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An investigation into social media marketing of gambling within Great Britain, its impact upon behaviour and the potential for effective safer gambling promotion.

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PhD

2021

An investigation into social media marketing of gambling within Great Britain, its impact upon behaviour and the potential for effective safer gambling promotion.

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HOUGHTON**

A thesis submitted in partial fulfilment of the requirements of the University of Northumbria at Newcastle for the degree of Doctor of Philosophy

Research undertaken in the Faculty of Health and Life Sciences and in collaboration with GambleAware

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Abstract

Background: There is a growing awareness of gambling as a public health issue in Great Britain, whereby harm occurring from gambling extends beyond individuals with a diagnosis of gambling disorder. Gambling marketing has been highlighted as something which may contribute towards gambling harm. The gambling industry in Great Britain is placing increasing focus upon marketing their products on social media. However, minimal research has focused on how gambling is marketed on social media in Great Britain or how bettors respond to such marketing.

Methods: An observational approach was taken within the first two studies in order to assess: the types of content included within gambling marketing on social media, the underlying messages of such content, the types of bets advertised and the success of advertised bets. An interpretative phenomenological analysis was carried out upon qualitative data from 10 frequent gamblers to explore how they think about gambling marketing. Two quantitative, online experimental studies were also carried out to assess how regular bettors respond to examples of advertisements on social media and whether social media can be used to effectively promote safer gambling.

Findings: Concerns were highlighted about both the frequency and content of social media marketing. Bets included within marketing were largely unsuccessful and simulation data highlighted that the chances of making money upon advertised bets decreased as the number of bets included within the simulations increased. Gambling affiliate marketing was highlighted as a specific concern, given their large number of direct advertisements and their positioning as 'betting communities'. Bettors were found to place increased confidence in affiliate marketing for specific types of bets. They also perceived marketing as something that they could take advantage of to increase their chances of winning, whilst acting as a risk factor for those perceived as being vulnerable. Receiving safer gambling messages on social media for two weeks led to a reduction in gambling behaviour compared to the previous two weeks, however further research is needed to clarify whether the messages were responsible for the observed changes.

Conclusions: Findings highlight numerous ways in which social media marketing has the potential to contribute towards gambling harm. Increased regulation of both operator and affiliate marketing is required to ensure such marketing is conducted in an open and safe manner.

List of Contents

Chapter 1. Background	1
1.1. Gambling in Great Britain	1
1.1.1. Levels of Gambling in GB	1
1.1.2. Legislation of Gambling within GB.....	2
1.2. Gambling Disorder	3
1.2.1. <i>History of disorder</i>	3
1.2.2. <i>Diagnosis</i>	4
1.2.3. <i>Prevalence</i>	5
1.2.4. <i>Comorbidity</i>	6
1.2.5. <i>Aetiology</i>	6
1.2.6. <i>Cognitive Distortions</i>	7
1.3. Gambling as a Public Health Issue	8
1.3.1. <i>Gambling-related harm</i>	8
1.3.2. <i>Scale of gambling-related harm</i>	9
1.3.3. <i>Types of gambling-related harm</i>	10
1.3.4. <i>Factors contributing to gambling-related harm</i>	10
Chapter 2. Literature Review + Aims	13
2.1. Gambling Marketing	13
2.1.1. <i>Television Advertising</i>	13
2.1.2. <i>Gambling and Sport</i>	18
2.2. Gambling and Social Media	19
2.2.1. <i>Social Media Marketing</i>	19
2.2.2. <i>Regulation of Social Media Marketing</i>	20
2.2.3. <i>International Research on Social Media Marketing</i>	21
2.2.4. <i>Affiliate Marketing</i>	23
2.3. Social Media and Safer Gambling Promotion	26
2.3.1. <i>Safer Gambling Strategies and their Effectiveness</i>	26
2.3.2. <i>Safer Gambling Marketing and Social Media</i>	27
2.3.3. <i>Safer Gambling Messaging</i>	29
2.4. Thesis Aims and Rationale	34
Chapter 3. Study 1 – How is gambling portrayed and marketed on social media in Great Britain?	37
3.1. Abstract	37

3.2. Introduction	39
3.3. Method - Study 1a	41
3.3.1. <i>Sampling Procedure</i>	41
3.3.2. <i>Analysis Procedure</i>	42
3.4. Results - Study 1a	43
3.4.1. <i>Sample Characteristics</i>	43
3.4.2. <i>Content of Posting</i>	45
3.5. Discussion – Study 1a	51
3.5.1. <i>Summary of Findings</i>	51
3.5.2. <i>Contribution to Existing Literature</i>	52
3.5.3. <i>Evaluation of Current Study</i>	54
3.5.4. <i>Future Directions</i>	55
3.5.5. <i>Conclusions</i>	56
3.6. Method – Study 1b	57
3.6.1. <i>Analysis Procedure</i>	57
3.7. Results and Discussion – Study 1b	58
3.7.1. <i>Betting is exciting</i>	61
3.7.2. <i>Betting is a skill</i>	64
3.7.3. <i>Betting is risky</i>	66
3.8. Conclusion – Study 1b	67
3.8.1. <i>Summary of Findings</i>	67
3.8.2. <i>Evaluation of Strengths and Limitations</i>	68
3.8.3. <i>Future Directions</i>	69
Chapter 4. Study 2 – What bets are advertised on social media in Great Britain and how successful are they?	70
4.1. Abstract	70
4.2. Introduction	72
4.3. Method	74
4.3.1. <i>Sampling Procedure</i>	74
4.3.2. <i>Analysis Procedure</i>	75
4.4. Results	77
4.4.1. <i>Bets Advertised</i>	77
4.4.2. <i>Bet Success</i>	79
4.4.3. <i>Simulation</i>	81
4.5. Discussion	82
4.5.1. <i>Summary of Findings</i>	82

4.5.2.	<i>Contribution to Literature and Policy Implications</i>	83
4.5.3.	<i>Evaluation of Study</i>	87
4.5.4.	<i>Future Research</i>	89
4.5.5.	<i>Conclusion</i>	89
Chapter 5. Study 3 – How do gamblers respond to bets advertised on social media depending upon account type and bet complexity?		91
5.1.	Abstract	91
5.2.	Introduction	93
5.3.	Method	95
5.3.1.	<i>Design</i>	95
5.3.2.	<i>Participants</i>	96
5.3.3.	<i>Materials</i>	98
5.3.4.	<i>Procedure</i>	102
5.4.	Results	103
5.4.1.	<i>Online Experiment – Treatment of Data</i>	103
5.4.2.	<i>Online Experiment - Findings</i>	106
5.4.3.	<i>Predictors of PGSI scores</i>	107
5.5.	Discussion	110
5.5.1.	<i>Summary of Findings</i>	110
5.5.2.	<i>Contribution to Existing Literature</i>	110
5.5.3.	<i>Evaluation of Current Study</i>	113
5.5.4.	<i>Future Directions and Conclusions</i>	114
Chapter 6. Study 4 – How do gamblers think about gambling marketing and its impact upon gambling behaviour?		116
6.1.	Abstract	116
6.2.	Introduction	117
6.3.	Method	119
6.3.1.	<i>Participants</i>	119
6.3.2.	<i>Data collection</i>	121
6.3.3.	<i>Data analysis</i>	122
6.4.	Results	124
6.4.1.	<i>Summary</i>	124
6.4.2.	<i>Theme 1 - Taking advantage of gambling marketing for personal gain</i> ...	124
6.4.3.	<i>Theme 2 - Gambling marketing as a test of a gambler’s self-control</i>	128
6.4.4.	<i>Theme 3 - Safer gambling marketing lacks effectiveness</i>	132
6.5.	Discussion	135

6.5.1.	<i>Summary of findings</i>	135
6.5.2.	<i>Contribution to existing theory and literature</i>	136
6.5.3.	<i>Evaluation of current study</i>	141
6.5.4.	<i>Future research suggestions</i>	143
6.5.5.	<i>Conclusions</i>	143
Chapter 7. Study 5 – How successful is safer gambling promotion on social media and what type of messaging is most effective?		145
7.1.	Abstract	145
7.2.	Introduction	147
7.2.1.	<i>Aims and Hypotheses</i>	149
7.3.	Method	151
7.3.1.	<i>Design</i>	151
7.3.2.	<i>Participants</i>	151
7.3.3.	<i>Materials</i>	155
7.3.4.	<i>Procedure</i>	158
7.4.	Results	159
7.4.1.	<i>Treatment of data</i>	159
7.4.2.	<i>Reach of safer gambling messages on social media</i>	160
7.4.3.	<i>Impact upon behaviour and intention to change</i>	162
7.4.4.	<i>Qualitative Feedback on Impact of Messages</i>	165
7.4.5.	<i>Predictors of PGSI Scores</i>	170
7.5.	Discussion	173
7.5.1.	<i>Summary of findings</i>	173
7.5.2.	<i>Contribution to existing literature</i>	175
7.5.3.	<i>Evaluation of current study</i>	179
7.5.4.	<i>Future Directions</i>	181
7.5.5.	<i>Conclusions</i>	182
Chapter 8. Overall Discussion		184
8.1.	Summary of Findings	184
8.2.	Contribution to Existing Literature	186
8.3.	Policy Implications	191
8.4.	Evaluation of Thesis Strengths and Limitations	192
8.5.	Future Research	195
8.6.	Conclusions	198

List of Tables

<u>Table 1</u> - Number of followers, number of posts during the two week data collection period and the mean number of retweets per post for each sports betting operator and gambling affiliate Twitter account [chapter 3].....	45
<u>Table 2</u> - Number of tweets made within each content category by sports betting operators and gambling affiliates. Percentages refer to the percentage of operators' or affiliates' tweets within each content category. Z-scores represent standardized residuals [chapter 3].....	46
<u>Table 3</u> – Advertised bet frequency, median odds of advertised bets and percentage of advertised bets which are price boosted for each operator and affiliate account [chapter 4].....	77
<u>Table 4</u> – Percentage of single, multiple and single game multibets advertised per operator and affiliate account [chapter 4].....	78
<u>Table 5</u> – Information on success of advertised bets and the frequency of commenting upon bet success after the bet had been advertised for each gambling operator and gambling affiliate Twitter account [chapter 4].....	79
<u>Table 6</u> – Percentage of simulations resulting in profit, median returns from a one-unit stake and mean percentage losses within 10,000 simulations of 14, 28, 70 and 140 randomly selected bets from operator, affiliate and both account types [chapter 4].....	81
<u>Table 7</u> – Participant demographic information including % of participants by PGSI category, age, employment status, ethnicity, education and relationship status [chapter 5].....	97
<u>Table 8</u> – Chosen bets which participants were asked to rate during the study [chapter 5].....	99
<u>Table 9</u> - Mean (SD) responses on each DV (confidence, stake and likelihood to bet) by account type (operator or affiliate) and bet complexity (low, medium, high), N=100 [chapter 5].....	105
<u>Table 10</u> - Findings from regression model 1 predicting PGSI scores [chapter 5].....	108
<u>Table 11</u> - Findings from regression model 2 predicting PGSI scores [chapter 5].....	109

<u>Table 12 – Participant demographic information for age, gender, employment status, ethnicity, relationship status and PGSI score [chapter 6]</u>	<u>121</u>
<u>Table 13 - Participant demographic information (Frequency & Percentage) by gender, employment status, highest level of education, ethnicity and relationship status per messaging condition, N= 281. [chapter 7]</u>	<u>154</u>
<u>Table 14 – Mean (SD) number of days where participants saw the safer gambling messages on social media and the number of messages seen per day by condition and overall, n=275 [chapter 7]</u>	<u>160</u>
<u>Table 15 – Table to show the number and percentage of participants who reported making changes or not making changes to their betting behaviour after seeing the safer gambling messages by condition, n=275 [chapter 7]</u>	<u>161</u>
<u>Table 16 – Mean (SD) responses on each DV (readiness to change behaviour, number of bets placed, money staked and days bet) by both experimental stage (pre-intervention and during-intervention) and experimental condition (informational, self-appraisal and emotional/self-efficacy), N=281 [chapter 7]</u>	<u>163</u>
<u>Table 17 - Findings from regression model 1 predicting PGSI scores [chapter 7]</u>	<u>172</u>
<u>Table 18 - Findings from regression model 2 predicting PGSI scores [chapter 7]</u>	<u>173</u>

List of Figures

<u>Figure 1 - A thematic map demonstrating how sports betting is presented on social media by gambling operators and affiliates in Great Britain [chapter 3].....</u>	<u>60</u>
<u>Figure 2 – An example of the created tweets shown to participants advertising one of the bets included within the study on both an operator and affiliate account [chapter 5].....</u>	<u>101</u>
<u>Figure 3 – A figure to demonstrate the different stages in participant recruitment, including the number of participants included at each stage and dropout rates [chapter 7].....</u>	<u>153</u>

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Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others. The funding for the work was provided by GambleAware.

Any ethical clearance for the research presented in this thesis has been approved. Approval has been sought and granted by the Faculty Postgraduate Ethics Committee on 07/06/2018.

I declare that the Word Count of this Thesis is 53,863 words

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Date: 24/06/2021

Chapter 1. Background

1.1. Gambling in Great Britain

1.1.1. Levels of Gambling in GB

Gambling is a popular activity within Great Britain (GB), with 57% of those aged 16 and over having gambled within the past year (Conolly et al., 2018). Of these gamblers 41% gamble at least once per week and 13% gamble more than once per week (Conolly et al., 2018). The national lottery is the most common gambling activity, with 41% of the adult population gambling on the lottery in the past year (Conolly et al., 2018). Other popular gambling activities include scratchcards (21%), offline horseracing betting (9%), online betting with a bookmaker (8%) and slot machines [6%] (Conolly et al., 2018). Gambling is more common in men than women for all gambling activities, apart from offline bingo. Despite the high levels of gambling in GB, the public perception of gambling is largely negative. Less than one-third of people view gambling as being fair and transparent, whilst 41% of people associate gambling with crime (Gambling Commission, 2018a). Additionally, over three-quarters of people believe that there are too many opportunities to gamble in current society and 71% of people believe that gambling is harmful to family life.

Despite the declining public perception of gambling, the gambling industry in GB has seen rapid expansion in recent years. Recorded Gross Gambling Yield (GGY), which refers to operator profits on staked bets, has risen from £8.3 billion in 2009 to £14.5 billion in 2018 (Gambling Commission, 2019c). Numerous explanations can

be put forward to explain why such an increase has occurred. Firstly, the rise of online gambling has greatly increased the opportunity for individuals to gamble, with gambling products being readily available on multiple devices at any given time (Deans et al., 2016). As a result, online gambling has adapted the structural characteristics of certain types of gambling from activities that are only available at a certain place and time, to activities that are constantly available to partake in. Online gambling has also provided a platform for the development of newer gambling activities, such as betting on virtual sports, e-sports, fantasy sports and skins betting (Lopez-Gonzalez & Griffiths, 2016; Macey & Hamari, 2019). Additionally, there are specific features of online gambling which could potentially lead to increased spending, such as the use of digital forms of money and the immersive, interactive environment (Gainsbury, 2015).

1.1.2. Legislation of Gambling within GB

Regulation of gambling within Great Britain is the responsibility of the Gambling Commission, which was set up under the 2005 Gambling Act. The 2005 Gambling Act was the last major act of parliament relating to gambling within Great Britain and set three main objectives for the Commission to enforce. The first objective was to prevent gambling from being a source of crime or disorder, being associated with crime or disorder, or being used to support crime. The second objective was to ensure that gambling is conducted in a fair and open way. The final objective was to protect children and other vulnerable persons from being harmed or exploited by gambling.

The Department of Digital, Culture, Media and Sport (DCMS) has been responsible for gambling policy since the Gambling Act was fully introduced in 2007, firmly framing Gambling as a leisure activity within British legislative policy. The act also

allowed gambling companies to advertise on radio and television, with some restrictions, and this led to a surge in TV advertising (Ofcom, 2013). Such a high level of advertising, combined with high levels of gambling sponsorship within sport (Bunn et al., 2018; Jones et al., 2019), have led to concerns within academic literature around the normalisation of gambling (Deans et al., 2017; Jones et al., 2019). There are also growing concerns within academic literature that the Gambling Act is no longer fit for purpose due to the vastly different gambling landscape in the current day compared to when the Act was written 15 years ago (Wardle, Reith, et al., 2019), such as the constant availability of online betting and development of new products discussed in the previous section.

1.2. Gambling Disorder

1.2.1. History of disorder

Whilst gambling is a common leisure activity in Great Britain, it can also lead to serious negative consequences. Initially added to the third edition of the Diagnostic and Statistics Manual of Mental Disorders (DSM) in 1980 as an impulse control disorder, gambling disorder was originally labelled “pathological gambling” (3rd ed.; DSM-III; American Psychiatric Association, 1980). However, the most recent edition of the DSM (5th ed.; DSM-V; American Psychiatric Association, 2013) saw the disorder renamed as gambling disorder in response to criticism of the term “pathological”, which many believed contributed towards the stigma of experiencing gambling problems (Reilly & Smith, 2013). The disorder was also reclassified in the DSM-V as an addictive disorder. This decision was primarily based on neuroscientific evidence that demonstrated similarities in brain reward activation between problem gamblers and those with substance-related addictions (Potenza,

2008). There was also genetic research that highlighted the familial risk of gambling disorder (Black et al., 2006) and evidence that gambling disorder led to many similar consequences as other addictions, such as relationship breakdown and financial problems (Grant et al., 2002).

1.2.2. *Diagnosis*

In order to be diagnosed with gambling disorder, an individual must meet four of the following nine criteria that demonstrate “persistent and recurrent problematic gambling behaviour leading to clinically significant impairment or distress” (5th ed.; DSM-V; American Psychiatric Association, 2013):

- Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
- Is restless or irritable when attempting to cut down or stop gambling.
- Has made repeated unsuccessful efforts to control, cut back, or stop gambling.
- Is often preoccupied with gambling (e.g., having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).
- Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed).
- After losing money gambling, often returns another day to get even (“chasing” one’s losses).
- Lies to conceal the extent of involvement with gambling.

- Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
- Relies on others to provide money to relieve desperate financial situations caused by gambling.

In addition to meeting those four criteria, their behaviour may also not be a result of a manic episode. Gambling disorder can be classified as being mild, moderate or severe depending on how many of the nine criteria the individual is currently meeting and is either episodic, whereby diagnostic criteria are met intermittently at multiple time points, or persistent, where individuals are consistently meeting diagnostic criteria over multiple years (5th ed.; DSM-V; American Psychiatric Association, 2013). Disordered gamblers are considered to be in sustained remission if they meet none of the criteria for 12 months, with early remission considered to be meeting no criteria for more than three months but less than 12 (5th ed.; DSM-V; American Psychiatric Association, 2013).

1.2.3. Prevalence

Previous year prevalence rates of gambling disorder range worldwide from 0.12% to 5.8%, whilst lifetime prevalence rates vary between 0.7% and 6.5% (Calado & Griffiths, 2016). Within GB, the prevalence rate of gambling disorder in the adult population has been recorded at 0.7%, which equates to roughly 340,000 people (Conolly et al., 2018). This rate is higher in those below the legal age to gamble. 1.7% of 11 to 16-year olds met the criteria for problem gambling in 2019, up from 0.7% in 2014 (Gambling Commission, 2018d).

1.2.4. Comorbidity

Such high prevalence rates of Gambling Disorder are particularly worrying due to the detrimental impact on psychosocial functioning and associations with mental health conditions (Cowlshaw & Kessler, 2016). Numerous studies have identified the high comorbidity between gambling disorder and other types of addiction, such as nicotine dependence and substance-use disorder (Lorains et al., 2011).

Research has also demonstrated there is a high comorbidity between gambling disorder and both mood and anxiety disorders (Dowling et al., 2015; Lorains et al., 2011), with disordered gamblers exhibiting more frequent suicidal thoughts (19.2% of disordered gamblers) and suicide attempts [4.7% of disordered gamblers] (Wardle, Dymond, et al., 2019). More recently, longitudinal research has highlighted the relationship between gambling disorder and comorbid conditions to be bi-directional, whereby gambling disorder can be both a cause and a consequence of other psychiatric disorders (Hartmann & Blaszczynski, 2018). In addition to the obvious financial difficulties associated with Gambling Disorder, a further major psychosocial impact of gambling disorder is the adverse effect it has upon an individual's social relationships (King et al., 2014). In particular, gambling disorder is known to severely harm family relationships and cause significant negative harm to the mental and physical health of their significant others and children (Chan, Dowling, Jackson, & Shek, 2016; Dowling et al., 2016; Langham et al., 2016).

1.2.5. Aetiology

Researchers have aimed to explain the underlying aetiology of gambling disorder. One model which accounts for the complexity of the range of different factors contributing towards gambling disorder is the pathways model of pathological gambling (Blaszczynski & Nower, 2002). It is proposed within the model that there

are three distinct groups of disordered gamblers: behaviourally conditioned problem gamblers, emotionally vulnerable problem gamblers and antisocial, impulsive gamblers. All three of the groups develop patterns of habitual gambling as a result of classical and operant conditioning, underlined by physiological arousal and distorted cognitions around gambling. However, behaviourally conditioned gamblers do not demonstrate any evidence of premorbid emotional or biological vulnerability of gambling disorder. This contrasts with emotionally vulnerable gamblers, who have a history of psychiatric disorders and biochemical imbalances that pre-dates their problematic gambling. For these gamblers, it is argued that gambling provides an emotional escape and is used as a way of modulating their negative emotions. Impulsivist gamblers similarly exhibit these emotional and biological vulnerabilities but also display high levels of impulsivity and attention deficits.

1.2.6. Cognitive Distortions

As previously mentioned, one commonality amongst the different types of disordered gamblers is the cognitive distortions displayed within their gambling behaviour. Fortune and Goodie (2012) provided a review of the cognitive distortions related to disordered gambling and highlighted the need to address such distortions when attempting to treat gambling disorder. Most cognitive distortions around gambling behaviour tend to derive from heuristics, which are defined as probability estimates within real-world decision making which are often correct and can be quickly made (Kahneman & Tversky, 1973). However, using heuristics can lead to major errors in decision making as they are not always precise estimates. This can be particularly detrimental when these errors become systematic and start to occur within regular patterns. An example of a common cognitive distortion within gambling is the gambler's fallacy. This is a term to describe when gamblers make a faulty judgement on the likelihood of a specific event occurring based on the failure

to recognise the independence of future outcomes in relation to past outcomes.

Another common cognitive distortion is inherent memory bias, where gamblers are more likely to recall recent events of wins as opposed to losses.

1.3. Gambling as a Public Health Issue

1.3.1. Gambling-related harm

In recent times there has been a shift, within the gambling literature, from a line of thinking which only attributes negative consequences of gambling behaviour to those with Gambling Disorder, to an acknowledgement that harms resulting from gambling affect a much wider range of people. This is highlighted in the definition of the term 'gambling-related harms' proposed by lead researchers in this area:

“gambling-related harms are the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society” (Wardle et al., 2018).

Such a definition highlights that gambling does not only cause harm to the individual gambler but also their family, friends and wider society. For every individual problem gambler, it has been estimated that six people are adversely impacted by their gambling behaviour (Goodwin et al., 2017). Gambling harms are also unevenly distributed across social groups. Research has demonstrated that certain demographics including being under the age of 18, living in areas of high deprivation and cultural factors, such as ethnicity, can lead to a higher incidence of gambling harms (Rogers et al., 2019). Similarly, those facing difficulty with their mental health and individuals who are unemployed also report higher levels of gambling harm (Rogers et al., 2019). There are also social costs associated with gambling, such as health costs, welfare and employment costs, housing costs and

criminal justice costs. These costs have been estimated at between £260 million and £1.16 billion per year in Great Britain (Thorley et al., 2016). However, this is considered to likely be a vast underestimate due to the quality of data available (Wardle, Reith, et al., 2019).

1.3.2. Scale of gambling-related harm

It is not only those with a clinical diagnosis of gambling disorder who experience harm from their own gambling behaviour. Gambling disorder exists on a continuum of severity which includes a population of gamblers who are classified as being 'at-risk' (Cowlshaw et al., 2019). At-risk gamblers are those who are currently experiencing some harm as a result of their gambling behaviour and therefore are at an elevated risk of their behaviour escalating to clinically problematic levels (Cowlshaw et al., 2019). In Great Britain, 3.5% of adults are classified as being at-risk gamblers, which equates to around 1.7 million people. Between one and three people are negatively impacted by an at-risk gambler's behaviour (Goodwin et al., 2017), further demonstrating the reach of gambling-related harm. International research has also demonstrated that the cumulative number of gambling harms within at-risk populations is much higher than those in the clinical population (Browne et al., 2017), highlighting the need for preventative measures that aim to reduce harms in the at-risk population. Longitudinal research has also demonstrated that gamblers who experience high levels of harm often move in and out of problem gambling status over time (Wardle et al., 2017), implying that the severity of harms encountered is fluid and dependent upon a range of personal, social and environmental factors.

