RG by including a variety of external links to external RG-related reference groups and organisation.
- Making the information accessible to the users through a variety of different features

Based on the current study, its findings and limitations, the following is recommended for follow-up research:

- Carry out website user testing with individuals who play online games and/or with individuals who have not viewed operator websites previously
- Conduct eye-tracking analysis of the users' experience with locating RG content on home pages and engaging with the RG-dedicated pages
- Research what RG-dedicated content and information users receive, once they are registered with an operator
- Conduct a social media content analysis on availability of any COVID-19 related communication.

References

ASA (Advertising Standards Authority), 2019. CAP Code Section 16. Gambling. Available from: https://www.asa.org.uk/type/non_broadcast/code_section/16.html

Blaszczynski, A., Ladouceur, R. and Shaffer, H.J., 2004. A science-based framework for responsible gambling: the Reno model. *Journal of Gambling Studies,* 20, pp.301–17.

Bahr, G.S. and Ford, R.A., 2011. How and why pop-ups don't work: Pop-up prompted eye movements, user affect and decision making. *Computers in Human Behavior*, *27*(2), pp.776-783.

Bloch, H.A., 1951. The sociology of gambling. *American Journal of Sociology*, *57*(3), pp.215-221.

Bolat, E., Arden-Close, E. and Ali, R., 2019. Building a responsible ecosystem: examining trust and responsibility in the gambling industry. Technical Report (December 2019).

Available from: https://www.bournemouth.ac.uk/sites/default/files/asset/document/Building-a-responsible-ecosystem-examining-trust-and-responsibility-in-the-gambling-industry.pdf

Bonello, M. and Griffiths, M.D., 2019. Behavioural tracking, responsible gambling tools, and online voluntary self-exclusion: implications for the gambling industry. *Casino and Gaming International*, *38*, pp.41-45.

Botella-Guijarro, A., Lloret-Irles, D., Segura-Hera, J. V., Cabrera-Perona, V., & Moriano, J. A. (2020). A longitudinal analysis of gambling predictors among adolescents. *International Journal of Environmental Research and Public Health, 17,*1-18. https://doi.org/10.3390/ijerph17249266

Broda, A., La Plante, D.A., Nelson, S.E., La Brie, R.A., Bosworth, L.B. and Shaffer, H.J., 2008. Virtual harm reduction efforts for internet gambling: effects of deposit limits on actual internet sports gambling behavior. *Harm Reduction Journal,* 5 (27).

Challet-Bouju, G., Grall-Bronnec, M., Saillard, A., Leboucher, J., Donnio, Y., Pere, M., & Caillon, J. (2020). Impact of wagering inducements on the gambling behaviors, cognitions, and emotions of online gamblers: A randomized controlled study. *Frontiers in Psychiatry,* 11:593789. https://doi.org/10.3389/fpsyt.2020.593789

Cooney, C., Columb, D., Costa, J., Griffiths, M.D. and O'Gara, C., 2018. An analysis of consumer protection for gamblers across different online gambling operators in Ireland: A descriptive study. *International Journal of Mental Health and Addiction*, pp.1-13.

Cox, E.P. III, Wogalter, M.S., Stokes, S.L. and Tipton Murff, E.J., 1997. Do product warnings increase safe behavior? A meta-analysis. *Journal of Public Policy Marketing*, 16, pp.195–204.

Delfabbro, P.H. and King, D.L., 2020. The value of voluntary vs. mandatory responsible gambling limit-setting systems: A review of the evidence. *International Gambling Studies*, pp.1-17.

Downs, C. and Woolrych, R., 2010. Gambling and debt: the hidden impacts on family and work life. *Community, Work & Family*, *13*(3), pp.311-328.

Drosatos, G., Nalbadis, F., Arden-Close, E., Baines, V., Bolat, E., Vuillier, L., Kostoulas, T., Budka, M., Wasowska, S., Bonello, M. and Brown, J., 2018. Enabling responsible online gambling by real-time persuasive technologies. *Complex Systems Informatics and Modeling Quarterly*, (17), pp.44-68.

Gainsbury, S.M., Black, N., Blaszczynski, A., Callaghan, S., Clancey, G., Starcevic, V. and Tymula, A., 2020. Reducing Internet Gambling Harms Using Behavioral Science: A Stakeholder Framework. *Frontiers in Psychiatry*, *11*.

Gainsbury, S.M., Abarbanel, B.L., Philander, K.S. and Butler, J.V., 2018. Strategies to customize responsible gambling messages: a review and focus group study. *BMC public health*, *18*(1), p.1381.

Gainsbury, S.M., Delfabbro, P., King, D.L. and Hing, N., 2016. An exploratory study of gambling operators' use of social media and the latent messages conveyed. *Journal of Gambling Studies*, *32*(1), pp.125-141.