1.3.3. Types of gambling-related harm

To further demonstrate the range of negative consequences that can occur from gambling, Langham et al (2016) developed a taxonomy of gambling harms which categorised harms into eight main categories across three temporal periods. The eight categories of harm are as follows: financial harms; relationship disruption, conflict or breakdown; emotional or psychological distress; decrements to health; cultural harm; reduced performance at work or study, criminal activity and life-course and intergenerational harms. The three temporal classifications of harm are general, crisis and legacy harms. General harms are those harms experienced from gambling before they reach a point of temporal significance, whilst crisis harms are those experienced at that point of temporal significance and which often lead to help-seeking. For example, a general harm within the financial harm category may be an inability to purchase luxury items, whereas a crisis harm would be the inability to afford essential items, such as food or accommodation. Legacy harms are those that a gambler continues to experience even if they successfully abstain from gambling. For example, a legacy harm within the financial category would be the higher costs associated with having a poor credit rating. These harms account for the fact that harm from gambling can be continuous and does not necessarily cease as a result of stopping the behaviour, there are long term consequences which can be hard to manage.

1.3.4. Factors contributing to gambling-related harm

In a recent paper, Wardle et al (2019) highlight the negative impact that gambling behaviour causes to individuals, relationships, communities and society and call for regulatory reform which will allow for gambling to be seen as a public health issue within British legislature. Within the article, the authors criticise the voluntary levy from Gambling Industry which has left gambling prevention and treatment in Great Britain underfunded and under-resourced. They also call for the responsibility of

gambling policy to be transferred from the Department of Digital, Culture, Media and Sport to the Department of Health and Social Care. It is argued that such a change in legislation will allow for focus to be widened from current safer gambling campaigns, which tend to focus on individual behaviour choices, to looking at the commercial and political environment in which gambling occurs. As such, it is important to research the different aspects of such an environment to evaluate aspects that contribute towards gambling harm.

One factor that is known to contribute towards gambling harm is product design, with some gambling products being inherently more dangerous than others. For example, researchers have argued that electronic gambling machines (EGMs) are designed to include structural characteristics that exploit some of the previously discussed cognitive biases that are associated with gambling (Yücel et al., 2018). Further examples of this include the speed at which a gambling product can be played and the return to player percentage (RTP), which can increase both the speed and volatility of losses respectively (Harris & Griffiths, 2018; Newall et al., 2020). However, it is not just the design of a product that can be harmful to a user. Rogers et al (2019) highlight how technological advancements have vastly expanded an individuals' opportunities to gamble and how this could act as an accelerator of harm as a result of making gambling products continuously available.

One environmental factor that is a concern for researchers is gambling marketing. Marketing refers to all activities carried out by a company with the intention to encourage purchases or engagement with a product or service (Vivek et al., 2012). Within a gambling context, marketing therefore incorporates both direct advertising of specific gambling products and gambling brand promotion (Newall, Moodie, et al., 2019). Different forms of marketing often employed within the gambling industry include, but are not limited to: television advertising, social media marketing, sports sponsorship, adverts in bookmaker windows, billboard adverts, highly attractive

sign-up offers, enhanced odds and money back offers. Industry spend on marketing has risen vastly in recent times, up from £960 million in 2014 to £1.5 billion in 2018 (GambleAware, 2018), highlighting the importance placed upon marketing by the gambling industry. As such, the following chapter will present a review of the academic literature on gambling marketing, with a specific focus upon aspects of marketing that may contribute towards gambling harm.

Chapter 2. Literature Review + Aims

2.1. Gambling Marketing

2.1.1. *Television Advertising*

One area of gambling marketing that has received a lot of attention within the gambling literature is television advertising. Television advertising has been on the rise since the introduction of the Gambling Act in 2007, with recent estimates of industry spend on television advertising rising from £155 million a year in 2014 to £234 million a year in 2018 (GambleAware, 2018). Television advertising in Great Britain follows the Committees of Advertising Practice (CAP) UK Code of Broadcast Advertising (BCAP), which is enforced by the Advertising Standards Authority (Gambling Commission, 2019a). Included within the BCAP are specific gambling and lottery advertising regulations, whilst operators are also expected to follow more general guidelines around advertising not being misleading. Included within the gambling-specific regulations are commands to ensure gambling advertising is done safely by avoiding making associations with aspects of gambling which can be particularly harmful (ASA, 2019a). For example, gambling is not allowed to be presented as a way of escaping emotional problems or as a solution to financial concerns, as these could both encourage chasing behaviours. Where advertising codes are breached, adverts can be banned from television and can lead to operators being fined by the gambling commission (Gambling Commission, 2018c).

Research investigating television advertising has covered a range of different topics, such as advertising exposure, advertising content, advertising awareness, advertising recall and self-reported advertising impact. The most recent figures on the number of gambling advertisements demonstrate that, following the

implementation of the Gambling Act in 2007, the number of gambling adverts rose to 1.37 million in 2013 from 237,000 (Ofcom, 2013). Whilst more recent statistics on the exact number of television adverts are not available, it is likely that the number of adverts has increased since then given that spending on television advertising by gambling operators has increased by over 50% from 2014 to 2017. Television advertising is also heavily targeted towards target demographics of specific gambling activities. For example, there is a large amount of advertising by bookmakers during sporting events or shows. Cassidy and Ovenden (2017) looked at the amount of time gambling advertisements were present on screen during three episodes of a football highlights show on terrestrial television (BBC) and during three separate football matches that were broadcast live on a channel that required a subscription (Sky Sports). Findings revealed that gambling advertisements were present for 1 hour and 35 minutes across the duration of the three episodes of football highlights on the BBC, approximately 50% of the total duration of the three shows. Similarly, adverts were present for 1 hour and 36 minutes across the three live football matches on Sky Sports. This highlights the vast exposure of gambling brands during popular sporting broadcasts across both public service and paid broadcasters.

Due to the vast levels of gambling advertisements present on British television, researchers have aimed to explore the content of such advertisements. A literature review on gambling advertising from 2014 summarised that studies carried out until that point had found gambling advertising to promote the activity as fun, exciting and social, with very little focus on potential negative aspects of gambling (Binde, 2014). More recently, researchers analysed 135 British and Spanish sports betting adverts and organised their findings within seven broad categories (Hibai Lopez-Gonzalez, Guerrero-Solé, et al., 2017). Within the main findings, it was highlighted that adverts predominantly portrayed sports betting as a male dominated activity, with 96.9% of

characters included within the adverts being male. In addition, it was depicted that betting was largely an individual activity with little interaction between characters in the adverts, despite the fact the characters often appeared in groups. Mobile betting also featured heavily within the studied adverts, with over 90% of adverts showing individuals using mobile devices to place their bets. Finally, the study found that adverts generally showed bettors placing low stake, multiples bets. Whilst this may initially seem to present a lower risk to an individual gambler, the authors argue these bets present a significant long-term risk due to encouraging more risky bets.

Further research from the same research team indicates that adverts for sports betting align the activity with other risky activities such as drinking alcohol and eating low nutritional value foods (Hibai Lopez-Gonzalez, Estévez, Jiménez-Murcia, et al., 2017). A grounded theory study then built upon these findings by looking at the narratives created with a sample of 102 British television adverts (Hibai Lopez-Gonzalez, Estévez, & Griffiths, 2017). This study highlights how television adverts simultaneously aim to reduce the perceived risk of gambling whilst increasing the perceived control a gambler has over their gambling behaviour. This is particularly concerning given the highlighted relationship between a gambler's illusion of control and problematic gambling behaviour (Potenza, 2014).

As well as looking at the underlying themes of gambling advertisements, research has also explored the types of gambling products displayed within television advertising. One such study explored the types of bets advertised during Premier League football matches in 2016 (Newall, 2017), ascertaining that the type of bets advertised are usually of a complex nature. Exemplifying this, over 50% of advertised bets included a prediction on a specific goalscorer, either predicting who would score the first or next goal in the match, predicting a player to score multiple goals or predicting multiple players to score a goal. The average decimal odds for the 63 advertised bets was just under 7.5, which equates to returns of £7.50 from a

successful £1 bet. Given that a bet with decimal odds of 7.5 gives an implied probability of just a 13.33% chance of the bet winning, it can be easily seen that adverts are trying to get gamblers to take on riskier bets. This is especially the case given that the actual probability of the bet winning will be even lower due to the market overround, whereby the sum of implied probabilities of each possible outcome within a market exceed 100%. Further demonstrating this, the authors of the study calculated the bookmaker profit margins on advertised bets and found that first goalscorer bets had a profit margin of 34.6% compared to a profit margin of just 5.7% for the win/draw/lose market.

A series of follow-up experiments were then ran assessing the ability for both football fans and the general population to make rational judgements on the probability of different types of bets highlighted within the content analysis (Newall, 2017). Findings demonstrated that participants were able to predict the probability of simple events (such as betting on a team to win a game) relatively well; however, they consistently over-estimated the probability of more complex events (such as when multiple bets were combined across markets within a single game).

Additionally, television adverts have also been found to include elements that appear to increase the urgency of gambling behaviour (Newall, Thobhani, et al., 2019). This was achieved either through offering bets that had the chance to be settled before the event was completed or by presenting a recent improvement in odds, often which was time limited. Therefore, television advertising of gambling is not only potentially dangerous in terms of the underlying themes of the adverts but also in terms of the products that they promote.

One method used to assess marketing “success” is to investigate advertising awareness and recall. If an individual can recognise an aspect of an advert or associate it with a specific gambling brand, then the marketing objective of increasing engagement with a product or brand will have been achieved. However,

looking at marketing from a public health perspective, awareness or recall of gambling advertising would also represent an increased risk of harm due to the dangerous aspects of advertising highlighted above. This is because it demonstrates that the individual is interacting with that advertising in some way, even if it is only on a subconscious level. As such, there have been numerous studies investigating gambling advertising awareness and recall, specifically in at risk populations. One such population that has been investigated frequently is those under the legal age to gamble. One study found that over 90% of Australian 11-16 year olds could recall seeing a gambling advertisement on television (Thomas et al., 2018). Another study showed that over 90% of 11-16 year olds could name a gambling brand and associate relevant characteristic to that brand (Nyemcsok et al., 2018). Additionally, qualitative research has found that children between the ages of 8 and 16 could give detailed recall of the content of gambling advertisements and had developed an understanding of gambling products and terminology (Pitt et al., 2017).

Building upon these studies, researchers have explored the relationship between gambling advertising exposure and gambling behaviour. In a recent literature review, Newall et al (2019) highlighted a number of studies that have found an association between advertising exposure and problem gambling. However, a major limitation of such studies is their reliance upon self-reported exposure of gambling advertising. So, it may simply be the case that problem gamblers report a higher exposure to advertising as they are more preoccupied with gambling and therefore are more likely to recall adverts that they have seen. In an attempt to address this limitation, researchers carried out an ecological momentary assessment study to assess how exposure to advertising and wagering inducements influenced gambling behaviour (Browne et al., 2019). This methodology still requires participants to self-report their exposure to advertising, however they are doing so at regular intervals

throughout a set period. In the case of the aforementioned study, participants reported exposure to different types of marketing and their gambling expenditure at the end of 5 separate days for 3 non-consecutive weeks. Findings demonstrated a significant positive relationship between advertising exposure and gambling expenditure, providing strong evidence that exposure to advertising impacts behaviour.

2.1.2. Gambling and Sport

Another key marketing strategy employed by gambling companies is to heavily integrate gambling marketing into professional sport. As previously mentioned, there is a large quantity of gambling adverts around professional sporting events (Cassidy & Ovenden, 2017). However, there are a multitude of other ways in which gambling marketing is integrated into professional sport. One such marketing method is through kit sponsorship of professional sporting teams. During the 2019/2020 season, 11 out of the 20 English Premier League teams and 16 out of the 24 English Championship teams had a gambling company as their main shirt sponsor. Whilst many of the highest reputation Premier League teams do not have a gambling company as the main sponsor on the kit, they do often have an official betting partner which allows the gambling company to market within other areas of the clubs' physical and virtual environments, such as on interview boards and websites (Jones et al., 2019). In addition, gambling companies have also acquired naming rights to sport stadiums and competitions. For example, Stoke City sold the naming rights of the previously named Britannia Stadium in 2016, renaming the stadium the bet365 Stadium. The 2nd, 3rd and 4th tier leagues in English football are sponsored by SkyBet, whilst the top division in Scottish football is named The Ladbrokes Premiership.

The high levels of gambling marketing within the gambling industry has been heavily criticised for the way that it normalises gambling within society (Hibai Lopez-Gonzalez & Griffiths, 2017). Terms such as ‘the gamblification of sport’ or ‘the sportification of gambling’ reflect upon the idea that the two activities have become almost inseparable and therefore the key components of one activity are commonly attached to the other. Hibai Lopez-Gonzalez and Griffiths (2017) put forward a list of key components of sport that may be problematic if they became applied to gambling. For example, we know that sporting success is largely dependent upon skill and practice and therefore the role of chance within sporting competition is lowered by increasing skill. Numerous marketing strategies can be seen to be increasing the level of perceived skill involved in gambling through highlighting features such as cash outs and bet builders (Hibai Lopez-Gonzalez, Estevez, et al., 2017). However, this concept becomes dangerous when applied to gambling as it threatens to enhance gamblers’ illusion of control and their overconfidence in their ability to correctly judge the outcome of events which they cannot actively influence (Lopez-Gonzalez & Griffiths, 2017).

2.2. Gambling and Social Media

2.2.1. Social Media Marketing

As previously stated, the increase in gambling marketing spend can be largely attributed to the increased focus on different types of online marketing (GambleAware, 2018). One such type of marketing is social media marketing, which has more than tripled in spend over the past 3 years to £149 million in Great Britain. As such, gambling companies have developed a large online following through social media, with recent statistics putting the rate of online gamblers following a

gambling company on social media at over 1 in 4 (Gambling Commission, 2018a). This rate has been shown to be significantly higher in the younger age categories (Gambling Commission, 2018a) and it is also known that over 10% of those aged between 11 and 16 follow a gambling company on social media (Gambling Commission, 2018d). Taken together, this demonstrates that social media marketing appears to be particularly engaging to the younger generation. This may explain the recent increase in social media marketing spend, with gambling operators adapting their marketing strategies to fit in line with the marketing preferences of young adults.

2.2.2. Regulation of Social Media Marketing

Gambling marketing on social media is expected to follow the UK code of non-broadcast advertising and direct promotional marketing (CAP) code. This code covers many of the same areas as the aforementioned BCAP code, such as avoiding misleading marketing and ensuring that marketing strategies do not encourage facilitate the development or strengthening of cognitive biases around gambling (ASA, 2019b). However, there are also some social media specific regulations that gambling operators are expected to abide by within the gambling industry code for socially responsible advertising, an additional advertising code created by the Industry Group for Responsible Gambling to supplement the CAP and BCAP. Examples of social media specific regulations which are included within the code are: operators must have relevant age screening processes set up on their accounts, they must include a link to the GambleAware website and they must clearly state on their social media pages that the content on the page is for those 18 and above (Industry Group for Responsible Gambling, 2019).

2.2.3. International Research on Social Media Marketing

Despite the increase in social media marketing in recent years (GambleAware, 2018), there remains little research exploring how gambling is marketed on social media within Great Britain. There is, however, international research from Australia that explores a range of different factors relating to social media marketing of gambling. For example, interviews with Australian gambling operators found that operators view social media marketing as a method through which they can increase their market share by both keeping existing customers and attracting new customers (Gainsbury, King, et al., 2015). They denied that social media marketing was intended to increase levels of revenue or gambling participation, however it can be argued that the former would result in the latter. Further research from the same research team carried out a content analysis on 101 Australian gambling operators' social media accounts (Gainsbury, Delfabbro, et al., 2016). Their findings highlighted how operators posted content on a variety of different topics relating to gambling and sport. The authors also carried out a thematic analysis on the same data to investigate the underlying messages around gambling on social media. A worrying finding here was that the messages were found to both emphasise winning and encourage betting with limited safer gambling messaging. This would seem to contradict the opinion of gambling operators in the previous study (Gainsbury, King, et al., 2015) that social media marketing does not aim to increase levels of gambling. This highlights the need for research investigating if social media marketing in Great Britain promotes similar messages around gambling.

As well of a lack of research into the type of content posted by British gambling operators on social media, there is also a lack of research looking into how social media marketing may impact upon gambling behaviour. One study did investigate the relationship between self-reported exposure to gambling marketing on social media and problematic gambling (Gainsbury, King, et al., 2016). Findings revealed

that both moderate risk and problem gamblers reported higher levels of exposure to social media marketing. They were also more likely to report social media marketing as having a negative influence upon their gambling behaviour. Whilst this study encounters some of the issues previously highlighted with self-reporting marketing exposure, it does highlight that social media marketing is viewed as something that contributes towards problematic behaviour for those who are experiencing problems. Furthermore, an interview study of 43 Spanish disordered gamblers in treatment found numerous ways in which social media marketing was seen to be problematic for the gamblers (Lopez-Gonzalez, Griffiths, Jiminez-Murcia, & Estévez, 2019). Firstly, adverts on social media kept gamblers' minds occupied with gambling by framing sporting outcomes as missed opportunities to win money. Secondly, participants described how seeing examples of others' wins on social media was particularly persuasive in making them want to gamble. Finally, participants discussed how sports betting marketing had reached a point of saturation across multiple forms of media, including social media, making it extremely difficult to avoid.

The saturation of gambling marketing across different forms of media is a specifically important point to make when considering research that aims to determine the impact of any specific marketing technique upon real-world gambling behaviour. Since gambling marketing appears across multiple formats and incorporates multiple different marketing techniques, it is exceedingly difficult to measure the single impact of any individual technique or format without direct access to real life data from the gambling industry. However, it is possible to design well-controlled laboratory studies that demonstrate the potential impact that specific marketing types or techniques can have upon gambling attitudes, behaviour or intention. For example, researchers have demonstrated how gamblers chose longer odds bets when a betting inducement was offered compared to when no

inducement was offered (Rockloff et al., 2019). This study therefore successfully demonstrates the fact that gamblers tend to display more risky gambling behaviour when specific marketing offers are made through a well-designed online study.

2.2.4. *Affiliate Marketing*

The arguments provided in this section are produced in conjunction with a letter I wrote which was published within International Gambling Studies in January 2020. The full reference to the letter is:

Houghton, S., Moss, M., & Casey, E. (2020). Affiliate marketing of sports betting – a cause for concern [letter to the editor]? *International Gambling Studies*, 20(2), 240-245. <https://doi.org/10.1080/14459795.2020.1718737>

One specific type of social media marketing which has received very little attention within academic literature is that of gambling affiliate marketing. Gambling affiliates are third party organisations that are financially incentivised to attract custom to a gambling operator. Gambling affiliates either receive a one off payment, known as cost per acquisition, for getting a new customer to sign up or earn a revenue share of a gambler's losses when they bet on something through a link provided by the affiliate (Hibai Lopez-Gonzalez & Tulloch, 2015). For example, bet365's affiliate program allows affiliates to earn a 30% commission on any losses made by a gambler who signs up to bet365 and deposits money throughout the entire period that the gamblers remains a customer of bet365 (bet365, 2019). Alternatively, William Hill's affiliate program affords affiliates the opportunity to either earn between 15 and 30% commission on a referred customer's losses depending on gambling activity type, earn a fixed sum for every customer who they refer that goes

on to sign up and deposit money into their account or a mixture of both (William Hill, 2019).

Gambling affiliate accounts on social media are usually presented in one of two ways. Firstly, there are 'tipsters' who are presented as an individual gambler that is providing their tips and suggested bets to gamble upon. Secondly, there are accounts that are presented as 'betting communities' whereby the account appears to represent a brand rather than an individual. Ultimately, both types of accounts are presented as an avenue for gamblers to receive expert guidance upon their gambling behaviour. Affiliates often post direct links either to a suggested bet or a sign-up offer with a particular bookmaker. The link which is posted contains a unique tracking code which then allows for the affiliate to be financially rewarded for any customer they refer to the bookmaker. However, given that affiliates who receive a revenue share will only make a profit if the gambler that they recommend makes a net loss, it brings into question whether the 'expert' tips that they provide are always made with the intention of suggesting a bet that they think is likely to win. Affiliates are not required to track the success of their suggested bets, with the only mention of gambling affiliation in the industry code for responsible advertising briefly stating that operators will be held accountable for any marketing done on their behalf by affiliates (Industry Group for Responsible Gambling, 2019). Therefore, research is needed to investigate the types of content posted by affiliates on social media and the success of suggested bets.

A further concern as relates to the gambling affiliation process is the lack of transparency over the fact that gambling affiliates are affiliated with the bookmakers and the potential impact that this may have upon gambling behaviour. Since affiliate accounts are presented in a way that implies that they are giving expert advice on how to make profit from gambling on sport (Savage, 2018), it may be the case that some gamblers have an increased level of trust in bets which are 'tipped' by

gambling affiliates. Research has demonstrated that people assign greater levels of trust to expert advice during decision making tasks involving financial risk (Meshi et al., 2012). This may be a particular concern for those who are just beginning to gamble upon sport as they may be more inclined to rely on expert advice when making a bet choice due to their lack of experience with sports betting. Another theoretical reason as to why people may place increased trust in affiliate marketing is that affiliates may be viewed as being peers who share a common goal of beating the bookmaker, given how the accounts are framed.

Such a lack of transparency in the commercial relationship between affiliates and the gambling industry could be argued to be in breach of ASA regulations for non-broadcast advertising. Rule 2.3 of the code is as follows:

“Marketing communications must not falsely claim or imply that the marketer is acting as a consumer or for purposes outside its trade, business, craft or profession; marketing communications must make clear their commercial intent, if that is not obvious from the context” (ASA, 2019b).

Firstly, given the manner in which suggested bets are put forward and celebrated when they are successful, it can be argued that this blurs the lines between the affiliate being a marketer and a consumer. On one hand, the affiliate is marketing a product to their consumers and will only stand to benefit financially if the consumer is making a net loss. However, by proposing bets and celebrating wins the affiliate appears to take upon the role of a consumer. This could quite easily be misconstrued by gamblers, especially those who are relatively inexperienced with gambling, as an account that aims to help them win against the bookmaker rather than one which simply aims to increase the frequency of their gambling activity. This therefore also appears to contradict the advertising code in that gambling affiliate marketing is not explicitly clear in relation to its commercial intent. This lack of clarity in the intent of gambling affiliate accounts creates a need for research to explore

how such accounts are understood by gamblers and whether they impact upon gambling behaviour in any way.

To summarise, affiliate marketing of gambling may act as a form of deceptive marketing by the gambling industry. In addition to the presentation of such accounts as accounts which aim to help bettors win against the bookmaker, there is a complete lack of transparency on the financial relationship between gambling affiliates and the gambling industry. As such, concerns arise around bettor's understanding of affiliate marketing as a marketing strategy and this may lead to increased confidence being placed within affiliate marketing in comparison to operator marketing.

2.3. Social Media and Safer Gambling Promotion

2.3.1. Safer Gambling Strategies and their Effectiveness

In addition to the focus on potential contributors towards gambling-related harm, a further body of literature looks at the effectiveness of strategies employed by governments and operators which aim to reduce harms. Such strategies are often referred to in the literature as “responsible gambling” strategies (Blaszczynski et al., 2011; Ladouceur et al., 2017; Wohl et al., 2013) but are now more commonly referred to as “safer gambling” strategies. This is due to concerns that the term responsible gambling portrayed individuals with gambling disorder as irresponsible. The Gambling Commission states that “safe and responsible gambling comes from an industry that takes care of its customers, customers who are empowered with the knowledge to manage their gambling and a regulator that ensures the consumer is at the heart of everything we do” (Gambling Commission, 2020b). As such, many of the commonly employed safer gambling strategies employed by the gambling

industry in Great Britain place focus upon providing individuals with tools by which they are supposed to monitor their own gambling behaviour to identify when their behaviour is causing harm. Examples of such strategies include optional deposit limits, self-exclusion programs, cool-off periods, reality checks in terms of time or money spent gambling over a certain period.

However, one major criticism of such an approach relates to the fact that many of these strategies employed lack a strong base of empirical evidence demonstrating that they are effective in reducing harms. One recent umbrella review highlighted 10 systematic reviews which reported upon the effectiveness of harm reduction strategies, covering a total of 55 unique empirical studies (McMahon et al., 2019). This discovered that much of the evidence base in terms of harm reduction strategies was within one of four categories: machine messaging, youth prevention programmes, self-exclusion and pre-commitment and limit setting. Mixed findings were highlighted in terms of the effectiveness of self-exclusion strategies, with self-exclusion reducing gambling severity and harm during the period of exclusion but not being maintained afterwards. Similarly, inconsistent evidence was found regarding the impact of limit setting strategies upon gambling behaviour, with six studies showing a positive impact upon behaviour but a further seven finding no impact. Youth prevention programmes were only shown to have a positive impact upon behaviour in five of the eleven studies identified, however eight of the nine studies investigating machine feedback provided evidence of positive changes in gambling behaviour after receiving feedback. Given that this review highlights the limited effectiveness of many of the mostly commonly used safer gambling strategies, it highlights the need for new safer gambling strategies to be developed and tested for effectiveness.

2.3.2. Safer Gambling Marketing and Social Media

One possible limitation of receiving safer gambling messages during an active gambling session is based on observations from fMRI research. Such brain imaging studies highlighted that impulsive decision-making is related to states of high emotional arousal, regardless of whether emotions are positive or negative, and that this is accompanied by changes in activation of brain regions associated with emotions and decision making (Sohn et al., 2015). Safer gambling strategies aim to encourage gamblers to make efforts to control their gambling behaviour in order to assure that it is not causing them harm. The impact of providing this information during gambling sessions, where high emotional states may push gamblers away from such rational decision making, could therefore be limited. As such, it may be of benefit to consider newer strategies which focus on promoting safer gambling outside of active gambling sessions where gamblers are less likely to be in highly emotionally charged states and therefore are better placed to act upon safer gambling messaging.

One such strategy which may be useful in promoting safer gambling behaviour is to use social media to send out safer gambling messaging to gamblers outside of active gambling sessions. As highlighted earlier in the review, social media is being increasingly used by the gambling industry to market gambling due to its large reach, particularly amongst younger generations (Gambling Commission, 2018d, 2018a). Such reach may also therefore be useful in disseminating safer gambling information to individuals who gamble. Whilst no academic literature has yet explored the reach of safer gambling campaigns upon social media, research has shown that public health campaigns have the potential to reach a high percentage of their intended audience. For example, one feasibility study examining the reach of message frames distributed upon social media on sun and cancer awareness in Northern Ireland found that messages were seen by just under a quarter of the population (Gough et al., 2017). Pre and post intervention surveys found improved

attitudes towards skin cancer prevention within a stratified sample of the Irish population, suggesting that the high reach of the messages may have allowed the campaign to successfully instigate attitudinal change.

However, the potential effectiveness of safer gambling messaging on social media cannot solely be attributed to the number of individuals the messages reach. For such messaging to be deemed effective, it must also produce positive behavioural change. Whilst no such evidence currently exists within the gambling literature, there is evidence of social media interventions producing positive changes within other types of behaviour. For example, a systematic review of 7 studies investigating social media interventions for smoking cessation found preliminary evidence for such interventions producing positive attitudinal and behavioural change (Naslund et al., 2017). Examples of changes identified included increased interest in quitting, attempts to quit smoking, preventing relapse and sustaining abstinence. Similarly, a meta-analysis of eight randomised control trials assessing the impact of social media interventions upon health-related behaviour change found evidence of positive behavioural change in areas such as diet, physical activity and weight loss (Laranjo et al., 2015). Taken together, these studies demonstrate that social media interventions can instigate positive behavioural change and highlight the potential for such methods to be applied to the promotion of safer gambling.

2.3.3. Safer Gambling Messaging

An important consideration for any social media intervention which aims to promote safer gambling is how to frame the messages included within the intervention. Informational messages that aim to increase a gambler's knowledge of odds and probabilities have been used previously within safer gambling campaigns

(Blaszczynski et al., 2011). The rationale for using informational messaging revolves around the idea that risky gambling behaviour is the result of erroneous cognitions around gambling and therefore correcting such beliefs should enable gamblers to regulate their own behaviour (Monaghan et al., 2009). However, evidence from academic literature suggests that improving individuals' understanding of gambling probabilities does not lead to a change in gambling behaviour. One study which investigated this found that a group of gamblers who were given a statistics course based around gambling were found to demonstrate an increased ability to calculate odds and dismiss gambling myths compared to a control group of gamblers who received a generic statistics course (Williams & Connolly, 2006). However, neither group exhibited any changes in gambling behaviour, highlighting that improving knowledge of gambling probabilities does not lead to safer gambling behaviour. Similarly, numerous studies have shown informational pop-up messages during active gambling sessions to have limited impact upon gambling behaviour (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015; Monaghan & Blaszczynski, 2010). Taken together, this highlights a lack of empirical evidence to support the use of informational messaging within safer gambling campaigns and this has led researchers to explore alternative types of messaging.

One alternative type of messaging which has shown to be more effective in promoting safer gambling behaviour is self-appraisal messaging. Such messages are framed in a way which invites gamblers to self-reflect upon their own behaviour in order to make the messages more personally relevant. Harris and Griffiths (2017) argue that such an approach promotes autonomy in health-related decision making and that this is important due to humans' fundamental need to act upon their own system of values as opposed to acting upon the advice of others, in line with self-determination theory. Consequently, gamblers may be less likely to dismiss self-appraisal messages as they promote autonomy within gambling decision making

(Pavey & Sparks, 2010). A further argument put forward for the use of self-appraisal messaging is that it may help address some of the commonly observed contributors towards problematic behaviour. Harris and Griffiths (2017) highlight that messages which directly attempt to get gamblers to raise their self-awareness of their behaviour may help prevent gamblers entering dissociative states, something which has been shown to correlate with problematic gambling behaviour (Stewart & Wohl, 2013).

Numerous studies have highlighted positive outcomes of self-appraisal messaging during in-play sessions on electronic gaming machines (EGMs) in comparison with information messaging. For example, one study found that self-appraisal messages lead to reduced playing sessions, greater within-session awareness of time spent gambling and increased likelihood of taking a break (Monaghan & Blaszczynski, 2010). These changes in behaviour were then reported to continue within gambling sessions over the following two weeks, highlighting that messaging can have an impact outside of the gambling session in which it was observed. Similarly, Gainsbury et al (2015) found that self-appraisal messages during an EGM session led to more accurate recall two weeks after being exposed to them and were also reported by participants to have a greater immediate impact upon gambling behaviour than informational messages. A further study found that self-appraisal messages reduced the speed of gambling for participants in a computer-simulated gambling task within the condition of the experiment where it was fixed that participants would lose (Harris & Parke, 2016). However, this finding was not replicated within the winning condition, suggesting that the effectiveness of self-appraisal messaging is dependent upon bet outcomes. This could be problematic as gamblers may be gambling in a risky manner but winning enough in the short-term to not perceive the messages as relevant. A further limitation of the current evidence base for using self-appraisal messages is the fact there is only support for

using such messages within active gambling sessions, therefore research is needed to investigate whether findings can be replicated when messages are delivered outside of gambling sessions.

A further possible avenue for safer gambling promotion is to produce messages which aim to invoke an emotional response. Emotion is now widely considered to be an influential contributor to the decision-making process (Lerner et al., 2015). As such, the gambling industry commonly create adverts which aim to normalise gambling as a leisure activity by provoking an emotional response from the viewer (Parke et al., 2015). Self-report data from gamblers highlights that this type of emotional advertising significantly increases gambling behaviour, suggesting that content which provokes an emotional response can influence upon levels of gambling. In addition to this, Harris, Parke and Griffiths (2018) argue that emotive messaging may be particularly effective at capturing attention of gamblers as emotional stimuli has been shown in experimental studies to capture attention better than neutral stimuli. There is some support for this argument within addiction literature, with a review highlighting that tobacco warning messages which included a picture aiming to produce an emotional response were more likely to capture attention than those without (Hammond, 2011). This may be particularly important for any safer gambling messages administered on social media, whereby messages will face vast competition for attention from other posts on the site.

One specific type of emotional warning message which has been widely researched within health and addiction literature is fear appraisals. The rationale for evoking fear within health warning messages is based within theoretical models which propose that humans are motivated to protect themselves when they feel endangered (Janis, 1967; Leventhal, 1970; Rogers, 1975). Some support exists for this idea, with fear inducing images leading to better recall, a greater neurological response and lower urges to smoke (Wang et al., 2015). Similarly, evidence from

the alcohol literature suggests fear appeals reduce intentions to drink excessively within a student population (Carrera et al., 2010). Whilst limited attention has been given to fear appeals in relation to gambling behaviour, Munoz, Chebat and Borges (2013) did demonstrate that graphic warning messages were able to increase cognitive appraisal of messages and successfully prompt attitudinal change within monthly video lottery terminal gamblers. However, one issue across these studies is that, whilst they show that fear appeals can instigate attitudinal change and reduce intention to participate in risky health behaviours, they do not provide evidence that fear appeals lead to a change in behaviour.

A further concern with using fear appraisals as a type of emotional warning message is the potential for such messaging to have an adverse impact upon at-risk populations. A study examining potential moderators of gambling fear appeal success found that gamblers who were high in experiential avoidance, which describes those who employ cognitive and affective strategies to reduce the likelihood of negative experiences, resisted the elicitation of fear and where fear was evoked in male at-risk gamblers, it did not lead to an increase in help-seeking intentions (De Vos et al., 2017). Not only does this highlight the fact that fear appraisals may be resisted by individuals with certain personal characteristics, but it also suggests that they have limited impact on male high-risk populations.

Additionally, a meta-analysis of the use of fear appeals highlighted significant interaction between efficacy and threat, whereby increased threat only impacted upon behaviour when efficacy was high (Peters et al., 2013). Where efficacy was low, a trend towards a negative impact of fear appeals upon health behaviour was identified.

This can be somewhat accounted for by the Protection Motivation Theory (PMT) (Rogers, 1975). PMT posits that there are two main cognitive appraisals which individuals make when they view fear-inducing messages. As well as making a

judgement as to the threat of the message to themselves, namely perceived vulnerability and perceived susceptibility, PMT also explains that individuals assess their ability to respond effectively to the threat. Within this, individuals must assess how capable they are at coping or dealing with the consequences of the threat, known as self-efficacy. They must also assess how effective their response to the threat would be, known as response efficacy. Therefore, if individuals do not believe that they are able to successfully cope with the threat highlighted within a fear appeal, or do not know how to successfully respond to such a threat, this could negate the impact of the messages in these populations. As such, researchers have argued that future emotionally stimulating health warning messages should simultaneously aim to increase efficacy within the population at which they are aimed (Kok et al., 2018; Ruiter et al., 2014).

2.4. Thesis Aims and Rationale

Harms arising from gambling behaviour extend far beyond those with a clinical diagnosis of a gambling disorder (Browne et al., 2017; Goodwin et al., 2017; Wardle et al., 2017) and can negatively impact an individual's life in a range of different ways (Langham et al., 2016). As such, it is pivotal that research aims to identify factors which may contribute to levels of gambling harm within society. Research has highlighted numerous concerns as to how marketing may contribute towards gambling-related harm (Hibai Lopez-Gonzalez, Estévez, & Griffiths, 2017; Newall, Moodie, et al., 2019; Rockloff et al., 2019; Thomas et al., 2018). The gambling industry in Great Britain is placing increasing focus upon marketing their products on social media (Gambling Commission, 2018a), with this type of marketing appearing to be particularly appealing to younger generations (Gambling Commission, 2018c). However, little research has focused upon how gambling is marketed on social media in Great Britain or how bettors respond to, or think about,

such marketing. Additionally, affiliate marketing is very common on social media and has received little focus within academic literature. This is despite the fact it may present its own unique risks due to the positioning of affiliate accounts as betting communities when such accounts are financially incentivised to attract custom to the gambling industry.

As well as investigating factors which may contribute towards gambling-related harm, it is also important to assess strategies which aim to reduce harm. Whilst many of the currently employed safer gambling strategies lack a strong empirical evidence base demonstrating their effectiveness in reducing harms (McMahon et al., 2019), they often look to promote safer gambling during an active gambling session. Such an approach may be limited due to emotional states present in a gambling session (Sohn et al., 2015) which may push gamblers away from the rational decision making that safer gambling strategies aim to promote. Therefore, safer gambling messages may be more effective when delivered outside of a gambling decision. Social media has been shown within health literature to be an effective platform to reach target audiences with health messaging (Gough et al., 2017) and social media interventions have shown some ability to impact upon behaviours and attitudes (Laranjo et al., 2015; Naslund et al., 2017). Research is therefore needed to assess whether social media can effectively promote safer gambling. There is also mixed evidence as to the effectiveness of different types of messaging within safer gambling campaigns (De Vos et al., 2017; Gainsbury, Aro, et al., 2015; Harris & Parke, 2016; Munoz et al., 2013). As a result, it will also be important to assess what type of safer gambling message is the most effective within any social media safer gambling campaign. In order to address the highlighted gaps in the literature relating to gambling and social media within Great Britain, the thesis has the following aims:

Aim 1 – To assess how gambling is marketed on social media within Great Britain by both gambling operators and gambling affiliates.

Aim 2 - To develop an understanding as to how bettors respond to gambling marketing upon social media. More specifically, it will be examined whether bettors alter their response to gambling marketing depending upon the type of gambling account it is posted upon and the complexity of the bets advertised.

Aim 3 – To explore how gamblers think about gambling marketing and its impact upon gambling behaviour. This will investigate the role gambling marketing plays within the lives of bettors and how they perceive marketing to impact upon their gambling.

Aim 4 - To assess whether safer gambling can be promoted successfully, through changes to attitude or behaviour, on social media and if so, to investigate which type of messaging is the most effective in producing attitudinal or behavioural change.

Chapter 3. Study 1 – How is gambling portrayed and marketed on social media in Great Britain?

Study 1a reported upon in this chapter was published in International Gambling Studies on the 3rd of January 2019. The full reference to the paper is:

Houghton, S., McNeil, A., Hogg, M., & Moss, M. (2019). Comparing the Twitter posting of British gambling operators and gambling affiliates: a summative content analysis. International Gambling Studies, 19(2), 312-326.

3.1. Abstract

Aims: The current study aimed to assess the type of content posted on Twitter by British gambling operators and gambling affiliates; third-party firms who are financially incentivized to attract custom to gambling operators. It also aimed to assess what messages are conveyed around gambling within such social media marketing. **Method:** 5,029 tweets from five gambling operators and 8,315 tweets from five gambling affiliates were collected over a two-week period. For the first part of the study, a summative content analysis was carried out whereby each tweet was coded for its main content. tweets were grouped together into content categories and the percentage of tweets in each content category was calculated for both operators and affiliates. For the second part of the study, a thematic analysis was conducted on a subset of the data to assess underlying messages around gambling **Results:** The nine categories of content found were: direct advertising, betting assistance, sports content, customer engagement, humour, update of current bet

status, promotional content, safer gambling and 'other'. Gambling operators had a higher proportion of posts in the sports content and humorous content categories, whilst affiliates had a higher proportion of posts within the direct advertising and betting assistance categories. Three main themes were generated in the second part of the study: betting is a skill, betting is exciting and betting is risky.

Discussion: These findings suggest that gambling affiliates were more direct in their posting style whereas operators followed a more indirect approach, reflective of a branding strategy. Future research should address how interacting with different types of gambling content on social media impacts upon gambling attitudes and behaviour.

3.2. Introduction

Companies are placing increasing focus on social media marketing in order to advertise their product and build brand awareness (Barreda et al., 2015; Okazaki & Taylor, 2013). Numerous positive outcomes of social media marketing have been highlighted within marketing literature, such as attracting new customers, enhancing brand experience of existing customers and producing a stronger brand relationship quality (Alalwan et al., 2017; Hudson et al., 2016). Whilst such research has not been carried out specifically in a gambling context, it is evident that there is an abundance of gambling content on social media, with one in 20 of the UK's fifteen million regular Twitter users following an account dedicated to posting gambling content (Miller et al., 2016). Additionally, over one in four regular online gamblers in Great Britain follow a gambling company on social media (Gambling Commission, 2018a). This rate is markedly higher in the younger age categories (Gambling Commission, 2018a), suggesting a potential generational effect whereby those who are younger are more likely to use social media to keep in touch with gambling news or products. Given that those in the younger age categories are more likely to report being influenced by gambling advertisements (Hanss et al., 2015) and have a higher incidence of problematic gambling behaviour (Gambling Commission, 2018a), there is a clear need for research which assesses how British gambling operators use their social media accounts and what type of messages are conveyed within their social media marketing.

The limited number of international studies which have explored how social media is used to market gambling have highlighted worrying findings around the types of content posted and the latent messages conveyed around gambling (Gainsbury, Delfabbro, et al., 2016; Thomas et al., 2015). However, no research has been carried out to assess whether these findings extend to British operator's social media marketing. Similarly, no academic research has assessed gambling affiliate

marketing on social media. This is despite the fact that affiliate marketing has been highlighted to have a larger reach on social media than operator marketing (Miller et al., 2016) and the concerns about how posts by affiliates on social media may be perceived by consumers due to the positioning of such accounts. Affiliate accounts on social media are often presented as betting communities or tipping accounts (Savage, 2018) and there are questions as to whether gamblers actually recognise that such accounts profit from trafficking customers to the bookmakers. Therefore, it is also pivotal for research to assess the content placed on social media by the gambling affiliates in order to gain a more complete understanding of the range of gambling content on social media.

The current study aims to address the aforementioned gaps in the research literature by assessing what type of content is posted on social media by British gambling operators and gambling affiliates. It will also be assessed whether the frequency of each type of content differs between operators and affiliates. This will build upon the work of Gainsbury et al. (2016) by quantifying the different types of content posted by gambling operators and affiliates, allowing for inferences to be made on differences in social media strategies between operators and affiliates. This is particularly important to investigate given the uncertainty surrounding consumers' ability to recognise affiliates on social media as marketing. These aims will be addressed within study 1a. Another aim of the current study will be to assess how messages are conveyed around gambling within social media marketing from British gambling operators. This aim will be addressed in study 1b. Findings will be discussed in relation to psychological literature and used to advise upon current British policy, with the purpose of ensuring gambling is marketed in a way which allows for recreational enjoyment whilst protecting those who are vulnerable.

3.3. Method - Study 1a

3.3.1. Sampling Procedure

In order to assess which social media platforms were most used by British gambling operators, an initial audit of gambling operators' social media accounts was undertaken. This revealed that Twitter was the only social media platform used across all operators, therefore Twitter was chosen as the social media platform to investigate within the study. Aiming to assess the social media accounts with the highest potential reach, it was decided that the study would investigate the five most followed British gambling operators and five most followed gambling affiliates. Researchers manually checked the Twitter accounts of the top 40 grossing British gambling operators (as provided by the Gambling Commission) to highlight which operators had the highest number of followers (see Appendix A for list of operators and their number of followers). Out of the 40 operators included in the audit, 33 had a twitter account, with the number of followers to those accounts ranging from 189 to 652,136. Within the five selected operators, the number of followers ranged from 204,639 to 652,136.

Unfortunately, a similar auditing strategy was not possible for gambling affiliates as there is no such publicly available information on the highest grossing affiliates.

Therefore, a manual search of the 'people' section on Twitter was used to establish the five most followed gambling affiliates on Twitter using the following terms: 'tips', 'accumulator', 'acca', 'bets' and 'betting'. Each search term was entered individually and the accounts returned from the search were inspected to assess whether they were active gambling affiliate accounts. In order to be identified as an active affiliate account, the account had to post direct links to either sign up to a gambling operator or to place a specific bet with a gambling operator. They also had to have posted at

least once within the previous week. In addition, the 'you may also like' section was followed from each identified affiliate Twitter account as a further strategy to locate affiliate accounts. Within the five chosen affiliate accounts with the most Twitter followers, the number of followers ranged from 194,858 to 583,153.

NCapture (QSR International, 2018) was used to download tweets from each of the 10 accounts over a 14-day period – Thursday 14th June 2018 to Wednesday 27th June 2018. This two-week period was chosen due to numerous sporting events taking place during this time, notably the first two weeks of the 2018 FIFA World Cup and the Royal Ascot race meeting. The study obtained ethical approval from the Northumbria University postgraduate ethics committee. The data that support the findings of this study are openly available in Mendeley Data at <http://dx.doi.org/10.17632/rhdjw852x4.1> .

3.3.2. Analysis Procedure

A summative content analysis (Hsieh & Shannon, 2005) was used to quantify the number of tweets made for a range of different reasons. Content analysis was chosen as an appropriate method of analysing data as it allows researchers to classify textual data into categories which share similar meanings. As such, it is a commonly used approach to analysing data across different forms of media, such as television adverts, radio, newspapers and social media (Barker et al., 2019; De Benedictis et al., 2019; Rafter et al., 2014; Tyrawski & De Andrea, 2015). Taking a summative approach to content analysis within the current study enabled the researcher to not only identify and qualitatively explore the different types of tweets posted by gambling operators and affiliates, but also enabled a comparison of the frequency of different types of content between the two types of accounts.

A bottom-up approach was taken when coding data, whereby codes were developed directly from the tweets. This decision was made to ensure that codes were not limited to those identified within previous literature. The first 100 tweets from each Twitter account were coded based upon the main purpose of the tweet. As such, each tweet was only coded into one single, mutually-exclusive, content category. From this, an initial coding scheme was developed and applied to the remaining data set. Codes were then grouped into nine main content categories to develop a final framework for subsequent coding. A second researcher then applied this coding scheme to just over 10% of the data (1,400 tweets) and Cohen's k was run to in order to provide a check on inter-rater agreement of the content categories. This demonstrated moderate agreement between researchers, $k = .668$ (95% CI, .641 to .695), $p < .001$. The proportions of operators' and affiliates' posts were then calculated for each of the nine categories. A Chi-Squared Test of Independence was then carried out to assess whether the proportion of posts belonging to different categories significantly differed between operators and affiliates. Inspection of standardised residuals allowed the researcher to assess differences in the frequency of posts in each different content category between operators and affiliates.

3.4. Results - Study 1a

3.4.1. Sample Characteristics

The five gambling operators included within the sample were: PaddyPower, bet365, SkyBet, Coral and William Hill. All five operators provide an online gambling service, whilst PaddyPower, Coral and William Hill also offer land-based gambling services. Each of the gambling operators included within the sample offer a range of

gambling services, including: sports betting, poker, casino games, live casino, bingo and virtual gambling. However, the Twitter accounts for each of the operators were focused almost exclusively on sports betting, with operators holding separate Twitter accounts, with far fewer followers, for their other gambling services. The operators will therefore be discussed and evaluated as sports-betting operators from this point onwards.

The five gambling affiliate accounts within the sample were: Footy Accumulators, Live Football, Football Super Tips, My Racing Tips and The Winners Enclosure. Upon further inspection, it was found that Footy Accumulators and The Winners Enclosure were owned and operated by a company called Checkd Media. Football Super Tips and My Racing Tips are accounts owned and operated by Apsley Group International. However, it is not clear as to who owns and runs the LiveFootball Twitter account as there is no such information available on their Twitter account or their website. The accounts were presented as either being betting communities, tipping accounts or accounts dedicated to posting football news and gossip.

To demonstrate the reach of the social media content of each account, the number of followers, the number of posts (per day) and the number of retweets per post were assessed. As demonstrated in Table 1, there were around 5% more followers for the operator Twitter accounts (1,949,316) compared to the affiliate accounts (1,866,358). However, the gambling affiliates posted around 40% more tweets per day (593.93) than the operators (361.56). Due to a lack of normal distribution within the number of retweets per post, a Mann-Whitney U test was conducted and revealed that the operators achieved significantly more retweets per post (Mdn = 2) than the gambling affiliates (Mdn = 0), $U = 13048895$, $z = -40.53$, $p < 0.0001$, $r = -0.35$. Therefore, whilst affiliates tended to post more often than operators, their posts were not as widely shared.

Table 1

Number of followers, number of posts during the two week data collection period and the mean number of retweets per post for each sports betting operator and gambling affiliate Twitter account.

	Followers	Total Posts	Total Posts Per Day	Mean Retweets
Paddy Power (@paddypower)	652,136	1,472	105.14	85.71
Bet365 (@bet365)	383,504	1,008	72	35.69
SkyBet (@SkyBet)	361,582	357	25.50	17.09
Coral (@Coral)	347,455	1,806	129	11.90
William Hill (@WilliamHill)	204,639	416	29.93	9.60
Operators' Total	1,949,316	5059	361.56	38.29
Footy Accumulators (@FootyAccums)	583,407	1,565	111.79	42.55
Live Football (@livefootball)	421,372	1,023	73.07	0.27
Football Super Tips (@FootySuperTips)	409,270	1,862	133	3.83
My Racing Tips (@myracingtips)	257,451	1,288	92	0.91
The Winners Enclosure (@TWEnclosure)	194,858	2,577	184.07	0.27
Affiliates' Total	1,866,358	8,315	593.93	9.13

3.4.2. Content of Posting

A total of nine categories of content posting were identified across the data set (See Table 2). A Chi squared test of independence revealed that there was a significant association between account type and the categories of posted content, $\chi^2(4) = 3433.21$, $p < 0.001$. Inspection of standardized residuals showed that there was a significant difference in the frequencies of each content category between sports-betting operators and gambling affiliates, $p < 0.001$ in each case.

Table 2

Number of tweets made within each content category by sports betting operators and gambling affiliates. Percentages refer to the percentage of operators' or affiliates' tweets within each content category. Z-scores represent standardized residuals.

	Gambling Operators			Gambling Affiliates		
	Number of tweets	Percentage of tweets	Z-Score	Number of tweets	Percentage of tweets	Z-Score
Betting Assistance	224	4.43%	-24.9	2466	29.66%	19.4
Customer Engagement	419	8.28%	-6.2	1076	12.94%	4.8
Direct Advertising	1118	22.10%	-9.9	2853	34.31%	7.7
Humour	935	18.48%	21.4	310	3.73%	-16.7
Other	44	0.87%	5.9	5	0.06%	-4.6
Promotional Content	192	3.80%	10.5	50	0.6%	-8.2
Safer Gambling	82	1.62%	6.8	22	0.26%	-5.3
Sports Content	2003	39.59%	24.7	1064	12.80%	-19.3
Update of Bet Status	42	0.83%	-10.9	469	5.64%	8.5
Total	5029	----	----	8315	----	----

In order to demonstrate a clearer view of these findings, a description of each content category has been provided below.

Direct advertising

The percentage of tweets across the data set classified as direct advertising was 29.76%. Posts made for the purpose of direct advertising were common for both the operators and affiliates, albeit significantly more common for the affiliates. For the operators, direct advertising posts were largely made up of posting their own

gambling odds for a specific sporting event, with a direct link to the market on their own website. For example, Coral tweeted: *“Fancy Diego Costa to get frustrated by Iran? Costa to get carded - 9/2 [LINK]!”* (20/06/2018). Additionally, operators also regularly posted special offers whereby followers are incentivised to wager on certain events. Examples of such incentives include: Early pay out or money back on bets where certain criteria are met, best odds guarantees and accumulator bonuses. There were also some examples of free bets offers, whereby free bets were offered for wagering a certain amount of money or logging into a gambling application on a mobile phone. Alternatively, direct advertising from the affiliates was mainly in the form of sign-up offers. Followers were given incentives to sign-up to specific bookmakers based around either vastly enhanced odds for new customers on a specific bet, which was usually paid in free bet tokens, or for free bets rewarded when a first bet of a specific value is placed. An example of this can be seen in the following post by Footy Accumulators: *“Yet to give William Hill a try? Bet £10 and get £30 in FREE bets when you join HERE [LINK]”* (20/06/2018).