Gainsbury, S.M., King, D.L., Hing, N. and Delfabbro, P., 2015. Social media marketing and gambling: An interview study of gambling operators in Australia. *International Gambling Studies*, *15*(3), pp.377-393.

Gainsbury, S.M., 2015. Optimal content for warning messages to enhance consumer decision making and reduce problem gambling. *KELM (Knowledge, Education, Law, and Management)*, *11*(3), pp.64-80.

Gambling Commission, 2020. Industry Statistics - November 2020. Available from: https://beta.gamblingcommission.gov.uk/statistics-and-research/publication/industry-statistics-november-2020

Gambling Commission, 2019. Gambling participation and problem gambling, Dec 2019. Available from: https://www.gamblingcommission.gov.uk/news-action-and-statistics/Statistics-and-research/Levels-of-participation-and-problem-gambling/Gambling-participation-and-problem-gambling.aspx

Geven, A., Sefelin, R. and Tscheligi, M., 2006, September. Depth and breadth away from the desktop: the optimal information hierarchy for mobile use. In *Proceedings of the 8th conference on Human-computer interaction with mobile devices and services* (pp. 157-164).

Hakansson, A., Fernandez-Aranda, G., Menchon, J. M., Potenza, M. N., & Murcia, S. J. (2020). Gambling during the COVID-19 crisis – A cause for concern. *Journal of Addiction Medicine, 14*(4), 10-12. https://doi.org/10.1097/ADM.0000000000000690

Harris, A. and Griffiths, M.D., 2017. A critical review of the harm-minimisation tools available for electronic gambling. *Journal of Gambling Studies*, *33*(1), pp.187-221.

Hing, N., Russell, A. and Hronis, A., 2016. Behavioural indicators of responsible gambling consumption. Melbourne: Victorian Responsible Gambling Foundation. Technical report, October, pp.1-241.

Killick, E.A. and Griffiths, M.D., 2020. A Content Analysis of Gambling Operators' Twitter Accounts at the Start of the English Premier League Football Season. *Journal of Gambling Studies*, *36*(1), pp.319-341.

Ladouceur, R., Shaffer, P., Blaszczynski, A. and Shaffer, H.J., 2017. Responsible gambling: a synthesis of the empirical evidence. Addiction Research & Theory, 25 (3), pp.225-235.
Leung, T.C.H., 2019. Legitimacy-seeking strategies in the gambling industry: the case of responsible gambling. *Sustainability Accounting, Management and Policy Journal*.

Livingstone, C. and Rintoul, A., 2020. Moving on from responsible gambling: a new discourse is needed to prevent and minimise harm from gambling. *Public Health*.

Lole, L., Li, E.N., Russell, A.M., Greer, N., Thorne, H. and Hing, N., 2019. Are sports bettors looking at responsible gambling messages? An eye-tracking study on wagering advertisements. *Journal of Behavioral Addictions*, *8*(3), pp.499-507.

McMillen, J., 1996. Understanding gambling. *Gambling cultures: Studies in history and interpretation*, pp.6-42.

Mouneyrac, A., Le Floch, V., Lemercier, C., Py, J. and Roumegue, M., 2017. Promoting responsible gambling via prevention messages: insights from the evaluation of actual European messages. *International Gambling Studies*, *17*(3), pp.426-441.

Newall, P.W., Moodie, C., Reith, G., Stead, M., Critchlow, N., Morgan, A. and Dobbie, F., 2019. Gambling marketing from 2014 to 2018: A literature review. *Current Addiction Reports*, *6*(2), pp.49-56.

Nielsen, J., 1994. Usability inspection methods. In CHI '94 Conference Companion on Human Factors in Computing Systems, pp.413–414.

Parke, A., Harris, A., Parke, J., Rigbye, J. and Blaszczynski, A., 2015. Responsible marketing and advertising in gambling: A critical review. The journal of gambling business and economics, 8 (3), pp.21-35.

Parke, J., Wardle, H., Rigbye, J. and Parke, A., 2012. Exploring social gambling: Scoping, classification and evidence review.

Rothman, A.J., Bartels, R.D., Wlaschin, J. and Salovey, P., 2006. The strategic use of gain- and loss-framed messages to promote healthy behavior: how theory can inform practice. Journal of Communication, 56, pp.202–220.

Tetrevova, L. and Patak, M., 2019. Web-based communication of socially responsible activities by gambling operators. *Journal of gambling studies*, *35*(4), pp.1441-1455.

Tversky, A. and Kahneman, D., 1974 Judgment under uncertainty: Heuristics and biases. *Science,* 80(185), pp.1124–31.

Weder, F. and Karmasin, M., 2017. Communicating responsibility: Responsible communication. In *Handbook of Integrated CSR Communication* (pp. 71-86). Springer, Cham.

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