Sports content

The proportion of tweets across the data set classified as sports content was 22.98%. It was the most common type of content posted by sports-betting operators and consisted of: sports news, match commentary, sports reviews, quotes from sportsmen and sport statistics. To illustrate this, bet365 tweeted: *“BREAKING: The WBA orders Anthony Joshua to sign a deal for a mandatory title defence against Alexander Povetkin within 24 hours”* (26/06/2018). Similar topics were discussed by gambling affiliates, however not as commonly.

Betting assistance

The percentage of tweets across the data set classified as betting assistance was 20.16%. Unsurprisingly, given the positioning of the affiliate twitter accounts as 'tipping pages', the affiliate accounts regularly posted content which aimed to assist in betting by giving tips to specific bets. Tips given ranged from low odds singles to high odds accumulators and permutation bets. They were mostly given before the event had started, however there were also examples of in-play tips being given.

Tips were also commonly given alongside a link to place the bet directly with a specific bookmaker. An example tweet from The Winning Enclosure reads:

"TODAYS SKY BETS 40/1 RAB boost to betslips [DIRECT LINK TO BET] 34/1

Place acca to betslips [DIRECT LINK TO BET]" (19/06/2018). Whilst tips were not

as commonly given by operators, they were more likely to be given from an

associated celebrity or sports personality. For example, SkyBet tweeted:

"@NewburyRacing is the venue for @skysportsAlexH's Daily Double. 2.55 - Sea Of

Class. 4.00 - Mountain Peak. Currently available at 8/1" (14/06/2018). In addition,

operators also gave match previews and links to statistics databases in order to

assist bettors with choosing their bets.

Customer engagement

The proportion of tweets across the data set classified as customer engagement was 11.20%. Both operators and affiliates regularly posted content which

encouraged engagement from their followers. For example, they would post

questions which would encourage replies or an answer through a poll. Additionally,

they would encourage followers to like or retweet certain content and the affiliates

would often incentivize this by stating they would message those who retweeted the

content with their daily tips. Examples of customer engagement include SkyBet

tweeting: *"What's been the best goal of the World Cup so far"?* (27/06/2018) and My Racing Tips posting *"POLL: #RoyalAscot is about to start!!! Who do you think will be crowned top trainer"?* (19/06/2018).

Humour

The proportion of tweets across the data set classified as humour was 9.33%. There was a clear focus by the sports-betting operators to incorporate humour into their social media content. Posts were made which employed a humorous tone when discussing sport or other relevant current events. An example of this from Paddy Power reads: *"GOALLL!!! Lovely penalty from... some lad from #TUN, and just like Harry Maguire's head, it's all-square"* (18/06/2018). Gambling affiliates also showed a similar strategy, albeit less commonly.

Update of bet status

The proportion of tweets across the data set classified as updates on bet status was 3.83%. Affiliates used social media to update their followers on the progress of selective bets which they had tipped. Whilst this was mostly focussed upon bets which had either won or were getting closer to winning, there were occasions where losing tips were commented upon. For example, My Racing Tips tweeted: *"MAKE THAT 3/3 ON THE EVENING LUCKY 15!!! ARTISTIC MELODY WINS AT 4/1!!! COME ON!!!"* (22/06/2018). Operators also occasionally updated on bet statuses by demonstrating examples of high odds accumulators which would have won on certain football games or by stating how many of their customers successfully backed a high odds bet, such as William Hill posting: *"We have a huge #YourOdds winner. One lucky punter had £30 on this, returning £6930"* (24/06/2018).

Promotional content

The proportion of tweets across the data set classified as promotional content was 1.81%. Another social media strategy of the sports-betting operators was to post promotional content with specific hashtags in order to increase operator visibility on the platform. For example, operators would gather popular sportspeople and celebrities to discuss sporting events live in a specific location alongside the use a hashtag such as *#TheKickOff* or *#PaddysBoatParty*. In addition, there was also examples of promotional content where free bets could be won. Alternatively, promotional content for the affiliates came in the form of self-promotion to alternative social media platforms or cross promotion to another affiliate's social media account which was primarily focussed on a different sport, such as My Racing Tips posting: *"IN PLAY ALERT @FootySuperTips have posted their #WorldCup IN PLAY PREDICTION for #ENGvTUN Download their app to get it HERE" (18/06/2018).*

Safer gambling

The proportion of tweets across the data set classified as safer gambling was 0.78%. There were a few examples of tweets posted solely to emphasise the importance of 'safer gambling' by the operators. All operators posted at least one tweet on safer gambling over the two-week period, however some operators made a more conscious effort to post on safer gambling than others. Only one affiliate made posts primarily related to safer gambling. Nearly all safer gambling messages made were informational in nature, with a few limited examples of self-appraisal messages. An example of a safer gambling messages posted by SkyBet was: *"Never put betting before family & friends. Remember, #WhenTheFunStopsStop" (20/06/2018).*

Other

The proportion of tweets across the data set classified as other was 0.37%. There were a few examples of other types of content which did not fit with the eight main categories discovered. Examples of content which was placed in this category are posts discussing good causes, commentary on news stories, music lyrics and celebrity news.

3.5. Discussion – Study 1a

3.5.1. Summary of Findings

The current study aimed to assess the type of content posted on social media by sports-betting operators and affiliates. In total, nine categories of content were discovered: direct advertising, betting assistance, sports content, customer engagement, humour, update of current bet status, promotional content, safer gambling and other. Additionally, the study also aimed to assess any difference in the frequency of posting within each content category. In doing so, it was highlighted that gambling affiliates were more active in their use of social media for direct advertising, with just under two thirds of their posts falling into the direct advertising or betting assistance categories. Alternatively, operators tended to take a clearer branding approach, with a higher percentage of their content falling into the sport content and humour categories. Other key findings of interest included that there was very little attention given to safer gambling and that there were no age restrictions placed upon access to affiliate accounts.

3.5.2. *Contribution to Existing Literature*

The type of content highlighted within the current study largely fits in line with research into Australian gambling operators' use of social media (Gainsbury, Delfabbro, et al., 2016). In particular, all nine of content categories discovered within the current study were also identified as being present within the aforementioned Australian study. Whilst there may be some overlap between operators included within the two samples, it is important to note the Gainsbury, Delfabbro et al. (2016) study included Australian-facing social media accounts, whereas the current study used the operators' main Twitter account. The current study therefore expands the findings of Gainsbury, Delfabbro et al. (2016) by emphasising that British sports-betting operators employ similar social media strategies to Australian operators and by demonstrating that gambling affiliates also post similar types of content.

Additionally, the current findings also provide further weight to the growing evidence base of the integrative relationship between gambling and sport, often coined the 'gamblification of sport' or the 'sportification of gambling' (Hibai Lopez-Gonzalez & Griffiths, 2017; McMullan & Miller, 2008; Thomas, Lewis, Duong, & Mcleod, 2012). Just under a quarter of total posts by operators and affiliates were made purely to discuss or provide updates upon sport. This highlights the fact that the relationship between gambling and sport is reciprocal, whereby gambling is not only prevalent within sporting environments (Hibai Lopez-Gonzalez, Estévez, & Griffiths, 2017) but sport is also widely discussed within gambling environments. Such processes have raised concern about the potential exposure to gambling products for at risk populations (Derevensky & Gilbeau, 2015; Li et al., 2018) and the current study exemplifies how this risk is also present upon social networking sites.

To the author's knowledge, the current study also entailed the first attempt to quantify the type of content posted by gambling operators on social media. It was found that over half of the content posted by sports-betting operators was dedicated

to sports or humour, whilst just under one fifth of posts contained direct advertising. This more considered, indirect approach to social media usage somewhat mirrors the view put forward by Australian gambling operators that social media is seen as a platform by which to engage with customers and promote brand engagement (Gainsbury, King, et al., 2015). Research has demonstrated that in order to maximise engagement with social media content, the content should be related to the brand's personality (Lee et al., 2018). Therefore, by implementing a social media strategy which is highly inclusive of sport and humour, operators can not only further the integration of sports and gambling but also create a clear brand personality which encourages engagement with their content. This may explain why sports betting operators average significantly more retweets upon their posts compared to affiliates despite posting proportionally less content which directly encourages customer engagement – as operators post significantly more content related to their brand personality.

Contrastingly, gambling affiliates were far more direct in their use of social media. Just under two thirds of the posts made by gambling affiliates on Twitter were either direct advertisements or posts made to assist betting choices. This finding was not a particularly surprising one, given that affiliate accounts are often presented as betting communities or tipping pages (Savage, 2018). However, the sheer number of tips and special offers presented on these accounts in comparison to operators highlights a far more aggressive marketing strategy employed by the gambling affiliates. A potential concern as relates to this is the fact that only one of the five affiliate accounts posted any tweets related to safer gambling and none of the accounts had age screening set up for their followers. This means that the affiliate accounts could have individuals under the legal age to gamble following them on Twitter where they are actively posting highly attractive gambling offers and tips. This is particularly worrying given adolescents are recognised as a vulnerable

population who are at an increased risk of developing gambling problems (Derevensky & Gilbeau, 2015). Additionally, gambling affiliates were more likely than operators to post updates on the status of current bets and these updates mostly focussed on bets which had won or were close to winning. This may create unrealistic expectations among vulnerable followers on the likelihood of making money from gambling, due to an availability heuristic whereby instances of winning are more easily recalled than examples of losing bets (Fortune & Goodie, 2012). Regulators of affiliate marketing should therefore be aware of the addressed concerns and consider whether affiliates should be required to track the success of all suggested bets in order to allow consumers to get a more accurate idea on how successful affiliates are in tipping winning bets. Affiliates should also be required to inform bettors of the financial relationship between them and the gambling industry.

3.5.3. Evaluation of Current Study

One issue encountered within the current study was that some of the tweets, particularly by the gambling affiliates, were multiple purpose tweet where it was difficult to decide upon the definitive main purpose of the tweet. In order to counter this problem, the researcher developed an initial coding scheme based upon the first 100 tweets from each of the 10 accounts and applied this coding scheme to the rest of the data. A second researcher was also asked to code over 10% of the data and checks of agreement showed substantial agreement between researchers, suggesting that the developed coding scheme was effective in classifying the data. A limitation of the current study was that the NCapture software (QSR International, 2018) uses the Twitter streaming API to retrieve the data, therefore it does not download all of the tweets which would be available to see on a browser. Additionally, it also does not collect certain measures of engagements, such as 'likes' or number of comments. However, there did not appear to be a systematic

bias in the types of tweets not collected. Additionally, the research initially set out to focus upon the use of Twitter by gambling operators. However, due to the sampling method employed, the study focused solely upon sports-betting operators. Whilst this is indicative of the social media environment for gambling, whereby sports-betting operators have a larger following, it does leave a gap in the literature as to how British gambling operators of other activities market their company on social media.

One major strength of the current study is the fact that it was able to successfully collect information on the frequency of posting certain types of content. For example, it was identified that only 1.62% of sports-betting operator's posts were dedicated to promoting safer gambling and this figure was even smaller for the gambling affiliates at 0.26%. By collecting data on the frequency of posting different types of content, the social media strategies of both sports-betting operators and gambling affiliates have become clearer.

3.5.4. Future Directions

The findings of the current study have highlighted numerous areas for further study. One such idea is to analyse the current data set in a more in-depth, qualitative, manner to explore the messages conveyed around gambling by operators and the affiliates. Whilst the current study has successfully explored the types of content posted by operators and affiliates on social media, there is also a need to understand the type of language used to discuss gambling and the underlying messages this conveys. In particular, there is a need to analyse the language used to present special offers, tips and updates upon current bets due to the potential for this type of content to present gambling in a very attractive manner. Therefore, study 1b within this chapter will address this.

The current research draws attention to the online environment in which gambling behaviour occurs, highlighting the social media strategies employed by sports-betting operators and affiliates. Future research would benefit from assessing the understanding gamblers have of such an environment. This may be particularly relevant to look at within at-risk populations, given that at-risk gamblers and problem gamblers report increased levels of gambling and gambling problems as a result of social media promotions (Gainsbury, King, et al., 2016). Through interviewing at-risk gamblers, a clearer understanding will be formed on how social media is used by gamblers and what role it plays within a gambler's life relevant to other gambling influences. Further research is also needed into the understanding of gambling affiliation amongst gamblers. It is unclear as to whether gamblers understand that such 'tipping' accounts on social media are affiliated with the bookmakers and make money from directing their custom to a gambling operator. This may therefore have major impacts on how trustworthy affiliates are viewed to be by gamblers which may be directly impacting upon gambling behaviour.

3.5.5. Conclusions

The aim of the current study was to assess the type of content posted by British gambling operators and gambling affiliates on social media. Findings supported international research (Gainsbury et al., 2016) regarding the type of content posted, however was able to build upon this research by quantifying the proportions of posting within each content category for both operators and affiliates. It was found that operators' use of social media marketing took a more calculated indirect approach, focussing content on humour and sport to build brand awareness. Alternatively, gambling affiliates were far more direct in their use of social media with the majority of their social media content focussed on direct advertising or giving tips for suggested bets. References to safer gambling were sparse for

operators and even more so for affiliates. Future research should aim to assess the impact of social media advertising upon at-risk populations and further focus should be given to the underlying messages portrayed through gambling content on social media.

3.6. Method – Study 1b

Within the previous section, Study 1a identified that the content twitter postings of gambling affiliates and operators were classified into nine distinct categories. Study 1b, of which the Method, Results and Discussion are presented below, aimed to further build upon this through assessing how gambling is conveyed within social media marketing.

3.6.1. Analysis Procedure

A latent, realist thematic analysis (Braun & Clarke, 2006) was applied on a subset of the data from study 1a in order to assess the underlying messages conveyed around gambling within the social media marketing of gambling operators and affiliates. Thematic analysis is a theoretically flexible method of qualitative analysis which aims to identify patterns of meaning within a data set (Braun & Clarke, 2006). The current study was carried out within a critical realist perspective (Archer et al., 2013), whereby linguistic descriptions of betting have causal effects in producing specific ways of thinking and acting about betting. This allowed the analysis conducted to go beyond the semantic content of tweets, in order to highlight how latent messages within the data which may have an impact upon the ways in which individuals think about betting as an activity.

The six stages of thematic analysis identified by Braun and Clarke (2006) were carried out to analyse the data. The first stage of thematic analysis requires researchers to familiarise themselves with the data. Since the researcher was already familiar with the data from carrying out the content analysis reported in study 1a, this initial stage was carried out by reading back through the first 200 tweets downloaded from each twitter account. A decision was taken to initially analyse the first 200 tweets from each of the ten accounts and then make a judgement as to whether new codes were still being identified once those 2000 tweets had been coded. The second stage in the analysis requires the researcher to generate initial codes from the data. Using NVivo, an inductive coding method was employed to start to identify interesting patterns within the data that appeared to be related to the study aims. As such, coding revolved around coding tweets for how gambling was portrayed within tweets. This differed from the coding with part a, whereby coding focused on the type of content in the tweet. As coding was inductive, this meant that the codes identified were driven by the data and were not identified to fit within pre-existing theoretical frameworks. After coding the first 2,000 tweets, it was seen that very few new codes were being generated towards the end of coding and the decision was taken that no more tweets needed to be analysed due to data saturation. Next, the codes identified were organised and collated into potential themes which addressed the study aims on a broader level. The generated themes were then reviewed and a thematic map (see figure 1) was created to visually demonstrate the organisation of themes and codes. Themes were then named and defined, before being written up in the following section to provide an explanation for how the generated themes answered the research question and their context within the wider literature.

3.7. Results and Discussion – Study 1b

A thematic analysis was applied to address the research question, 'what messages are conveyed around gambling through gambling operators and affiliates posting on social media'? Three main themes were generated: Betting is exciting, betting is a skill and betting is risky (refer to Fig.1 for thematic map).

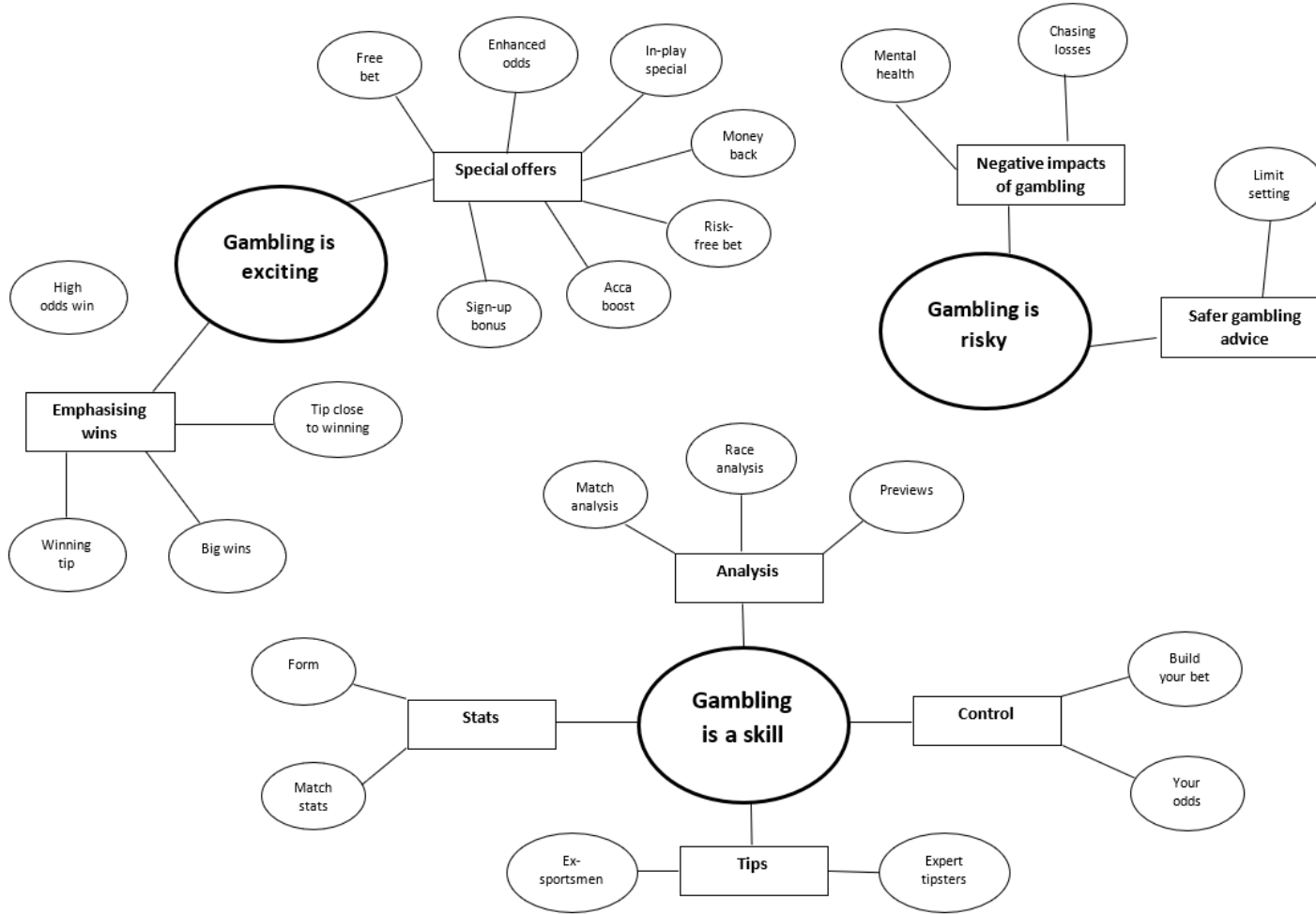


Figure 1

A thematic map demonstrating how sports betting is presented on social media by gambling operators and affiliates in Great Britain



3.7.1. Betting is exciting

One of the main themes generated within the analysis, perhaps unsurprisingly, was that betting was portrayed by gambling operators and affiliates as an inherently exciting activity. Both gambling operators and gambling affiliates made posts focussed on winning bets or tips. In particular, gambling operators posted information on bets with high odds and large returns.

William Hill: “Did you celebrate Ronaldo’s equaliser last night? Probably not as much as one of our customers. That late free-kick landed them a 400/1 winner from a £25 stake”.

bet365: “Calyx, Without Parole, Monarchs Glen. An 86.75/1 treble for Frankie Dettori and John Gosden on day one at Royal Ascot”.

By posting such information on large wins, gambling operators may be able to prime followers on the idea that winning large sums of money from betting is an obtainable goal. Given that research has demonstrated a clear link between the expectancy of winning money and excitement within gambling (Wulfert et al., 2008), it is reasonable to conclude that presenting examples of large wins on social media has the potential to instil feelings of excitement around gambling within followers of the account. Additionally, gambling affiliates regularly made posts which highlighted the fact that a tip they had provided had won or had moved closer to winning.

My Racing Tips: “48/1 MEGA ACCA!!!  13/1 WIN ACCA!!!  BOTH SMASHED IN ON THE GREYHOUNDS AS THE NEXT BEST WINS - GET IN THERE!!!”

FootySuperTips:

“GOOOAL!!!! GET IN LADS!!! HOLD ON NOW PLEASE!!”

Through regularly posting updates on successful tips and infrequently posting on suggested bets which have lost, gambling affiliates present gambling in an extremely positive manner whereby winning occurs more frequently than losing. This marketing strategy is similar in nature to well established cognitive biases which have been known to impact upon gambling behaviour. For example, research has demonstrated an inherent memory bias where gamblers are more likely to recall gambling wins than losses (Toneatto et al., 1997). Also, viewing other people’s wins is known to instigate a belief that winning is common within gambling and therefore encourages people to keep gambling with the expectancy of winning (Fortune & Goodie, 2012). The qualitative analysis within the current study therefore adds to this body of literature, as it demonstrates how these biases are replicated within the marketing strategies of gambling affiliate and operator accounts. In turn, this may pose the risk of disordered gamblers’ maladaptive cognitions being reinforced or developed over time, through gambling accounts directing of their attention towards primarily “win-orientated” content.

Another marketing strategy employed by gambling operators and affiliates was to post attractive special offers which encourage consumers to bet. For example, gambling affiliates would often post sign-up bonuses and free bet offers, whereby followers were incentivised to deposit money or place a specific bet.

Footy Accumulators: *“BET365 NEW CUSTOMER OFFER! Join today & you can get up to £100 in bet credits HERE”.*

My Racing Tips: *“Bet £10 on the 2.30pm. Get £25 in Free Bets for the next 5 races”.*

These sign-up strategies place emphasis on lowering the risk associated with a betting experience by offering potential customers free bets or bet credits. This allows individuals to experience the excitement of gambling, whilst either removing the chance of losing their own money or increasing the chance of initially making a profit from betting. Given that these kinds of offers were common across bookmakers and affiliates, this could be very appealing to those who are new to betting (Kim et al., 2017) and who may view these types of offers as an avenue of making money. However, there were also special offers presented which targeted existing customers such as in-play specials, enhanced odds and accumulator boosts.

Coral: “A hat-trick vs. Spain, Cristiano Ronaldo is 7/2 to score 2+ today (was 16/5)”.

bet365: “Tennis Accumulator Bonus. Earn up to 50% more on your accumulators. Applies to pre-match accumulators of 2+ selections on To Win Match, First Set Winner and Set Betting markets”.

These types of offers also aimed to invoke a sense of excitement in bettors around a particular bet by emphasising an additional benefit of placing the bet. For example, when an individual places a bet with enhanced odds, they receive additional winnings in the case of that bet winning. Given the previously discussed relationship between excitement and expectancy of winning money (Wulfert et al., 2008), it supports the argument that operators may be able to increase excitement within bettors by highlighting the extra winnings they will receive if the enhanced odds bet wins. In support of this, enhanced odds inducements have been shown to be particularly appealing to sports bettors within an online experiment (Rockloff et al., 2019) and are often poorly priced (Newall et al., 2019). Inducements were also highlighted within the study to lead to riskier, higher odds bets which have a higher volatility of player returns. This further exemplifies how the presentation of betting as

an exciting activity on social media may lead to negative impacts upon actual betting behaviour.

3.7.2. *Betting is a skill*

Another theme which was developed from the data was that betting is a skill, whereby gambling affiliates and operators depicted the activity of betting behaviour to their consumers as a skilled ability which could be 'mastered' over time. One way in which this theme manifested itself was through tips given alongside a range of seemingly relevant sport statistics.

FootySuperTips: *"FC Ilves v Lahti. Lahti No Clean Sheet @ 1/1. Ilves have scored in 15 of their last 17 home games in all competitions. Lahti have conceded in 12 of their last 14 away games in all competitions"*.

William Hill: *"Suarez has 51 goals in 99 games for Uruguay. He makes his 100th appearance today (Link to bet on Suarez scoring 2 or more goals)"*

Through placing suggested bets alongside statistics which appear to be logically related to the suggested bet, it implies that gamblers can be successful by carefully selecting their choice of bets based on previous form. This is more explicitly emphasised by the promotion of statistics databases and even encouraging followers to study a particular fixture.

FootySuperTips: *"Half Time is the perfect time to study the 7pm kick off!"*

Paddy Power: *"Our World Cup Stat centre has been updated with the latest data from all of today's matches. That's 3,500 stats in one place for all the nerds out there"*.

Taken together, this represents an example of the illusion of control cognitive bias, whereby an individual overestimates their ability to influence a gambling outcome (Fortune & Goodie, 2012). The tweets presented above suggest that a key aspect in

being successful within betting is to carefully choose your bets based on studying form and statistics of those involved within a sporting competition. This subsequently places the focus of a bet outcome on a gamblers' individual ability to select winning bets, as opposed to outcomes being randomly occurring. This shift of focus serves to present betting as a sport in itself (McMullan & Miller, 2008), whereby gambling can be mastered with knowledge of the sport which an individual is gambling on. Concerningly, research has consistently demonstrated that bettors overestimate their own perceived skill level in predicting outcomes of sporting events (Cantinotti et al., 2004; Khazaal et al., 2012) and that at-risk gamblers believe their own gambling behaviour to be highly skilled (Thomas, Lewis, Westberg, & Derevensky, 2013)

A further example of betting being presented as a skill was observed from the use of expert tipsters, usually an ex-sportsman or an individual seen to be particularly knowledgeable within a given sport, to either suggest a bet or to give a match preview from a betting perspective.

bet365: *"It's a competitive looking Royal Hunt Cup. Pat Cooney has an idea of how to play the race".*

SkyBet: *"Redknapp has given us his prediction ahead of #TUN v #ENG later".*

The use of expert tipsters is representative of a heuristic-like strategic, whereby customers were given the impression that there was a betting advantage to be gained through the expert's possession of a good level of knowledge on the sport that they were gambling on. Research has demonstrated how incorporating celebrity endorsements within gambling marketing is able to reduce the perception of risk within a gambling product (Lamont et al., 2016). It may therefore be the case that bettors are more likely to back specific bets which are suggested by experts due to distorted expectations of how likely the bets are to win.

3.7.3. *Betting is risky*

The final theme developed from the data was that betting is a risky activity which can, in certain circumstances, escalate to levels deemed to be problematic. This was mainly achieved through the posting of 'safer gambling' warning messages.

William Hill: *"Never Put Betting Before Your Mates #WhenTheFunStopsStop"*.

SkyBet: *"Set your limits before betting. Remember, #WhenTheFunStopsStop"*.

Whilst the safer gambling messages used were mainly informational in nature, they did cover a range of concerns which are associated with problematic gambling behaviour. For example, gamblers were encouraged to set deposit limits. This is a safer gambling strategy aimed at preventing gamblers from chasing their losses and losing more money than they can afford to (Auer & Griffiths, 2013). Additionally, followers were encouraged to not prioritise gambling over family or friends as problematic gambling behaviour is known to place a significant strain on interpersonal relationships (Downs & Woolrych, 2010). Safer gambling messages were also posted on mental health issues associated with gambling behaviour. Through advocating potential strategies to avoid such issues, gambling operators can convey that there are risks associated with gambling and that gamblers need to be aware of such issues in order to avoid them. Additionally, this could also be considered an aspect of brand building where brands are able to present themselves as being socially responsible.

However, despite the acknowledgement of the risks associated with betting behaviour, numerous elements of the aforementioned themes work to lower the perceived risk of betting. For example, there were a range of special offers

presented which aimed to reduce the risk associated with placing a bet with a specific bookmaker.

LiveFootball: “Get your money back if one leg of your #WorldCup accumulator bet lets you down”.

Paddy Power: “Remember we are money back (as a free bet) on selected markets if Spain beat Iran! T&Cs”.

Through emphasising the potential to earn your money back, either directly or through a free bet, on a losing bet if certain conditions are met, operators are able to lower the risk associated with placing such bets. This strategy was therefore representative of a possible countermeasure tactic presented by gambling operators and affiliates, to encourage continued playing from bettors who had begun to grow concerned with the severity of their gambling behaviours. Through the presentation of match and player form statistics, gambling accounts also lowered the perceived risk of betting to consumers by creating a clear association between an individual’s sporting knowledge and their gambling outcomes, through their presentation of betting as a ‘master-able’ skill. A recent review on the advertising of sports betting highlighted numerous strategies used to reduce the perception of risk associated with gambling (Griffiths et al., 2018). Therefore, the current study highlights how these strategies expand into the social media marketing of sports betting.

3.8. Conclusion – Study 1b

3.8.1. Summary of Findings

The current study aimed to assess how gambling was portrayed on social media by gambling operators and gambling affiliates. In summary, sports betting was

presented as an activity which is exciting through gambling accounts posting information on high wins, near misses and highly attractive betting incentives. Betting was also portrayed to consumers as a skill which can be mastered through the giving of tips and the presentation of statistics. This encouraged bettors to offload feelings of risk by exploring statistics databases and relying upon the advice of ex-sportsmen to provide tips and betting previews for “studying” potential bets. Finally, the risks associated with gambling were acknowledged within social media, such as overspending on gambling and gambling impacting upon relationships. However, there were also countermeasure strategies employed by operators and affiliates to lower the perceived risks of partaking in betting behaviour. This was accomplished through the posting about betting offers which return stakes to bettors if a bet is unsuccessful and the presentation of gambling as a skill which can be mastered.

3.8.2. Evaluation of Strengths and Limitations

One strength of this study is that it builds upon the findings of Study 1a, which explored the types of content posted by British gambling operators on social media, to highlight the underlying messages conveyed around gambling through such posting. In doing so, the current study has developed an initial understanding of how gambling is presented on social media. One potential limitation of the current study is that there may be an argument that Twitter content is not processed at such a level to justify the inferences made within the analysis. However, even if tweets are not processed at a conscious level, research has demonstrated that social media marketing influences consumer perceptions (Ali et al., 2016). Therefore, it appears likely that underlying messages identified around gambling within the study have the potential to impact upon perceptions of gambling. A further limitation of the current study is that it only explores how sports betting is portrayed on social media, rather

than other types of gambling. Whilst this is a result of the sampling strategy employed within study 1a and therefore the findings are reflective of the gambling social media accounts with the highest reach, it may be that other types of gambling activities are portrayed differently upon social media platforms.

3.8.3. *Future Directions*

Given the large quantity of posts made for the purpose of direct advertising within the current study, further research in this area should look to assess the types of bets advertised on social media. Additionally, given the positioning of affiliate accounts as betting communities, future research should also consider how successful the bets they advertise are and how this compares to gambling operators. As such, the next chapter will focus upon this, whilst also considering how successful these bets are and whether this differs between operators and affiliates.

Chapter 4. Study 2 – What bets are advertised on social media in Great Britain and how successful are they?

4.1. Abstract

Aims: The current study aimed to assess the types of bets advertised, and their success, on social media by betting operators and affiliates. **Method:** An observational study was carried out whereby bets advertised on Twitter by the 10 accounts within the previous study were tracked over a two-week period in September 2018. Information on each advertised bet was then observed, including: bet odds, bet type, bet success, how many times it was advertised, whether the bet was price boosted and whether the success of the bet was commented upon. Descriptive statistics were then calculated based upon the information collected. The overall success of bets was calculated based upon betting on each advertised bet with equal stakes and by running simulations of an increasing number of random bets from the sample of bets observed. **Results:** Both operators and affiliates advertised around 140 bets per day at average decimal odds of 6.0, however affiliates posted each bet three times more than operators. Over 10% of bets advertised by operators were price boosted and over 75% of bets advertised across accounts were single bets. Only one in five bets which were advertised won. Affiliate bets led to an overall loss of 12% of original stakes while operator bets led to a 20% loss. Of 10,000 simulations of 14 randomly chosen bets across accounts, only 30% of the simulations led to profit and this decreased to 19% when the number of bets included in the simulation was increased to 140. **Discussion:** Findings raise concerns about the volume of bets advertised on social media with large expected losses. This is supported by the poor success of bets within the

study, especially within the simulation data which demonstrates how chances of making a profit decrease the more advertised bets are bet upon. Concerns are also discussed in relation to the misrepresentation of the success of affiliate tips within the study. Future research should focus on exploring how bettors respond to such marketing and whether they place increased confidence in affiliate advertised bets.

4.2. Introduction

As discussed previously, gambling companies are placing an increased focus on social media marketing (Gambling Commission, 2018a). Previous research, including both international research (Gainsbury, Delfabbro, et al., 2016) and the studies discussed in the previous chapter, has investigated the types of content posted within such marketing and the underlying messages conveyed around gambling. However, there has been little focus on the bets advertised within social media marketing. As highlighted within the previous chapter, both gambling operators and affiliates have a large reach on social media and post a large quantity of content. Nearly one-third of the posts identified within the previous study across affiliates and operators were made for the purpose of directly advertising a specific bet or offer. Therefore, given the large quantity of bets being advertised on social media, research is needed to assess the types of bets which are being advertised and their success.

Whilst little is known in relation to the types of bets advertised on social media, research has investigated the types of bets advertised on British television and in bookmaker shop windows. For example, Newall (2015) carried out an observational study of shop window and television advertised bets during the 2014 football World Cup and found that the majority of advertised bets focused upon complex gambles. Within the paper, the author explains how more complex gambles lead to larger expected losses for bettors due a larger “overround” within the markets for complex bets. An overround within sports betting refers to the extent to which the sum of bookmaker’s odds for mutually exclusive events exceeds 1. Whilst there are only three possible outcomes when betting on the outcome of a football match, the number of possible outcomes for a first goalscorer bet is far greater. As a result, the increased number of potential outcomes tends to lead to an increased overround and subsequently, larger expected losses. Additionally, it was argued that

advertised bets take advantage of the biases within representativeness heuristic whereby individuals make overestimations on the probability of complex events due to them appearing more representative. For example, bookmakers would often advertise the favourite team winning by a large amount or a star player being the first goalscorer.

Further research exploring television advertising during the subsequent World Cup in 2018 found a similar pattern of adverts consisting of mostly complex bets (Newall, Thobhani, et al., 2019). In fact, complex bets were advertised more frequently during the 2018 World Cup in comparison to the 2014 World Cup. Bets which required a combination of more than one selection (for example two different players to score) were featured in 34.8% of 2018 World Cup advertising compared to just 4% of advertising in 2014, with the frequency of simple bets on teams to win dropping from 7% in 2014 to 0% in 2018. Additionally, it was observed that around a quarter of advertised bets were shown to have increased odds and 40% of bets had the potential for the outcome of the bet to be decided before the end of the match. This highlights both the use of incentives to increase perceived value of bets and the use of bets with quicker outcomes to encourage a higher frequency of betting.

A further study exploring television advertising during Premier League football matches in January and February 2016 found that mean decimal odds of advertised bets was just under 7.5 (Newall, 2017). Additionally, over 50% of advertised bets required bettors to make a prediction on a specific goalscorer. Building upon this, the authors conducted multiple experimental studies exploring bettors understanding of the implied probability of different types of events within a football match. Whilst bettors had a good understanding of implied probabilities of simplistic bets, they consistently over-estimated the likelihood of more complex events. Since bettors have a poor understanding of the likelihood of complex events, this furthers

the argument that advertising complex bets may lead to larger and more consistent losses, as compared to more simple bets.

To build upon the findings of the studies within the previous chapter, the current study aims to develop an understanding of the frequency and types of bets advertised by British gambling operators and gambling affiliates on social media. This will build upon previous literature which has highlighted that British television advertising focuses upon advertising complex bets which bettors struggle to accurately judge the probability of and which lead to larger expected losses (Newall, 2015, 2017; Newall, Thobhani, et al., 2019). In addition, the study also aims to assess how successful these bets are and how likely it is that a bettor would make a profit or loss based upon betting on advertised bets.

4.3. Method

4.3.1. Sampling Procedure

In building upon the findings of study 1a, the decision was made to investigate bets advertised by the same 10 accounts which were included within that study. This decision was taken as these accounts represented the five operators (SkyBet, PaddyPower, Bet365, Coral, William Hill) and five affiliates (FootyAccumulators, FootySuperTips, TheWinnersEnclosure, MyRacingTips and LiveFootball) with the highest reach on Twitter. It was then confirmed that all accounts were still active, which was determined by whether they had posted at least once within the previous week. One of the affiliate accounts had been rebranded from LiveFootball to FootballTips. The number of followers of the five operator accounts range from

219,800 (William Hill) to 650,600 (PaddyPower), whilst affiliate followers ranged from 201,300 (FootballTips) to 603,100 (FootyAccumulators).

For a two-week period between the 16th and 28th of September in 2019, the lead researcher manually tracked each of the 10 Twitter accounts and made an observation of every bet which was advertised on these accounts. For each bet which was advertised, the following information was recorded: what the advertised bet was, the date in which the bet was first advertised, the type of bet which was advertised, the decimal odds of the bet, how many times the bet was advertised, whether a betting inducement accompanied the bet, whether the bet won and whether any comment was made on the account about the success of the bet. Each account was checked four times daily to make the observations, with the timestamps of the tweets used to ensure that no post made was observed more than once. All bets which were referenced within a tweet were included within the study. Advertised bets were either included in the text of the tweet, within an accompanying image or on a webpage accessed through a hyperlink in the tweet.

4.3.2. Analysis Procedure

Observational data collected on the bets advertised was used to calculate a range of descriptive statistics on each data category for each individual account and subsequently for the two account types (operator and affiliate). Descriptive statistics calculated on advertised bets were: total number of bets advertised, the mean number of bets advertised by days, the mean number of times each bet was advertised, median odds of advertised bets, percentage of advertised bets which were price boosted and the percentage of bets advertised by different bet types. Median odds were presented to represent average odds instead of mean odds due to the presence of extreme outliers which greatly increased the mean odds of

advertised bets. Success of advertised bets was then measured by calculating the percentage of bets which won and by calculating the percentage of original stakes lost if an individual were to bet on each advertised bet with an equal stake. The median decimal odds of winning and losing bets were then calculated. Percentages of winning and losing bets commented upon by the accounts were also determined as a measure of how honest the accounts were about the success of their advertised bets.

Mann-Whitney U tests were run to assess differences between account types on bets advertised per day, how often bets are advertised and bet odds. A further Mann-Whitney U test was run in order to assess whether there was a significant difference between odds of winning and losing advertised bets. Chi-squared tests of independence were run to assess whether there was a significant relationship between account type and the following variables: percentage of advertised bets which were price boosted, type of bet, percentage of bets won and percentage of original stakes lost. Inspections of standardised residuals were then made to assess for differences on each of the variables between the operator and affiliate accounts.

Finally, given that it is implausible any individual bettor would bet on every single advertised bet over the two-week period, a series of simulations were run through the statistical programming software R (RStudio Team, 2020) to assess returns for randomly chosen samples of advertised bets, based upon betting even stakes on each bet. Three sets of 10,000 simulations of 14 randomly chosen bets were run initially - one for operator advertised bets, one for affiliate advertised bets and one for a combination of both. This process was then repeated three times for 28, 70 and 140 randomly chosen bets. These numbers were chosen to reflect an average of one, two, five and ten bets per day.

4.4. Results

4.4.1. Bets Advertised

Table 3

Advertised bet frequency, median odds of advertised bets and percentage of advertised bets which are price boosted for each operator and affiliate account.

Account	Total Bets Advertised	Bets Advertised per Day	Mean Number of Times Each Bet is Advertised	Median Odds of Advertised Bets	Percentage of Advertised Bets Price Boosted
SkyBet	72	5.14	1.10	11.00	26.39
PaddyPower	1076	76.86	1.40	6.00	8.94
Bet365	315	22.50	1.02	6.00	0
Coral	392	28.00	1.26	4.33	21.94
WilliamHill	95	6.79	1.01	11.00	38.95
Operator	1950	139.29	1.28	6.00	12.31
FootyAccumulators	99	7.07	3.10	8.00	30.30
FootySuperTips	690	49.29	2.31	4.84	0
TheWinnersEnclosure	361	25.79	6.73	5.00	2.22
MyRacingTips	679	48.50	2.10	6.00	0
FootballTips	126	9.00	3.22	6.05	3.17
Affiliates	1955	139.64	3.15	5.70	1.42

As demonstrated in Table 3, both operators and affiliates advertised a large quantity of bets throughout the two-week period in which the social media accounts were observed. Whilst there was little difference between the number of unique bets advertised each day by operators and affiliates, around 139 for each, affiliates (Mdn = 2) did post their advertised bets more frequently than gambling operators (Mdn = 1), $U = 892303.50$, $p < 0.01$. There was no significant difference between the decimal odds of advertised bets between operators (Mdn = 6) and affiliates (Mdn =

5.67), $U = 1846720.50$, $p = 0.182$. However, examination of standardised residuals within a significant Chi squared test of independence between account type and use of betting incentives [$\chi^2 (1) = 150.389$, $p < 0.001$] highlighted that there was a significantly higher frequency of bets being price boosted by operators (12.31%) compared to affiliates (1.42%).

Table 4

Percentage of single, multiple and single game multibets advertised per operator and affiliate account.

Account	Single	Multiple	Single Game Multibet
SkyBet	51.39	36.11	12.50
PaddyPower	86.06	5.39	8.55
Bet365	84.44	0.32	15.24
Coral	92.86	0.26	6.89
WilliamHill	62.11	3.16	34.74
Operator	84.72	4.56	10.72
FootyAccumulators	5.05	58.59	36.36
FootySuperTips	76.74	19.91	3.34
TheWinnersEnclosure	86.98	10.80	2.22
MyRacingTips	81.54	16.86	1.62
FootballTips	33.33	53.97	12.70
Affiliates	73.90	21.30	4.79

The three main types of bets advertised by operators and affiliates were single bets, multiple bets where 2 or more selections are combined across multiple events and single game multibets where 2 or more selections are combined within a single

event. A Chi squared test of independence demonstrated a significant association between account type and types of bets advertised, $\chi^2(2) = 276.925$, $p < 0.001$. Single bets were the most advertised bet type for both operators and affiliates, however inspection of standardised residuals showed that operators posted a higher frequency of single bets and single game multibets whereas affiliates posted a higher frequency of multiple bets.

4.4.2. Bet Success

Table 5

Information on success of advertised bets and the frequency of commenting upon bet success after the bet had been advertised for each gambling operator and gambling affiliate Twitter account.

Account	Percentage of Advertised Bets which Won	Percentage of Original Stake Lost	Median Odds of Winning Bets	Median Odds of Losing Bets	Percentage of Winning Bets where Outcome was Discussed	Percentage of Losing Bets where Outcome was Discussed
SkyBet	11.72	55.88	3.75	11.13	100	0
PaddyPower	20.16	16.77	2.50	7.00	0	0
Bet365	21.09	11.69	3.55	7.50	0	0
Coral	23.20	16.77	3.10	4.90	1.35	0
WilliamHill	2.47	90.31	3.92	11.00	0	0
Operator	19.85	20.46	2.63	7.00	1.58	0
FootyAccumulators	10.31	44.10	3.60	10.00	40.00	0
FootySuperTips	22.59	22.86	2.00	7.50	12.50	0.19
TheWinnersEnclosure	23.32	7.24	2.75	6.00	61.25	3.42
MyRacingTips	17.58	13.64	3.00	7.00	42.61	3.15
FootballTips	23.20	-59.05	3.75	7.25	41.38	0
Affiliates	20.40	12.52	2.63	7.00	21.76	1.79

The success of advertised bets was observed for 2 weeks after data collection had been completed. Therefore, bets which had a winning or losing outcome were noted as such, whereas bets which did not yet have an outcome were not included in the calculations for bet success. A Chi squared test of independence revealed no association between account type and bet success $\chi^2 (1) = 0.489, p = 0.484$, with just under one in five resulted bets being winners regardless of account types. However, it was calculated that operator advertised bets would lead to a larger percentage loss of original stakes (20.46%) based upon betting the same amount on each advertised bet than affiliate advertised bets (12.52%). It was also found that, as expected, winning advertised bets across both account types had significantly lower odds (Mdn = 2.63) on average than advertised bets which lost (Mdn = 7.00), $U = 472805.50, p < 0.01$. Affiliate accounts posted updates on the success of their bets at a rate of just over one in five winning bets and just under two in every hundred losing bets. Operators rarely commented upon the success of the bets that they advertised, updating their followers on the success of under two in one hundred winning bets and none of their losing bets.

4.4.3. Simulation

Table 6

Percentage of simulations resulting in profit, median returns from a one-unit stake and mean percentage losses within 10,000 simulations of 14, 28, 70 and 140 randomly selected bets from operator, affiliate and both account types.

	Operators	Affiliates	Overall
10,000 simulations of 14 randomly selected bets			
% of simulations which made profit	25.17	32.89	29.51
Median returns from a 1 unit stake	8.49	10.02	9.20
Mean Percentage Losses	23.57	12.58	18.04
10,000 simulations of 28 randomly selected bets			
% of simulations which made profit	23.64	31.25	28.41
Median returns from a 1 unit stake	18.73	21.56	20.30
Mean Percentage Losses	23.29	14.39	17.82
10,000 simulations of 70 randomly selected bets			
% of simulations which made profit	19.44	28.75	23.88
Median returns from a 1 unit stake	50.76	57.53	54.58
Mean Percentage Losses	22.73	13.69	17.92
10,000 simulations of 140 randomly selected bets			
% of simulations which made profit	13.88	24.62	18.82
Median returns from a 1 unit stake	104.41	118.40	111.54
Mean Percentage Losses	22.85	13.48	17.96

Findings revealed that both types of accounts showed a low chance of making profit from advertised bets when choosing bets at random. A higher percentage of simulations upon affiliate advertised bets resulted in profit than operator advertised bets regardless of bet frequency. However, it was observed that as the number of bets included within the simulations increased, the percentage of simulations which resulted in profit decreased, highlighting the fact that it appears harder to make

profit from betting on advertised bets the more frequently you bet upon them. An important point of consideration here is that the number of simulations that result in profit would continue as the number of bets chosen within the simulations increased and at the point every chosen bet was included within the simulation, none of the simulations would result in a profit. This is due to the previously discussed fact that both operator and affiliate advertised bets led to an overall loss of between 12 and 20% of original stakes. However, if the simulations only included 1 chosen bet, around 20% of the simulations would result in a profit as this was the number of bets that won. Average percentage losses of original stakes remained relatively consistent as the number of bets within the simulations increased, however this would still lead to a larger financial loss due to the higher total stakes involved as bet frequency increases.

4.5. Discussion

4.5.1. Summary of Findings

The current study aimed to investigate the frequency and types of bets advertised by British sports betting operators and affiliates on social media. It was found that betting operators and affiliates advertised a large volume of bets each day, with no difference between the number of bets advertised between the two types of accounts. However, affiliates did post their advertised bets more frequently than operators. The average odds for advertised bets across account types was just under decimal odds of 6.0, with no significant difference observed between operators and affiliates. The most common incentive within the study was price boosted bets, with operators boosting the odds of over 10% of advertised bets. Whilst single bets were the most advertised bets across account types, there was a

difference in the frequency of different bet types between operators and affiliates. Namely, operators posted a higher frequency of single bets and single game multi-bets whereas affiliates posted a higher frequency of multiple bets.

The current study also aimed to assess how successful these bets were and how likely it is that a bettor would make a profit or loss based upon betting on advertised bets. It was found that around one in five advertised bets were winning bets for both account types and that betting on all advertised bets with an equal stake would result in losses for both operator and affiliate bets. However, betting on operator advertised bets would lead to larger losses than affiliate advertised bets. Similarly, findings from the simulations of randomly chosen bets demonstrated that betting on a random selection of affiliate bets would lead to larger returns and would result in making a profit more often than betting on a random selection of operator advertised bets. Less than 30% of the simulations returned a profit when they were based on choosing 14 bets and this percentage continually decreased as more bets were included within the simulations, highlighting the increased difficulty of making a profit from betting on advertised bets as the frequency of bets made increases. Also, gambling operators rarely posted updates on the success of their bets regardless of their success. Alternatively, gambling affiliates posted updates on one in five winning bets whereas they posted updates on less than one in 50 losing bets.

4.5.2. Contribution to Literature and Policy Implications

The large frequency of bets advertised by both operators and affiliates fits in line with the large number of posts made for direct advertising purposes within the previous study (Houghton et al., 2019). However, the current study expands on the findings of study one by highlighting that the reason for a higher frequency of posts for the purpose of direct advertising by affiliates within the previous study is due to

affiliates advertising each suggested bet more commonly, as opposed to advertising a larger quantity of bets. Whilst this is somewhat expected given that affiliates only make money from directing custom to gambling operators, it does raise questions as to what impact affiliate advertising may have upon gambling behaviour. Given the lack of clarity discussed previously over the affiliates' financial relationship with the betting industry, this large volume of advertised bets may promote impulsive betting due to the presentation of affiliate accounts as betting experts. This may specifically be problematic for individuals within at-risk populations, given that research has highlighted such populations report higher levels of impulsiveness (Russell et al., 2018). It also presents a further risk for those under the legal age to gamble as the previous study showed there were no age barriers on affiliate accounts, therefore allowing children to be exposed to such advertising on social media. Given the evidence that exposure to gambling marketing normalises gambling amongst underage populations (Nyemcsok et al., 2018; Pitt et al., 2017), this suggests a need for a review around the regulations of affiliate marketing on social media to protect at-risk populations.

The average decimal odds of advertised bets on social media was slightly lower at 6.0 compared to the average odds of television adverts at around 7.5 identified in previous research (Newall, 2017; Newall, Thobhani, et al., 2019). One potential explanation for this is the fact that the larger quantity of advertised bets on social media allows a wider variety of bets to be advertised compared to television adverts. Regardless, the average odds of bets on social media are still high at 6.0. Bets with odds of 6.0 give an implied probability of winning of just 16.66%, assuming no operator profit margin. As such, betting on advertised bets is likely to require bettors to bet a higher amount of money on average before seeing any returns. Such an increased volatility also places more gamblers into a losing position, with fewer gamblers profiting from betting (Rockloff et al., 2019). This

further portrays social media marketing as a risk factor within gambling due to the advertising of a high quantity of bets which could therefore result in more bettors losing money over time.

The finding that price boosted bets were the most common inducement included within bets advertised on social media aligns with research on television advertising during the 2018 World Cup (Newall, Thobhani, et al., 2019). Whilst the rate of price boosted bets in the current study for operators was lower at around one in ten bets compared to one in four bets in television adverts, this again is likely due to the increased frequency of social media advertising allowing operators to advertise a larger variety of bets whilst television adverts are more likely to focus on advertising special offers. However, given the frequency of posting by operators there was still an average of around 14 price boosted bets per day across the 5 operators within the study. This is concerning given that experimental research has highlighted that increased odds was the most popular inducement within a sample of sports bettors (Rockloff et al., 2019). Additionally, the study highlighted that the inclusion of an inducement encouraged bettors to choose riskier bets and that results were consistent regardless of the risk level of an individual's betting behaviour. The minimal use of incentives by gambling affiliates can be explained by the fact affiliates tended to post highly attractive sign-up offers but these were mostly advertised separately from specific bets and therefore were not tracked within the study. This difference in strategy in use of incentives suggests incentives are mainly used by affiliates to attempt to get individuals to sign-up to betting companies whereas operators use incentives to present their bets as being of increased value to existing customers.

The study found that single bets were the most advertised bets for both operators and affiliates. This can largely be explained by the vast number of different types of single bets advertised across the two weeks. For example, single bets identified

within the current study ranged from relatively simple events with as few as two possible outcomes to more complex predictions such as predicting a first goalscorer within a football match, the winner of a horse race or the winner of a tournament. As such, the large variety in bets within the 'single' category makes it difficult to draw solid conclusions around the complexity of bets within the category. However, it was observed within the study that affiliates posted a higher frequency of multiple bets than operators and operators posted a higher frequency of single-game multi-bets. Both of these types of bets are more complex than single bets and therefore are likely to lead to more individuals making a loss within a population of bettors due to higher market over-rounds and poor understanding of probabilities with higher bet complexity (Newall, 2015, 2017).

One novel aspect of the current study was that it investigated the success of bets which were advertised. Findings highlighted that around one in five advertised bets were winners, regardless of the type of account they were advertised on. Both affiliate advertised bets and operator advertised bets made a loss based upon betting on each bet with even stakes, albeit affiliate bets led to a smaller loss. Whilst this may show that affiliates bets slightly outperformed operator ones, it still highlights that their bets lose at a rate of four times those which win and that on average their advertised bets lead to losses. These findings were replicated within the simulation data of samples of randomly chosen bets, with affiliate bets again outperforming those of operators yet more simulations leading to a loss than a profit. Further to this, the simulation data suggests that there is less chance of making profit as the number of bets increased within the simulation. Affiliates also posted updates on one in five winning bets but less than two in one hundred losing bets, creating a false image of how successful their bets are. Taken together, these findings raise further questions as to the transparency of affiliate accounts on social media and their potential to be harmful to bettors. As affiliate accounts are largely

presented as betting communities or ‘tipping’ accounts, they might be required to track the success of their suggested bets and report this back to their followers. This would help their followers make informed decisions on whether they want to bet on suggested bets.

4.5.3. Evaluation of Study

By providing an initial evaluation of the types of bets that are advertised on social media and their success, the study provides a crucial insight into one of the main betting marketing strategies employed within Great Britain. Given that spend on social media marketing is increasing (GambleAware, 2018) and gambling companies agreed to reduce their television advertising from August 2019, it is likely that increasing focus will be placed on social media marketing going forward. This highlights the importance of understanding how operators engage with such marketing. The current study was also the first study to the author’s knowledge to investigate the bets advertised by gambling affiliates on social media. This is important as little has currently been researched on affiliate marketing for sports betting and concerns have been raised as to how such marketing may be interpreted by bettors (Houghton et al., 2020).

A further strength of the current study was that the manual data collection strategy whereby the lead researcher inputted information about the bets into a spreadsheet allowed every bet within the allocated time period to be collected. This is unlike the method of downloading data used in the previous chapter, which uses the Twitter API and therefore does not collect every tweet available to see on a browser and is also more likely to miss tweets which are subsequently deleted. Another strength of the current study was the novel use of simulation data to highlight the likelihood of making a profit or loss based upon betting on a random selection of advertised bets.

This demonstrated that bettors are unlikely to make a profit betting on 'tipped' bets by affiliates and that bettors' chances of making a profit decrease the more they bet on advertised bets. As such, it is suggested that future research could build upon the use of such a strategy and advance on it to take into account different staking plans used by bettors.

One main limitation of such an approach is that it can be criticised for lacking applicability to real world betting choices. Many bettors would argue that their betting choices are not made at random and that they rely on their own skill to choose bets. However, research has demonstrated that bettors tend to overestimate their own ability to predict outcomes within sporting events and make poor probability judgements of complex events (Cantinotti et al., 2004; Khazaaal et al., 2012; Newall, 2017). Therefore, there is little evidence to suggest that, on average, bettors would be more successful choosing their own bets rather than betting on a random selection of bets. This is something which could be empirically assessed within future research. However, the fact that around four in every five bets advertised lost and the average odds of winning bets was just 2.63 suggests that it would be difficult for bettors to profit from advertised bets.

Another potential criticism of the current study is that it is only based over a two-week time period. One difficulty of carrying out such research is that social media marketing and gambling marketing strategies may change rapidly to fit in line with new products or consumer preferences. This highlights the importance of replicating such work to assess whether such changes occur and to highlight any new marketing strategies which have the potential to be harmful to consumers.

Additionally, it could be argued that the success of advertised bets may fluctuate over time and that a randomly chosen two-week period is not a fair reflection of advertised bet success. This argument may specifically be made by affiliate marketers as they stand to benefit from presenting themselves as knowledgeable

'tipsters'. Therefore, it is suggested that future research assesses bet success over a longer time period or at regular short time intervals to get a long-term view of advertised bet success on social media.

4.5.4. Future Research

Whilst the current study provides evidence of the types of bets advertised on social media by betting operators and affiliates as well as their success, there is still little known about how bettors interact with such advertising. As such, future research in the next chapter will assess whether bettors respond differently to bets depending on whether they are advertised on an operator or affiliate account. This will build upon the findings of the current study by demonstrating how bettors respond to the types of advertising they encounter on social media evidenced within the current study. It will also show whether affiliate advertised bets are trusted more than operator bets.

4.5.5. Conclusion

The current study aimed to provide an understanding of the bets advertised on social media and their success. It was found that there is a large number of bets advertised per day across the most followed operator and affiliate accounts and that those bets tended to give odds with low expected probability of winning. This was supported by the data looking at how successful bets were which found that just one in five bets on average were winners and that both operator and affiliate advertised bets would lead to losses if they were bet on with even stakes. This was further compounded by the simulation data which showed that betting on a random selection of advertised bets more commonly led to a loss than a profit and that chances of making a profit decreased with the number of bets included within the

simulation. Such findings highlight the potential dangers for bettors engaging with social media marketing on social media, whereby the frequency and types of bets advertised will likely result in more overall losing bettors within the population of bettors.

Concerns were also highlighted over affiliate marketing, with affiliate advertised bets being framed as betting tips yet still leading to regular losses within the data.

Affiliates also misrepresented the success of their bets by posting more frequent updates of winning bets than losing bets, creating an image of their advertised bets being more successful than they are. This is something which may create a false sense of confidence within affiliate advertised bets and therefore this is one reason that the study in the next chapter will assess whether bets are perceived differently depending on whether they are advertised on an operator or affiliate account. It is suggested that for affiliate marketing to be done in a manner which fits within the safer gambling framework discussed in an earlier chapter, affiliates should be more transparent about the success of their advertised bets in order to help bettors make informed decisions regarding their advertising.

Chapter 5. Study 3 – How do gamblers respond to bets advertised on social media depending upon account type and bet complexity?

Study 3 reported upon in this chapter was published online in the Journal of Behavioural Addictions on the 26th of September 2020. The full reference to the paper is:

Houghton, S., & Moss, M. (2020). Comparing football bettors' response to social media marketing differing in bet complexity and account type—An experimental study. *Journal of Behavioral Addictions*.

5.1. Abstract

Aims: The current study aimed to assess how sports bettors respond to advertised bets on social media and whether this differs dependent upon bet complexity and social media account type. **Method:** Employing a 3x2 repeated measures design, 145 regular football bettors were recruited to take part in an online study requiring them to rate bets advertised upon social media, providing indications of their likelihood to bet, confidence in the bet and how much they would stake on the bet. Advertised bets differed in terms of complexity (low, medium and high) and each bet was presented separately on both an operator account and an affiliate account. **Results:** Data analysis highlighted a significant interaction between bet complexity and account type, with bettors rating themselves as being more likely to bet and more confident in bets which were presented on an affiliate account for medium

complexity bets but not for low or high complexity bets. **Discussion:** This study provides initial evidence that affiliate marketing of sports betting increases bettors confidence in certain types of bets. This heightens previously addressed concerns around affiliate marketing, given that affiliates are financially incentivised to attract custom toward gambling operators. Future research should explore risk factors for increased uptake of affiliate marketing, and the impact on gambling behaviour.

5.2. Introduction

Despite the growing evidence base of studies highlighting potentially harmful aspects of gambling marketing on social media (Gainsbury, Delfabbro, et al., 2016; Houghton et al., 2019; Killick & Griffiths, 2019), relatively little evidence has been gathered on how bettors respond to such social media marketing. However, there is evidence from the wider gambling marketing literature showing that marketing can have a negative impact upon behaviour. For example, studies have shown marketing inducements lead to risky behaviours such as; choices of longer odds, increased size of bets, increased frequencies of bets and placing bets on impulse (Hing et al., 2017, 2019; Rockloff et al., 2019). Additionally, evidence from an ecological momentary assessment study provided evidence of a significant positive relationship between self-reported advertising exposure and gambling expenditure (Browne et al., 2019). This suggests that exposure to marketing has the potential to impact upon gambling behaviour. Therefore, it is important to assess how social media marketing may impact upon betting behaviour.

One factor discussed within the previous chapters which may impact upon how a bettor responds to an advertised bet is bet complexity. As previously discussed, research has highlighted that British television advertising often advertises a large volume of complex bets (Newall, 2017; Newall, Thobhani, et al., 2019). Similar findings were also reported for social media marketing within the previous chapter. Whilst bettors can make sensible probability judgements for simple events, they consistently overestimate the probability of more complex bets (Newall, 2017). Such overconfidence raises concerns as to how bettors may respond to advertisements, therefore research needs to investigate whether bettor's response to gambling advertisements is adequately adapted in relation to bet complexity.

Another aspect of social media marketing which impacts upon how bettors respond to advertised bets is the type of account the bets are presented upon. As discussed

previously, affiliate accounts on social media are often presented as ‘tipping’ accounts or betting communities, whereby bettors can receive suggested bets, offers and expert advice. Such positioning of accounts, combined with a lack of transparency over their commercial relationship with operators, leads to concerns that bettors could become overconfident in bet suggestions made by affiliates compared to gambling operators. Supporting this, research has found that individuals place more trust in experts when making decisions which involve financial risk (Meshi et al., 2012). Additionally, given the positioning of affiliate accounts as betting communities which share a common objective of winning against the bookmaker, bettors may place increased trust in bets suggested by affiliates if they are viewed as being peers. Therefore, research is required to assess how bettors respond to marketing on social media by gambling affiliates and whether they place increased trust in affiliate marketing compared to operator marketing.

Previous research highlights that bettors struggle to judge the rational probability of complex bets regularly used in advertisements (Newall, 2017), however it is unknown as to whether this influences how they respond to such advertisements. Industry statistics demonstrate an upwards trend in the amount of money spent on social media marketing of gambling, aligning with increasing numbers of young people following gambling companies on social media (Gambling Commission, 2019b). Affiliate marketing on social media provides its own unique challenge, whereby affiliate accounts provide followers with suggested bets yet stand to financially benefit if bettors that they direct to an operator make a net loss. The current study therefore aims to assess whether bettors’ response to gambling advertisements differs depending on whether the bet was advertised by a gambling operator or gambling affiliate. The study also aims to assess whether bettors’ response to gambling advertisements changes depending upon bet complexity.

Finally, an additional exploratory aim within the current study is to use the demographic information collected within the study to investigate whether following gambling operators or affiliates on social media is a predictor of problem gambling scores.

H1 – Given the evidence of bettor’s poor understanding of bet probabilities for complex bets (Newall, 2017), it is predicted that bettors will not adjust their response to gambling advertisements (likelihood to bet, bet stake, confidence in bet winning) dependent upon bet complexity.

H2 – Given the concerns highlighted around the presentation of gambling affiliate marketing (Houghton et al., 2020), it is predicted that bettors will place a higher level of confidence (likelihood to bet, bet stake, confidence in bet winning) in bets advertised by affiliates compared to the same bet advertised by an operator.

5.3. Method

5.3.1. Design

A 3x2 repeated measures design was employed. The first factor was social media account type with two levels: operator and affiliate. The second factor was bet complexity with three levels: low (win-draw-win market), medium (first goalscorer) and high (scorecast). The dependent variables measured were responses to tweets advertising a specific bet. This included how likely they would be to bet on the advertised bet, how much they would choose to stake on the bet and how confident they would be in the bet winning.

5.3.2. *Participants*

145 regular football bettors in Great Britain aged 18 and over were recruited to take part in the study via opportunity sampling. Initially, the study was advertised upon the researcher's social media account, on a university campus via recruitment posters and on football supporter forums online. In order to bolster recruitment, the study was later shared on a survey swapping website (SurveyCircle) to recruit the rest of the sample. Participants who completed the study were invited to enter a prize draw to win one of 3 £50 Amazon vouchers. In the absence of a consistent definition of 'regular' gambling within the literature (Barrault et al., 2019; Binde et al., 2017), regular football betting was defined as betting once a month or more on football. 38 participants were removed from analysis for completing less than 50% of the survey and a further 7 participants were removed for not rating more than one bet within each bet complexity for both operators and affiliates. Of the remaining 100 participants (mean age = 27.84, SD = 9.01, range = 18 to 64) which were included in the analysis, there were 83 males and 17 females. Median number of days spent gambling per month was 4.75 (range = 1 to 30) and median spend per gambling day was £10 (range = £0.75 to £1,000). Median PGSI score was 6 (range = 1 to 26). 52% of participants followed at least one gambling operator on social media whilst 35% followed at least one affiliate. The majority of the sample were white British (59%) and were either in full-time employment (45%) or a student (40%). The sample was highly educated, with 82% of the sample having at least an undergraduate degree. Most of the sample were either in a relationship (42%) or single (36%). Table 7 gives a detailed breakdown of participant demographics.

Table 7

Participant demographic information including % of participants by PGSI category, age, employment status, ethnicity, education and relationship status.

	%
PGSI category	
<i>Non-problem</i>	10
<i>Low risk</i>	23
<i>Moderate risk</i>	26
<i>Problem</i>	41
Age	
<i>18-25</i>	52
<i>26-35</i>	39
<i>36+</i>	9
Employment Status	
<i>Full time employed</i>	45
<i>Part time employed</i>	8
<i>Student</i>	40
<i>Other</i>	7
Ethnicity	
<i>British</i>	59
<i>Any other white background</i>	12
<i>White and Asian</i>	5
<i>Indian</i>	4
<i>Chinese</i>	4
<i>Other</i>	16
Highest level of education	
<i>GCSE or equivalent</i>	4
<i>A-level or equivalent</i>	14
<i>Undergraduate degree</i>	41
<i>Postgraduate degree</i>	38
<i>Doctorate</i>	1
<i>Other</i>	2
Current relationship status	
<i>Single</i>	36
<i>In a relationship</i>	42
<i>Married</i>	19
<i>Divorced</i>	2
<i>Did not say</i>	1

5.3.3. *Materials*

Tweets

30 tweets were manufactured to mimic the advertising of football bets on social media by both gambling operators and gambling affiliates. Three different types of bets, differing in complexity, were included within the tweets. The lowest complexity bets included were predicting a team to win or draw a game. The medium level of bet complexity was correctly predicting the first goalscorer in a match. The highest level of bet complexity included within the tweets was scorecast bets, whereby a prediction is made on both the first goalscorer and the correct final score, with both predictions needing to be correct for a winning bet. As discussed within previous chapters, bets become more complex as the number of potential outcomes within a market increase. Within the 'win-draw-win' bet market there are only 3 potential outcomes, either the first team wins, the second team wins or the match ends in a draw. Within the 'first goalscorer market', any of the 22 starting players could score the first goal, as could any substitute who is brought on before the first goal is scored and there is also the possibility of no first goalscorer. This means the number of potential outcomes within this market ranges somewhere between 23 and 29, albeit some players are far more likely to be the first goalscorer than others. The number of potential outcomes within the 'scorecast' bet market is multiplied even further by additionally having to pick from a range of possible correct scores in addition to correctly identifying the first goalscorer. Additionally, a further example of the increased complexity of scorecast bets is that the inclusion of multiple events within the same bet involves joint probabilities whereby individuals have to assess the likelihood of two events occurring at the same time.

Five of each bet type were included within the tweets and every bet was included with the online experiment twice, once on a gambling operator Twitter account and once on a gambling affiliate Twitter account. A full list of chosen bets, their bet type and their odds can be seen in Table 8.

Table 8

Chosen bets which participants were asked to rate during the study.

Match	Bet	Bet Type	Fraction Odds
Liverpool vs Tottenham	Liverpool to win	Win-draw-win	8/13
Watford vs Fulham	Watford to win	Win-draw-win	4/6
Burnley vs Wolves	Wolves to win	Win-draw-win	7/5
Everton vs Arsenal	Arsenal to win	Win-draw-win	11/10
Brighton vs Southampton	Match to be drawn	Win-draw-win	21/10
Fulham vs Manchester City	Raheem Sterling to score first	First Goalscorer	16/5
Leicester vs Bournemouth	Jamie Vardy to score first	First Goalscorer	13/5
Manchester United vs Watford	Andre Gray to score first	First Goalscorer	8/1
Liverpool vs Tottenham	Harry Kane to score first	First Goalscorer	5/1
Cardiff vs Chelsea	Gonzalo Higuain to score first	First Goalscorer	10/3
Arsenal vs Newcastle	Aubameyang to score first and Arsenal to win 3-1	Scorecast	22/1
West Ham vs Everton	Sigurdsson to score first and game to be drawn 1-1	Scorecast	30/1
Crystal Palace vs Huddersfield	Zaha to score first and Palace to win 4-0	Scorecast	60/1
Fulham vs Manchester City	Aguero to score first and City to win 3-0	Scorecast	16/1
Burnley vs Wolves	Jimenez to score first and Wolves to win 1-0	Scorecast	17/1

The chosen bets and odds were taken from an online sports betting website and covered 2 game weeks of the 2018/2019 English Premier League season. In order to accurately represent the differences in presentation of advertised bets between operator and affiliate accounts, the wording of tweets was adapted to reflect advertising observed on actual gambling Twitter accounts through carrying out the research conducted within the previous two chapters. For example, where a bet may be advertised on an operator account with a simple presentation of the betting market, an affiliate may advertise the same bet by presenting it as a 'tip', with statistics to back up why they believe it to be a good bet. This is exemplified in figure 2, whereby the bet of Raheem Sterling to score first is presented as one of 6 first goalscorer bets within the market on SkyBet (operator account). However, in the affiliate tweet (FootballSuperTips), the same bet is given as a specific suggested bet and a relevant statistic is provided to support the 'tip'. In addition, the tweets were either edited to be presented as being posted from one of the five operator accounts highlighted in study one or one of the five affiliate accounts (see Appendix B for full list of tweets included in the study).



Figure 2

An example of the created tweets shown to participants advertising one of the bets included within the study on both an operator and affiliate account.

Demographics + Gambling Activities Questionnaire + Social Media Use Questionnaire

A short in-house demographics questionnaire was developed to collect information on a range of relevant demographics, such as age, gender, employment status, highest level of education, ethnicity and relationship status (see Appendix C). A short gambling activities questionnaire was also developed to enquire as to how many days a month the participant gambles on football and how much they tend to gamble on football on a typical gambling day (see Appendix D). A social media use questionnaire was developed to ask participants how many gambling operator and affiliate accounts they follow on social media (see Appendix E).

Problem Gambling Severity Index

The Problem Gambling Severity Index (PGSI) is a nine-item questionnaire (Ferris & Wynne, 2001) validated to assess levels of problematic gambling in the general population (Holtgraves, 2009) [see Appendix F]. Participants rate nine items based on their gambling behaviour over the previous four months on a four-point scale from never (0) to almost always (3). Example items include 'Have you bet more than you could afford to lose' and 'has gambling caused you any health problems, including stress or anxiety'? Participant scores are totalled out of 27 and are placed in one of four categories based upon their scores: no problem (0), low risk (1-2), moderate risk (3-7) and problem gambler (8+).

5.3.4. Procedure

Participants accessed the Qualtrics survey via a social media site or an online survey-sharing website. Participants were asked to fill out the demographics questionnaire, the gambling activities questionnaire and the PGSI in that order. Participants were then shown all 30 of the tweets individually in a randomised order, each advertising a specific bet either on an operator account or on an affiliate account. When viewing each tweet, participants were asked three questions about the bet advertised. Firstly, they were asked to rate how likely they would be to bet on the advertised bet, on a visual analogue scale (VAS) ranging from 0 (extremely unlikely) to 100 (extremely likely). They were then asked how much money (in pounds) they would bet on the advertised bet. Finally, they were asked how confident they are that the advertised bet would win, again answered on a VAS ranging from 0 (extremely low confidence) to 100 (extremely high confidence). Once participants had answered the three questions for all 30 tweets, they were then asked to read the debrief sheet. The average time taken to complete the online

survey was 15 minutes. The study received full ethical approval from Northumbria University Health and Life Sciences postgraduate ethics committee.

5.4. Results

5.4.1. Online Experiment – Treatment of Data

Data was downloaded from Qualtrics into SPSS version 25 for analysis. After removing unusable data, missing data points for 21 of the remaining 100 participants were replaced via imputing the median values for each individual question across respondents. Mean values were then calculated for participants' five responses on each DV within each combination of account type and bet complexity. Pearson's correlations were conducted to assess the relationship between the 3 DVs at each combination of bet complexity and account type. Whilst all 3 DVs were significantly correlated for medium and high complexity bets ($P < 0.05$), bet spend was not significantly related to either likelihood to bet or bet confidence for low complexity bets ($p > 0.05$), justifying the inclusion of the 3 separate DVs. Assumptions of a two-way repeated measures ANCOVA were then considered for each DV. Data for bet spend was highly skewed and therefore a log transformation was applied. Where data did not meet the assumption of sphericity, a more conservative test of within-subjects effects was considered. Whilst there were some outliers within the data, analysis was run with and without the outliers. It was found that the outliers did not alter the main findings and were considered possible responses, therefore remained within the analysis.

Three separate two-way repeated measures ANCOVAs were then ran, one for each DV with age, PGSI score and number of social media accounts followed added as

covariates. Each covariate was centered around the mean due to design of the study being repeated measures (Delaney & Maxwell, 1981). Bonferroni corrected pairwise comparisons were used to assess differences between the different levels of bet complexity. Finally, any significant interaction effects were followed up with Bonferroni corrected paired sample t-tests to assess where differences within the interaction were. Descriptive statistics are presented in Table 9.

Table 9

Mean (SD) responses on each DV (confidence, stake and likelihood to bet) by account type (operator or affiliate) and bet complexity (low, medium, high), N=100.

	Operator	Affiliate	Overall
Low			
Likelihood to bet	46.66 (20.29)	48.00 (19.87)	47.33
Stake (Log Transformed)	0.69 (0.43)	0.70 (0.40)	0.70
Confidence in bet	53.25 (16.83)	53.66 (16.07)	53.45
Medium			
Likelihood to bet	38.05 (22.00)	42.17 (21.05)	40.11
Stake (Log Transformed)	0.57 (0.34)	0.62 (0.33)	0.60
Confidence in bet	39.69 (19.68)	44.00 (20.11)	41.84
High			
Likelihood to bet	33.43 (23.23)	33.33 (24.43)	33.38
Stake (Log Transformed)	0.52 (0.38)	0.51 (0.38)	0.52
Confidence in bet	32.76 (21.93)	32.98 (23.11)	32.87
Overall			
Likelihood to bet	39.38	41.17	40.28
Stake (Log Transformed)	0.59	0.61	0.60
Confidence in bet	41.90	43.55	42.72

5.4.2. *Online Experiment - Findings*

Mauchly's test of sphericity indicated that the assumption had been violated for the factor of bet complexity on each DV ($p < 0.05$), therefore degrees of freedom were corrected using Huynh-Feldt estimates of sphericity. PGSI score was found to be the only significant co-variate in each ANOCVA ($p < 0.05$), with age and number of social media accounts followed found to be non-significant for each DV ($p > 0.05$). A significant main effect of bet complexity was found for both bet likelihood [$F(1.848, 177.436) = 34.031, p < 0.001, \text{partial eta squared} = 0.262$], bet confidence [$F(1.760, 168.915) = 73.060, p < 0.001, \text{partial eta squared} = 0.432$] and spend [$F(1.980, 155.147) = 24.837, p < 0.001, \text{partial eta squared} = 0.206$]. Bonferroni corrected pairwise comparisons highlighted that participants were significantly less confident, less likely to bet and would spend lower amounts of money on high complexity bets than medium complexity bets ($p < 0.001$) and on medium complexity bets than low complexity bets ($p < 0.001$) [see Table 9].

A significant main effect of account type of was found for both bet likelihood [$F(1, 96) = 5.154, p = 0.025, \text{partial eta squared} = 0.051$] and bet confidence [$F(1, 96) = 5.634, p = 0.020, \text{partial eta squared} = 0.055$]. Participants reported higher likelihood to bet and confidence in bets when they were presented on an affiliate account than an operator account. However, there was no significant main effect of account type on bet spend [$F(1, 99) = 1.494, p = 0.225, \text{partial eta squared} = 0.015$].

A significant interaction effect was found between account type and bet complexity upon both likelihood to bet [$F(2, 192) = 3.781, p = 0.025, \text{partial eta squared} = 0.038$] and confidence in bet [$F(2, 192) = 5.243, p = 0.006, \text{partial eta squared} = 0.052$]. Follow up paired sampled t-tests with corrected alpha levels of 0.017 highlighted that there was no significant difference in likelihood to bet or confidence in bets depending upon account type for low complexity or high complexity bets (all $p > 0.017$). However, participants were more likely to bet [$t(99) = -3.352, p = 0.001$]

and more confident in medium complexity bets [$t(99) = -3.813, p < 0.001$] when they were presented on an affiliate account than on an operator account [see Table 9]. The interaction between account type and bet complexity upon bet spend was found to be non-significant [$F(2,192) = 2.695, p = 0.070, \text{partial eta squared} = 0.027$].

5.4.3. Predictors of PGSI scores

A multiple linear regression was carried out to investigate whether following operator or affiliate accounts was a significant predictor of PGSI scores after controlling for measures of gambling behaviour collected within the study which are expected to be related to PGSI scores, days spent gambling per month and spend per gambling day. PGSI scores within the data ranged from 0 to 26 (mean = 7.22, SD = 6.37). Days spent gambling per month ranged from 1 to 30 (mean = 7.86, SD = 8.11). Spend per gambling day ranged from £0.75 to £1000 (mean = £41.44, SD = £115.06). Whilst this mean and SD are inflated due to outliers within the dataset, all analyses run within this section were ran with and without outliers and they did not impact the overall findings. Therefore, they were left in the dataset since they were considered possible responses. 52 of the 100 participants followed at least one operator account on social media and 35 of the 100 participants followed at least one affiliate account on social media.

The first stage within the analysis was to check the assumptions of a multiple linear regression. Firstly, scatterplots between the predictor and outcome variables highlighted a linear relationship between variables. Correlations ran between predictor variables then showed no multicollinearity (all $r < 0.8$). The data showed evidence of multivariate normality as residuals were approximately normally distributed. Finally, a scatterplot of residuals against predicted values showed that

the data was homoscedastic. The first model was then run and highlighted that both spend per gambling day and following at least one affiliate account on social media were significant positive predictors of PGSI scores. However, neither days spent gambling per month or following at least one operator account were found to be significant predictors of PGSI scores. In total, the model explained 18.1% of variance in PGSI scores. Full statistics for model 1 are reported in Table 10 below.

Table 10

Findings from regression model 1 predicting PGSI scores.

Predictor	<i>b</i>	<i>se(b)</i>	β	<i>p</i>	Fit
(Intercept)	1.332	2.089	-	0.525	
Operator Account Followed (yes)	-0.359	1.416	-0.028	0.800	
Affiliate Account Followed (yes)	3.591	1.423	0.270	0.013*	
Days Spent Gambling Per Month	0.126	0.077	0.160	0.105	
Spend Per Gambling Day	0.014	0.005	0.261	0.007**	
					$R^2 = 0.181$
					F(4, 95) =
					5.255, $p =$
					0.001

Note. *b* represents unstandardized regression weights, with *se* representing the standard error. β represents the standardized regression weights. * indicates $p < .05$. ** indicates $p < .01$.

A second regression model was then run to assess whether the number of affiliate accounts an individual follows predicts PGSI scores. Gambling spend per day was also included within the model as it was the only other significant predictor in model 1. Whilst gambling spend per day remained a significant predictor within this model, the number of affiliate accounts an individual follows was found to not be a significant predictor of PGSI scores. The model also predicted less variance than model 1 at just 11.0%. Full statistics for model 2 are reported in Table 11 below.

Table 11

Findings from regression model 2 predicting PGSI scores.

Predictor	<i>b</i>	<i>se(b)</i>	β	<i>p</i>	Fit
(Intercept)	5.952	0.725	-	<0.001	
Affiliate Accounts Followed	0.537	0.280	0.184	0.058	
Spend Per Gambling Day	0.014	0.005	0.264	0.007**	
					$R^2 = 0.110$
					F(2, 97) =
					6.022, $p =$
					0.003

Note. *b* represents unstandardized regression weights, with *se* representing the standard error. β represents the standardized regression weights. * indicates $p < .05$. ** indicates $p < .01$.

5.5. Discussion

5.5.1. *Summary of Findings*

The current study aimed to assess how regular football bettors responded to social media advertisements of bets depending upon bet complexity and the account type which the advertisement was placed upon. The first hypothesis that bettors would not adjust their response to the advertisements depending upon bet complexity was not supported as bettors reported being significantly less likely to bet, less confidence in bets and betting with smaller stakes when responding to higher complexity bets. The second hypothesis that bettors would place a higher level of confidence in bets advertised by affiliates than operators was partially supported. Whilst there was no difference in response for low or high complexity bets, bettors were more confident and more likely to bet on medium complexity bets advertised on affiliate accounts than on operator accounts. The final aim of the current study was to investigate whether following gambling operators or affiliates on social media was a predictor of problem gambling scores. Analyses showed that following at least one affiliate account on social media was a significant predictor of higher problem gambling scores, however following an operator account was not. It was also found that the number of affiliate accounts an individual follows was not a significant predictor of problem gambling scores.

5.5.2. *Contribution to Existing Literature*

The finding that regular football bettors placed increased confidence in certain types of bets when advertised on an affiliate account provides initial evidence that affiliate marketing of sports betting can alter bettors' perceptions of advertised bets. However, this was only the case for medium complexity bets. One potential

explanation for this is that bettors use the information provided within affiliate tweets to help them decide how to respond when their levels of uncertainty are highest for medium complexity bets. For low complexity bets, it may be the case that bettors feel confident making their own decisions on the advertised bets, whereas the high complexity bets may be seen as so unlikely that the extra information provided by affiliates is not enough to impact their response. The type of messaging included within affiliate posting regularly plays upon cognitive biases associated with betting by accompanying betting tips with references to previous successful tips or by presenting statistics of previous form which suggests a higher chance of the advertised bet winning. Affiliates could be altering bettor's perceptions upon the likelihood of their advertised bets winning for medium complexity bets by activating biases involving representativeness and availability heuristics (Tversky & Kahneman, 1973) when gamblers are most uncertain on whether to bet on an advertised bet. This builds upon previous research (reported in chapters 3 and 4) which highlighted the risky nature of affiliate marketing content (Houghton et al., 2019) by providing evidence that this content can impact upon perceptions of advertised sports bets.

It was also found that participants reported higher levels of confidence in lower complexity bets. Whilst this may appear to suggest that bettors are able to appropriately adjust their response to sports betting advertising of differing bet complexities, this seems unlikely as research has demonstrated that bettors vastly overestimate the probability of more complex betting events due to a range of cognitive biases associated with such events (Newall, 2017). Taken together, this highlights that whilst bettors may attempt to alter their response to betting behaviour based upon bet complexity, such adjustments to confidence are unlikely to be appropriately scaled due to bettors' poor understanding of probability for higher complexity bets (Newall, 2017). Therefore, bettors may still be overconfident on the

outcome of more complex advertised bets despite being comparatively less confident in them than simpler bets. Given that bets of higher complexity are more volatile, this presents a potential risk factor within sports betting marketing whereby the advertising of such bets could lead to quicker, more frequent losses for bettors due to such volatility and bettor's overestimation of the likelihood of more complex events.

However, one possible alternative explanation for findings within the current study relating to bet complexity is that participants may have predominantly chose how to respond to bets based upon their advertised odds. This is particularly relevant as there was no overlap between the odds of the bets within each bet complexity within the study. For example, the decimal odds of low complexity bets ranged from 1.62 to 3.1. For medium complexity bets, they ranged from 3.6 to 9.0 and high complexity bets ranged from 17.0 to 61.0. Whilst the rise in odds as bet complexity increases is largely reflective of such an increase in bet complexity, within examples of real-world marketing it is not always the case that the odds for a higher complexity bet will be higher than those of a lower complexity bet. For example, the odds for a star player on a highly performing team scoring the first goal in a match against a big underdog would likely be lower than the odds of the underdog winning the match. Therefore, if participants within the study were making decisions based upon the advertised odds of the bets rather than the complexity of bets, this would mean that the interaction effect observed actually highlights increased confidence for affiliate posts when betting on a certain range of odds rather than a specific type of bet. Further to this, the median odds of advertised bets within the previous chapter for affiliates (5.70) sits firmly with the range of odds for medium complexity bets included within the current study. This would therefore suggest that affiliates are most commonly advertising bets at odds which have been shown in the current study to have increased levels of confidence when advertised by affiliates.

The current study also highlighted that following at least one affiliate on social media was a significant predictor of a higher problem gambling score, however this was not the case for following at least one gambling operator. It was also found that the number of affiliate accounts followed was not a significant predictor of problem gambling scores, suggesting it is interacting with affiliates rather than the number of affiliates an individual interacts with which is a risk factor for problem gambling. Previous research exploring the relationship between social media and gambling disorder has found that those with higher PGSI scores self-report increasing gambling, and subsequently increased harm due to gambling, as a result of such marketing (Gainsbury, King, et al., 2016). Such findings may be susceptible to a response bias whereby those who score higher on the PGSI are more likely to remember responding to gambling marketing on social media. However, the current study also highlights a relationship between PGSI scores and interacting with gambling marketing on social media with a more objective, yet still self-reported, measurement of whether someone follows an affiliate on social media or not. This furthers the argument that there is a relationship between social media marketing and increased PGSI scores but suggests that it relates specifically to affiliate marketing rather than operator marketing. However, like much other research exploring the relationship between disordered gambling and marketing (Binde, 2014), these findings cannot distinguish whether those with higher PGSI scores seek out affiliate marketing or whether engaging with affiliate marketing is a contributor towards higher PGSI scores.

5.5.3. Evaluation of Current Study

One limitation of the current study is that the task can be criticised for lacking validity as being asked to rate specific bets within a study may fail to replicate the emotional states present within actual betting activity. Frequent sports bettors have

been shown to often place bets on impulse (Hing, Li, Vitartas, & Russell, 2018) and there is lots of evidence on the role that emotions play upon gambling behaviour (Blaszczynski & Nower, 2002; Williams, Grisham, Erskine, & Cassedy, 2012), something which is unlikely to be replicated through an online experiment.

Therefore, bettors may have answered based upon their ideal gambling behaviour which may not accurately replicate their actual betting behaviour. Another limitation of the current study is the fact that participants were asked to rate all 30 bets consecutively and therefore they may have been susceptible to fatigue effects.

However, the order of presentation of the bets was randomised to prevent systematically biasing findings. Additionally, the current study only measured direct responses to bets advertised on social media. Seeing gambling adverts can act as a reminder for bettors to gamble (Binde, 2014), however they may instead choose to focus on picking their own bet due to perceptions of skill or control.

In contrast, a strength of the current study is that it is the first study to investigate how bettors respond to social media advertisements and the first study to assess whether affiliate marketing provokes different responses to the same bet compared to operator marketing. As such, the study provides initial evidence that affiliate marketing can lead to increased confidence in bets. A further strength of the current research was the attention given to ensure that the tweets created for the current study accurately mirrored posts made by gambling operators and affiliates on Twitter. This ensured that conclusions drawn within the study could be related back to actual social media marketing employed.

5.5.4. Future Directions and Conclusions

Findings from the current study provide initial evidence that bettors demonstrate increased confidence and report being more likely to bet on certain types of bets

when they are presented on an affiliate account as compared to an operator account. It also highlights that following an affiliate account on social media is predicative of higher problem gambling scores. This raises concerns due to the lack of transparency around the financial motives of gambling affiliates and their presentation on social media sites as betting communities. Future research should focus on exploring what factors are related to increased uptake of affiliate marketing on social media, as well as using qualitative methods to explore how bettors think about such marketing.

Chapter 6. Study 4 – How do gamblers think about gambling marketing and its impact upon gambling behaviour?

6.1. Abstract

Aim: The current study aimed to address how frequent gamblers think about gambling marketing and the impact that it has upon gambling behaviour. **Method:** 10 purposefully sampled gamblers who gambled on at least three days a week took part in semi-structured interviews on their experiences of gambling marketing. An interpretative phenomenological analysis was then carried out to analyse the data collected. **Results:** Three overarching themes were constructed: taking advantage of marketing for personal gain, gambling marketing as a test of a gambler's self-control and safer gambling marketing lacks effectiveness. These themes capture that participants viewed marketing as something which acted as a test of self-control and may present a risk to those who are vulnerable but is something which they can use to increase their own chances of gambling success. Safer gambling content included within marketing was considered ineffective due to perceived insincerity and due to being seen as an 'afterthought' within gambling marketing. **Discussion:** These findings highlight that concerning narratives encapsulated within gambling marketing, as discussed in previous chapters, are replicated in the way frequent gamblers think about gambling marketing. Given the perceived lack of effectiveness of current safer gambling strategies identified, future research should explore new avenues for safer gambling promotion.

6.2. Introduction

The studies reported within the previous three chapters have highlighted numerous potentially dangerous aspects of social media marketing within Great Britain and began to explore how bettors respond to such marketing through an experimental study. However, assessing the impact of marketing upon gambling behaviour proves to be methodologically challenging due to the wide-ranging marketing strategies employed and the fact that marketing is just one of a number of factors that could influence gambling behaviour. Whilst carefully designed experimental studies can demonstrate experimentally how specific aspects of marketing (such as wagering incentives or affiliate marketing) may be harmful to bettors, in order to develop a more holistic understanding of the role marketing has within an individual's gambling behaviour, it is important to understand how marketing is perceived by bettors.

Despite this, there are only a limited number of studies which have explored the perceived impact of marketing qualitatively. For example, semi-structured interviews were carried out with 25 Swedish disordered gamblers on the impact of advertising on their disordered gambling (Binde, 2009). It was found that, where advertising was perceived to impact upon their gambling problems, this was due to triggering impulses to gamble and creating difficulties in following through on a decision to cease gambling. More recently, Lopez-Gonzalez et al (2019) carried out focus groups with 43 treatment-seeking disordered gamblers in Spain and found a number of themes around the perceived impact of marketing on their gambling behaviour. The authors described how participants found price-related gambling promotions to be particularly persuasive by prompting them to calculate the potential advantage to be gained in accepting such offers. Additionally, advertising was stated to be effective in instigating the uptake of a new gambling product and

also caused anticipatory anxiety in situations where gamblers expected to encounter gambling advertising.

Whilst the aforementioned studies demonstrate that taking a qualitative approach allows gamblers to expand on how marketing has influenced their gambling behaviour, they only focus on how marketing influences those who have been diagnosed with Gambling Disorder. Considering the growing awareness of gambling-related harms across the spectrum of problematic gambling behaviour (Browne et al., 2017) and research demonstrating that marketing can prompt riskier gambling behaviour regardless of problem gambling levels (Rockloff et al., 2019), the research area would benefit from qualitative research exploring perceptions of marketing in those who gamble frequently but do not have a diagnosis of gambling disorder. Given the lack of research with such a sample, the current study will not be focusing just on social media marketing as in the previous chapters. This will allow a broader understanding to be developed of how frequent bettors think about the range of different gambling marketing strategies they encounter.

One qualitative approach that is particularly useful in understanding how individuals interpret experiences within their lives is Interpretative Phenomenological Analysis (IPA). The phenomenological nature of IPA ensures that such research revolves around developing an understanding of how people make sense of their social world (Smith et al., 2009). As such, IPA is a commonly employed method within gambling research. Areas within gambling research where IPA has been employed include: exploring gambling in the context of information technology (Parke & Griffiths, 2012), understanding perceived stigma and self-stigma in people diagnosed with gambling disorder (Hing et al., 2016), experiences of high frequency gambling in female older adult gamblers (Pattinson & Parke, 2017), and the role of trauma in the development and progression of female disordered gambling (Nixon et al., 2013).

Within the current study, the use of IPA will not attempt to objectively measure the impact of gambling marketing upon behaviour, instead exploring how frequent gamblers make sense of the role marketing plays within their gambling lives. This is important to consider because the impact of more subtle marketing strategies is not objectively measurable at the individual level. It is also difficult to untangle the impact of other marketing strategies due to their highly integrative nature. Therefore, it would be beneficial to focus on gamblers' perceptions of gambling marketing as a method of understanding how they interact with such marketing. Whilst such methods may be criticised from a positivist viewpoint as being too subjective, such levels of interpretation are actively encouraged within IPA as a means of exploring feelings, emotions and meanings (Brocki & Wearden, 2006). Additionally, IPA is idiographic in nature and is therefore useful when exploring complex social phenomena by identifying both the individual idiosyncrasies in behaviour and shared experience (Shinebourne, 2011). Given that response to marketing is likely to be highly context-specific, it follows that any research method assessing gambling marketing should take such an idiographic approach.

The aim of the current study, therefore, is to use IPA to answer the research question 'how do frequent gamblers think about gambling marketing and its impact upon gambling behaviour'?

6.3. Method

6.3.1. Participants

10 participants were recruited to take part in the study via purposeful sampling. Smith, Flowers and Larkin (2009) highlight the importance of recruiting participants who can offer a detailed insight into a particular experience. Therefore, the inclusion

criteria for taking part in the study was that participants had to be frequent gamblers between the age of 18 and 34, as this age range reports gambling most in response to marketing (Gambling Commission, 2018a). In the absence of a consistent definition within the literature (Svensson & Sundqvist, 2019; Welte et al., 2016; Yakovenko et al., 2018), frequent gambling was classified as gambling on three days a week or more. A number of recruitment strategies were employed; the study was advertised on a university campus, on the researcher's social media accounts, and flyers were handed out to local bookmakers. Participants were compensated with a £15 Amazon voucher for taking part in the study. Table 12 outlines the participant demographics of recruited participants.

Table 12

Participant demographic information for age, gender, employment status, ethnicity, relationship status and PGSI score.

Participant	Age	Gender	Employment Status	Ethnicity	Relationship Status	PGSI Score (Risk)
1	22	Male	Full time student	White-British	Single	4 (Moderate-risk)
2	22	Male	Full time student	White-British	In a relationship	10 (Problem)
3	21	Male	Full time student	White-British	Single	6 (Moderate-risk)
4	22	Male	Full time student	White-British	Single	3 (Moderate-risk)
5	21	Male	Full time student/part time employed	White-British	In a relationship	6 (Moderate-risk)
6	21	Male	Full time student	White-British	Single	9 (Problem)
7	23	Male	Full time student	White-British	Single	8 (Problem)
8	28	Male	Full time student/part time employed	White-British/Mixed	In a relationship	6 (Moderate-risk)
9	32	Female	Full time employed	White-British	Single	2 (Low-risk)
10	20	Male	Full time student	White-British	Single	10 (Problem)

6.3.2. Data collection

Semi-structured interviews were used to collect data within the study. Interviews were conducted on a university campus and lasted between 40 and 70 minutes.

The main aim of interviews within IPA research is to allow the participant a platform to provide rich and detailed first-person accounts of the research topic (Pietkiewicz et al., 2014). As such, the purpose of the interviews within the current study was to allow participants the opportunity to openly discuss their experiences of a range of

different marketing strategies. The interview schedule (see Appendix G) was therefore developed with a limited number of questions, alongside relevant prompts and examples of gambling marketing that were shown to participants during the interview. These questions can be broken down into four main categories: personal gambling history, television advertisements, social media marketing and gambling within sport. This allowed the researcher to steer the participants towards discussing experiences of certain types of marketing, whilst retaining the flexibility needed to pursue any interesting topics of discussion that arose through the course of the interview. The role of the interviewer was to facilitate the discussion of the participant's personal experience of marketing whilst also encouraging the participant to reflect on their answers to ensure there was a suitable level of depth within the data collected. A further benefit of interviews is that they often uncover elements of reality that we are not able to empirically capture, therefore providing ontological depth (Bhaskar, 2008).

6.3.3. Data analysis

The interviews were transcribed verbatim by the first author and the data was analysed using IPA. Whilst IPA does not set strict rules to follow when carrying out the analysis, leading researchers within the area have provided information on flexible guidelines which can be applied and adapted in relation to the research objectives (Smith et al., 2009). These guidelines have been loosely followed within the current study. Given the idiographic nature of IPA, each interview was initially analysed in full on an individual basis. The first stage within the analysis process was to relisten to the interview and read the transcript numerous times as a means of increasing familiarity with the data. The researcher then began to make exploratory notes on any areas of interest within the transcript. Notes made at this stage were a mixture of descriptive comments, which gave accounts of how

participants discussed gambling marketing, and more conceptual comments, which explored the context in which these discussions were embedded. Smith et al (2009) argues that this allows for identification of more abstract concepts that, in turn, aids the researcher in making sense of the participant's lived experience. This represents the 'double hermeneutic' involved in IPA, whereby the researcher aims to make sense of the participant making sense of their social world (Smith et al., 2009). Developing themes were then generated on a case-by-case basis from these exploratory notes and were clustered to create a thematic structure for each participant (see Appendix H for example of exploratory notes and developing themes), aiming to capture the different ways in which the participants thought about gambling marketing. A short summary of the findings was then written up to revisit at a later stage of the analysis (see Appendix I for an example of a participant summary).

This process was repeated for each of the ten interviews carried out. The researcher then used the summary of findings crafted for each participant to begin searching for commonalities between the developing themes. Within this process, some themes were clustered together to create a new overarching theme. Additionally, some themes were collapsed into a pre-existing theme which subsequently became an overarching theme. In this process of clustering themes, it was important to ensure that the themes generated were theoretically distinct from one another. This allowed for a final thematic structure to be produced, which accounted for shared experience whilst also maintaining the idiographic nature of the analysis.

6.4. Results

6.4.1. Summary

Three overarching themes were developed through the analysis to explain how regular gamblers think about gambling and the impact it has upon gambling behaviour. The first super-ordinate theme “taking advantage of gambling marketing for personal gain” explains how participants view marketing as something which can be exploited for their own personal gain to increase their own chances of winning as smart or skilled gamblers. The second super-ordinate theme “gambling marketing as a test of a gambler’s self-control” covers how participants feel tempted to gamble by certain types of gambling marketing and how they believe that this is particularly risky for those who are deemed to be vulnerable. The final theme “safer gambling marketing lacks effectiveness” describes the lack of trust and confidence participants feel towards safer gambling marketing.

6.4.2. Theme 1 - Taking advantage of gambling marketing for personal gain

Throughout the interviews, all participants discussed ways in which they feel as though they can take advantage of gambling marketing to either enhance their gambling experience or increase their chances of gambling success. As such, gambling marketing was presented as something which, under a skilled and considered approach, could be beneficial to individual consumers. For example, numerous participants demonstrated how they were able to use marketing offers to reduce the overall risk associated with their gambling behaviour.

Extract 1 – participant 3 (male, PGSI score = 6): “It’s all about what you can get it’s about getting as much as you can from as little as possible ermm so I want to say

Betway are offering if you have a £10 bet antepost so before the market before Tuesday you'll get a £10 free bet for each day of the festival so something like that I'll have a tenner on something before hand that I think is a banker and then I'll have a free £10 bet Tuesday, Wednesday, Thursday, Friday so it's a race covered everyday cause it's a free bet. Normally I wouldn't probably bet £10 on that race but cause it's free it's easier to, it's easier to justify, I don't have to justify it cause it's their money, it's there it's a free bet"

In placing an initial qualifying bet, participant 3 is able to earn a series of free bets which are to be used on the racing festival over the subsequent days. Through stating that these free bets will cover a race every day, it is implied that these free bets afford him the opportunity to maintain a certain frequency to his betting over the course of the festival whilst minimising his risk of losing large sums of money. Interestingly, he then states that he does not need to justify his betting behaviour when betting with free bets, suggesting an internal conflict around levels of spending which usually exists when spending actual money on gambling. So, whilst the initial suggestion from the participant is that the uptake of such offers is to cleverly reduce the financial risk associated with gambling, a more detailed interpretation highlights how free bets alleviate internal conflicts around levels of spending on gambling whilst continuing to actively gamble. Participant 10 similarly puts forward the value in taking advantage of free bets offers to reduce financial risk, commenting upon 'the lack of pressure' they feel when betting with free bets. However, when questioned whether their strategy differed when betting with free bets, they explained how free bets led to making riskier gambling choices.

Extract 2 – (participant 10, PGSI score = 10): "Yeah 100 percent I mean I remember erm I signed up to the casino called Genting and then I went to Aspers the casino in the gate and they give me like a five pound free bet and errrr I remember the dealer had like a, I had like a 4 and I had 15 off my two cards and I'd usually stay I

wouldn't, I'd just leave it but I just thought it's five pound hit me again like that sort of thing so it changed my, my strategy I lost my strategy because it was free like cause I thought I'm not gonna lose like i'm never gonna lose cause like and then you do lose cause you put another bet on and do the same so."

It is evident from this extract that the increased freedom, which accompanies the lack of financial risk when gambling with free bets, allows the participant to take a riskier approach within his game of blackjack. However, changes to betting strategy continue when they start to gamble with their own money, something which they attribute to the feeling that they cannot lose whilst betting with the free bet. This indicates that emotional states that are present when betting with free bets, such as a lack of fear of losing money, can extend beyond the period in which they are using the free bet. As such, whilst the initial purpose of engaging with the marketing offer may be to reduce risk, it may actually result in riskier behaviour in the long term.

As well as using offers to minimise risk, most participants also discussed ways in which they took advantage of gambling marketing to increase their chances of making profit when gambling. One method which was commonly used across participants was to sign-up for multiple bookmakers to take advantage of the sign-up offers, exemplified here by participant 4.

Extract 3 – (participant 4, PGSI score = 3): "Yeah cause like all the join offers and stuff, so I do have accounts but I don't really use them, I use SkyBet as my main one, my go to and then probably PaddyPower's like sort of like another one that I use but apart from them two I don't actively bet with anybody else. I just use to do the join offers and see if I can like rinse, basically rinse them for some money and then just take off, off into the sunset."

Despite only betting regularly with two bookmakers, the participant has signed up to multiple other bookmakers in an attempt to make profit from their sign-up offers but

does not use these accounts once the offers have been used. Such offers are thus presented as a one-time opportunity to take advantage of gambling marketing to secure profits from different bookmakers than those which are regularly used. More broadly, this conveys the idea that sign-up marketing offers can be exploited by savvy gamblers as part of a wider gambling strategy to increase the chances of making money through gambling. Participant 6 highlights a further example of this strategy, explaining how price boosted bets can increase the value of certain bets to the point where the implied probability of the odds is lower than their perceived likelihood of the event occurring.

Extract 4 – (participant 6, PGSI score = 9): “well cause before I even see the odds you know like I've got like an opinion or whatever it is but sometimes you see the odds and you think the odds are really good and then you know when you see a boost you might think even if I'm not, even if I don't think that's going to happen the odds are you know, they sort of outweigh the sort of chance of it not happening so, it may make me place a bet, especially if I'm sort of on the, you know, on the fence on it I see better odds and I think oh might as well”

Through comparing his pre-conceived judgements of how likely a bet is to win against how likely the advertised odds suggest it is to win, the participant is able to reach a judgement on whether the bet represents value and is therefore something he would choose to bet on. When odds are boosted, this can make certain bets seem more valuable and push him towards betting on them even if he does not think the bet is likely to win. Through the combination of detailed sporting knowledge and marketing offers that increase the value of a bet, this therefore depicts the idea that knowledgeable gamblers can search for bets where the odds are in their favour over the bookmaker and can help the gambler secure profit over an extended period of time.

6.4.3. Theme 2 - Gambling marketing as a test of a gambler's self-control

Despite the consensus amongst participants that marketing could be exploited for personal gain, there was also an agreement that marketing acted as a test of the control that they have over their gambling behaviour. Most participants interviewed described how marketing acted as temptation or as a reminder to gambler, with participant 2 stating that marketing offers draw him back into gambling after he has decided to stop gambling due to concerns over the amount of money he was losing.

Extract 5- (participant 2, PGSI score = 10): “[Interviewer] how do you feel when you stop gambling and is there something which makes you pick it back up again?”

Participant: Errmmm (long pause) there's like (.) sometimes I'll get like obviously marketing like I get texts off like Ladbrokes and Coral and that like giving me offers and that and erm when I stop I sort of find it like I don't ever get like an urge in my head to go and splash a load of money but I sort of think I, I'll do that it's just a bit of fun in it and then sort of progressively gets a bit more and more like progressive”.

It is evident from this extract that there is a disconnect between the participant's reasons for gambling and the reality of his actual behaviour once he begins gambling. Whilst he acknowledges that his gambling behaviour escalates to levels that he feels uncomfortable with, he struggles to maintain his attempts to stop gambling due to the enjoyment he associates with the activity. Given that marketing is identified as something which leads him to start gambling again after choosing to stop, it implies that marketing offers act as temptation by reminding him of the enjoyment that he gets from gambling. Marketing therefore plays a key role in establishing a cycle of behaviour whereby attempts to stop gambling are prevented from being successful by acting as a reminder of the positive aspects of taking part in gambling. Building on from this, numerous participants also discussed how the

high frequency of gambling marketing that they saw within their everyday lives made it hard for them to switch off from gambling.

Extract 6 – (participant 5, PGSI score = 6): “I'd say I go through phases of gambling like I might bet a lot one weekend and then I might not bet for two weeks so sometimes I might just see something and I'll just and for some reason I'll just want a go and just want to put a bet on errm but then also and I think I touched on it before where they've got like live odds on things so if you're busy watching a game or whatever things like that I quite often errrm make us actually go put a bet on or at least have a look so I might not put that exact bet on but I might go have a look and see what other bets are on of like a similar ilk”.

In this extract, participant 5 explains how seeing marketing whilst watching live sport makes him feel as though he wants to place a bet, even if he is not necessarily interested in the specific bet that is being advertised. This indicates that marketing averts his focus when watching sport from simply watching for enjoyment to thinking about what bets he could place on the game by initiating an evaluation of the advertised bet. Through such an aversion of focus, marketing therefore acts as a reminder to the participant of the possibility of gambling on the event that they are watching. Additionally, participant 10 discussed how marketing schemes used within casinos glamourize gambling and encourage increased spending.

Extract 7 – (participant 10, PGSI score =10): “For me I don't think I'll ever really, I don't know if I'll, if I had money I'd probably like say I was on 4 points for the month and there was only a few days left I'd probably just want to get up to that tier because I've seen people who are obviously at these tiers and they make them feel like celebrities like even their drinks come in a fancier glass errm they, they get a valet who'll come and take their coat and they come over every 5 minutes is everything ok and you, your card even looks different just little things like mine has just got white card and they'll have like a mat black card and it just looks, it's just the

whole, it's like fashion isn't it you try and look better and then you feel more important and you spend more money".

Within this extract, the participant is discussing a tiered marketing scheme whereby gamblers receive differing levels of perks based upon the amount of money they had spent in the casino over the previous month. Whilst he acknowledges that such marketing schemes are put in place solely to keep the gambler spending, the participant states that he would be tempted to spend more money to reach the higher tiers if he could afford it due to the celebrity-like treatment that those at the higher tiers receive. This suggests that the temptation provided by such schemes act by playing upon perceptions of self-worth, making higher spending gamblers feel more special by treating them in a way that elevates their social status within the gambling environment.

Despite the acknowledgement that marketing acts as a temptation to gamble, most participants stated that advertising did not have any serious impacts upon their gambling behaviour. Instead, most of their concerns around marketing were related to those who they saw as having problematic personalities or who were problem gamblers.

Extract 8 – (Participant 1, PGSI score = 4): "Interviewer: Yeah and I think you've touched upon a couple of times that adverts could be harmful to people that are vulnerable, could you just explain what you mean by someone who would be vulnerable in a gambling context?"

Participant: Maybes someone that's got less control over how much money they're wanting to be putting into their gambling accounts, certainly I know cause obviously still living at home being a student I don't necessarily have a lot of outgoings of my money so ermm so maybe when I've got more responsibilities like a house and things like that err and people that are also in that situation when they maybe don't

have as much disposable income to be gambling with I think that's when it can become a little bit more irresponsible they're kind of targeting their adverts at people who need their money for other things so I think that's when someone's vulnerable when they kind of (.) have maybes children depending on their income and things like that and they're still choosing to gamble that money."

In response to a question on what makes a gambler vulnerable, something the participant had previously established as a risk factor for marketing, participant 1 responds that vulnerability refers to a lack of control over spending, particularly for individuals with major financial responsibilities. Essentially, this indicates that the risk of gambling advertising is that it triggers those who cannot control their gambling behaviour into spending money that they cannot afford to spend. In distancing himself from such a lack of control or financial responsibilities, the participant suggests that any dangers of gambling marketing do not apply to himself. So, whilst marketing serves as temptation to gamble, the severity of the negative impacts that it can have upon behaviour depends upon individual factors to each gambler. This view is further supported by participant 5, who argues gambling advertising targets individuals with addictive personalities.

Extract 9 – (Participant 5, PGSI score = 6): "I do know plenty people that have quite addictive personalities so the more that they are targeted by gambling companies the more potential there is for them to err to kind of succumb to that kind of demand I guess ermm but like I say not really for me personally but I definitely know people that would be sucked in by those kind of adverts".

In responding to an advert shown by the interviewer, the participant argues that the advert would not make him gamble but that he knows other people who would be drawn into betting when viewing it. The use of the metaphor 'sucked in by those kind of adverts' presents marketing as a trap designed to lure a specific sub-group of gamblers into gambling. Whilst this acknowledges the dangers that gambling

marketing can bring, it places the responsibility of avoiding such negative consequences on each individual gambler. Through describing the limited impact of advertising upon his own individual gambling behaviour, the participant implies that marketing has no impact upon his behaviour due a superior level of self-control over his gambling behaviour compared to other people that he knows. As such, this suggests that the risks of gambling marketing only exist for those who are not in control over their behaviour and therefore cannot resist the temptation to gamble that is evoked by such marketing.

6.4.4. Theme 3 - Safer gambling marketing lacks effectiveness

The final super-ordinate theme that was developed from the interviews covered the feeling amongst nearly all of the participants that marketing of safer gambling lacks effectiveness. Concerns were expressed over the content of safer gambling marketing, both in terms of the lack of useful information included within safer gambling marketing and the uneven balance between prompting people to gamble and promoting safer gambling. For example, participant 3 discussed how current safer gambling marketing campaigns fail to provide gamblers with the relevant information to reduce the risk associated with their gambling behaviour.

Extract 10 (Participant 3, PGSI score = 6): "there isn't many promoted ways of safer gambling, it's just like when you stop having fun stop betting but there isn't like a, this is a way of trying to reduce your risk and like if you've got an addiction how to help yourself without having to go through all that there isn't really much guidance on starting safe and not waiting until you're 5 thousand pound in debt to try and become safe, I would definitely say that."

Here, the participant discusses how the 'when the fun stops stop' safer gambling slogan lacks effectiveness due to an absence of practical application within such

messaging. In highlighting three different examples where more focused and informative safer gambling advice would be useful for gamblers, this emphasises that the complexity of promoting safer gambling within marketing cannot be covered by one uniform slogan. This is because the advice needed for someone beginning to gamble is completely different from the help needed for someone who is experiencing harm from gambling. Building upon this, participant 7 highlighted the lack of focus on safer gambling with gambling marketing.

Extract 11 (Participant 7, PGSI score = 8): "I feel like the whole safe gambling's just erm a bit of like a bit of a blanket over it all sort of thing like you can easily just rub it off straight away and you wouldn't notice that it wasn't there like I mean the gamble responsibly bit on the end of the advert I, I think you've already targeted someone by giving the odds or the boost or something in the advert I think with that at the end of it you've already hooked them sort of thing erm so I don't think, I don't think it's very good at the minute."

The participant describes here how he sees safer gambling messages within marketing as ineffective as they are usually incorporated at the end of an advert, after the company has advertised an appealing bet or offer. It is evident from this that the participant therefore sees safer gambling messaging within marketing as an afterthought and, as such, pays little attention to it. Taken together, both previous extracts highlight that participants struggle to connect with safer gambling marketing due to the way safer gambling content is included within marketing campaigns. Additionally, there were also concerns as to the sincerity of safer gambling marketing from gambling operators.

Extract 12 (Participant 9, PGSI score = 2): "Errm I suppose it's a bit like smoking where I'm not necessarily sure it's the best message coming from the people that are producing it themselves I think it should be more like a government thing if, or actually made into a law or something like that erm because it's so accessible and

it just seems mad if the people that are running are it are necessarily the ones responsible, I dunno it's a bit like if you were making sweets why should, you're not really gonna decide that you're gonna add less sugar or something like that I don't know I just, it doesn't seem necessarily like it's the right people to be making a decision on it when they're gonna be biased about it anyway."

Within this extract, participant 9 expresses concern over gambling operators including safer gambling content within their marketing, instead stating a preference for information to come from what they perceive to be a less biased source. This indicates a lack of trust in gambling operators to provide useful safer gambling advice, since they stand to financially benefit from those showing risky gambling behaviour. It also implies that the effectiveness of the messages that are used is further limited by the very fact they are viewed as a biased source. Essentially, if they do not believe that that operators want their customers to gamble in a safe and controlled manner, then they are not going to follow any safer gambling advice given within their marketing.

Another way in which it was clear that safer gambling marketing lacked effectiveness was the common misconception amongst participants that safer gambling is a reactionary measure aimed at helping those who are addicted, rather than being a general principle for all gamblers to follow. For example, participant 5 responds to a question on the effectiveness of safer gambling adverts by stating that he does not feel as though they will help those who are addicted.

Extract 13 (Participant 5, PGSI score = 6): "Interviewer: Is there, like how useful do you think these types of adverts would be in actually adapting or making any changes in someone's behaviour?"

Participant: I feel not really much because I think that people with the problem are the people that are addicted so you've got to tackle, I feel like the solution has got to

be a bit more of a harder one I mean like yes you can relate to those things and but like just because a pundit said you shouldn't make a put a bet on because you've lost the last, you're on a losing streak or whatever it doesn't really make it especially that one where it's saying don't bet when you're drunk but it, when you're drunk you've got less control anyways so whether that's at the forefront of your mind I'm not really sure errr I'm not really sure that it works at all to be honest".

In framing their response to the question of the advert's effectiveness in relation to how it may impact individuals experiencing gambling problems, the participant implies that the purpose of these adverts is to get disordered gamblers to identify and change their problematic behaviour. As such, safer gambling messages are seen to be irrelevant for those who do not identify their behaviour as problematic as they do not feel the need to change their behaviour.

6.5. Discussion

6.5.1. Summary of findings

The current study aimed to assess how frequent gamblers think about gambling marketing and its impact upon gambling behaviour. One main finding was that bettors within the study thought that gambling marketing was something that they could take advantage of for their own personal gain, either through reducing the risk associated with betting or by increasing the value of certain bets. A further main finding was that bettors thought of marketing as a test of their self-control, with marketing keeping betting at the forefront of participants' minds. However, it was argued that marketing was only a risk factor for other people who were seen to be more vulnerable to developing disordered gambling. The final main finding was that bettors thought of safer gambling marketing strategies as being ineffective due to

the lack of balance between safer gambling promotion and marketing, as well as the perceived insincerity of such messaging when it is delivered by gambling operators.

6.5.2. Contribution to existing theory and literature

The current findings supported a recently published interview study which also investigated sports bettors' perceptions of gambling marketing within Great Britain (Killick & Griffiths, 2020), in that marketing offers were seen to reduce risk. However, whilst that study explained how bettors felt as though gambling promotions decreased their feelings of risk associated with placing a particular bet, the current study highlights how bettors feel as though they can carefully take advantage of marketing offers to reduce the overall risk associated with their gambling behaviour. Further to this, a deeper interpretation of the data highlighted how such a reduction of risk can be seen to alleviate internal conflicts around the frequency of their gambling behaviour. Such an internal conflict can be seen as an example of cognitive dissonance (Festinger, 1957), whereby the frequency of their gambling behaviour may differ from their perception of what a 'safe' frequency of gambling may be. Therefore, engaging with marketing offers to reduce risk may allow bettors to employ a form of internal self-justification, whereby individuals alter their attitudes to make negative consequences seem more tolerable and reduce states of cognitive dissonance (Holland et al., 2002). In particular, it may result in bettors altering their view of the frequency of their own betting behaviour to align more with how they view a 'safe' frequency of betting by reducing the risk associated with certain bets.

It was also highlighted that participants viewed certain types of marketing as being free of risk and therefore allowing greater freedom to choose bets with longer odds. This finding is supported by experimental research that found that participants

chose significantly larger odds when a betting incentive was offered compared to when one was not offered (Rockloff et al., 2019). Interestingly, it was also suggested that free bet offers can lead to continued choices of longer odds bets due to emotional states extending beyond the use of the inducement. This may be explained by research which has demonstrated a relationship between the value of expected winnings and subjective measures of excitement, as well as increased heart rates (Wulfert et al., 2008). Therefore, if individuals experience the excitement of larger potential winnings, this may encourage them to choose such bets again in the future. This highlights how the intended use of marketing offers may not always align with the outcomes of interacting with such offers. Whilst bettors may think of marketing as a tool by which they can reduce their risk, it may actually lead to riskier behaviour over a longer time period due to the increased volatility of bets with higher odds.

A further way in which bettors reported taking advantage of gambling marketing within the study was through making judgements as to when offers increased the value of certain bets. One participant discussed how some offers can boost the odds of bets to odds which give a lower implied probability than his perceived likelihood of the bet winning. Such a finding aligns with a recent systematic review which concluded that sports bettors attributed more importance to skill than luck in the outcomes of betting (Mercier et al., 2018). However, the current study builds upon these findings to highlight how such perceptions of gambling as a skilled activity can impact on the way gamblers interact with marketing offers that they encounter. This is a concern due to the same review finding that sports bettors do not win more money with their choices of bets than random selection (Mercier et al., 2018). Additionally, sports bettors have been found to overestimate the probability of more complex bets often included in marketing offers (Newall, 2017). So, whilst bettors may think of marketing as something which can be exploited for financial

gain, this may not always be possible due to an overestimation of their own skill. Additionally, a grounded theory analysis on the contents of sports betting advertising in Great Britain found that adverts used a dual persuasion strategy, to enhance perceived control and reduce perceived risk (Hibai Lopez-Gonzalez, Estévez, & Griffiths, 2017). The findings of the current study would therefore suggest that such persuasion strategies are successful as they are reflected within the way bettors think about gambling marketing.

Participants within the study also acknowledged the risk associated with gambling marketing. Numerous participants discussed how marketing drew them back into gambling after a period without gambling, suggesting marketing acted as barrier to maintaining a change in behaviour. For example, one participant described how marketing reminded him of the enjoyment he would get from gambling after choosing to not gamble for a while and another discussed trying to actively avoid marketing during periods they were uncomfortable with their own gambling behaviour. Previous qualitative research found similar findings in that gambling adverts acted as a reminder to gamble and initiated gambling sessions (Binde, 2009b; Hing et al., 2014), however these studies recruited treatment-seeking disordered gamblers whereas nobody in the current study had a diagnosis of gambling disorder. Taken together, these findings highlight how marketing is perceived to prevent sustained behaviour change across the spectrum of gambling harm.

One potential theoretical explanation as to why marketing may prevent bettors from maintaining behaviour change relates to the role of self-efficacy in leading models of behaviour change, such as the Transtheoretical Model (Prochaska & DiClemente, 1982) and the Theory of Planned Behaviour (Ajzen, 1991). Both of these models argue that, in order for behaviour change to be successful, individuals must believe themselves capable of maintaining such a change. Within the Transtheoretical

Model specifically, it is argued that behaviour change is often unsuccessful when feelings of temptation outweigh an individual's confidence in their ability to maintain a behaviour. It therefore may be the case that seeing gambling marketing increases temptation to gamble above an individual's level of self-efficacy and therefore results in them starting to gamble again. This is particularly relevant given that research has shown that television gambling advertisements include content that emphasises the control a bettor can have over their own betting behaviour (Hibai Lopez-Gonzalez, Estevez, et al., 2017). Similar findings were also reported in a previous chapter for social media marketing (see Chapter 3). It may therefore be the case that self-efficacy can be an inducement to gamble when the efficacy is linked to a gambling outcome yet can act as a preventative factor when efficacy is linked to the ability to avoid temptation.

Alternatively, the Theory of Planned Behaviour suggests that self-efficacy is just one important element of engaging in a particular behaviour. Subjective norms, the extent to which an individual believes others approve of a behaviour, and an individual's own attitudes towards a behaviour are also important in producing behavioural intentions. Given that gambling marketing has been highlighted as a major factor in normalising gambling within society, and that gambling is often presented positively in marketing (Hibai Lopez-Gonzalez, Guerrero-Solé, et al., 2017), this could act to lower the desire to maintain changes in behaviour by increasing positive attitudes towards gambling. In addition to this, gambling in response to marketing may be considered a form of reminder impulse purchasing (Hing et al., 2018; Stern, 1962) and a recent meta-analysis highlighted a link between positive emotions and increased impulse purchasing (Iyer et al., 2020). So, marketing which aims to increase positive feelings towards gambling may not only lower desire to maintain changes in gambling behaviour but also increase the temptation to engage within impulse purchasing.

However, despite acknowledging the risks associated with gambling marketing, participants described marketing as only being a serious problem for those who had a diagnosis of gambling disorder or had a specific type of personality. One possible explanation for such an argument is the third-person effect, which refers to an individual's belief that mass media messages have a larger impact on others than themselves (Davison, 1983). However, given that participants were keen to stress the rationality of their own behaviour in comparison to the perceived vulnerabilities of specific types of people, their explanation of the dangers of marketing moves beyond the third-person effect. By distancing themselves from any harm arising from gambling marketing, participants can protect a positive identity and stress rationality and self-control as markers of positive identity in contrast to disordered gamblers. One possible explanation for this is that it is an example of a fundamental attribution error (Ross, 1977), whereby individuals over-emphasise personality characteristics over situational explanations when explaining the behaviour of others.

Alternatively, if this distinction between their behaviour and others' behaviour is more intentional, this could be seen as an example of Social Identity Theory (Tajfel et al., 1979). This theory explains that individuals attribute negative characteristics to an out-group, in this case 'vulnerable gamblers', in order to enhance their own self-image. Such categorising of gamblers into two distinct subgroups of 'safe' and 'vulnerable' gamblers can be seen as a reflection of the narrative around individual control which is often supported by the gambling industry (Wardle, Reith, et al., 2019). This is a concern due to the fact that gambling does not only harm those with a diagnosis of gambling disorder (Browne et al., 2017). Also, research has found that certain aspects of gambling marketing lead to riskier behaviour regardless of disordered gambling category (Rockloff et al., 2019). So, despite thinking of marketing as something which only has a negative impact on others who cannot

control their gambling, this may not accurately reflect the impact marketing has on bettors' behaviour.

The issue of identity is also relevant within the finding that safer gambling messages incorporated into gambling marketing are perceived to be largely ineffective. One reason for this was the perception of safer gambling as a reactionary measure aimed at helping those who are disordered gamblers. If, as discussed previously, gamblers are motivated to maintain a positive identity of being a safe gambler, then safer gambling messages are not going to be perceived as being relevant due to targeting the wrong identity. Further to this, participants also expressed concerns over the sincerity of safer gambling messages which were made by the gambling industry due to the concept of safer gambling not aligning with their financial interests as a business. There were also concerns around their sincerity due to these messages usually being included as an afterthought within advertisements of gambling products and are their infrequency in comparison to gambling adverts. Hocevar, Metzger and Flanagin (2017) argue that source credibility, which incorporates both trustworthiness and expertise, is a key factor in whether health messages are accepted by their target population. Thus, if gamblers perceive that the gambling industry is not a trustworthy source to deliver safer gambling messages then they will not accept or process the content of the messages.

6.5.3. Evaluation of current study

One strength of the current study is that it built upon previous qualitative research into the impact of gambling marketing, which recruited individuals seeking treatment for gambling disorder (Binde, 2009a; Hibai Lopez-Gonzalez, Estevez, et al., 2017), by recruiting individuals who gambled frequently but did not have a diagnosis of gambling disorder. Such a purposive sampling approach meant that individuals from

the low-risk, moderate-risk and problem categories (based upon PGSI scores) were recruited for the study, allowing experiences and perceptions of gambling marketing to be captured across the spectrum of risky gambling behaviour. Additionally, this also allowed the perceptions of gambling marketing within those who did not view their gambling behaviour as being problematic to be explored. This is important given the large number of individuals who meet the criteria for being at-risk gamblers within Great Britain (Gambling Commission, 2020a). A further strength of the current study is the novel use of IPA within the area, which allowed for an in-depth understanding to be developed about the different ways in which frequent bettors think about gambling marketing.

One potential limitation of IPA as an approach is that it relies upon participants being both willing and able to reflect upon the importance and experience of the phenomena under study (Brocki & Wearden, 2006), in this case gambling marketing. Within the current study, upon an inspection of the transcripts, it is suggested that this assumption was met within all but one of the interviews. Whilst this limited the quality of the data for one participant, it did not have a major impact on the overall study due to a combination of the idiographic nature of IPA and the quality of the data provided by the other nine participants. A further criticism often made of IPA as a method is that it is overly subjective and therefore unscientific (Giorgi, 2010). However, such levels of interpretation are actively encouraged within IPA as a means of exploring feelings, emotions and meanings (Brocki & Wearden, 2006). Additionally, the researcher within the current study has taken steps to document the different stages within the analysis process in order to improve clarity around how the final themes were constructed. Firstly, each individual transcript is available with both initial exploratory comments and developing themes listed upon them. Additionally, a summary of each interview was written up alongside developing themes for each participant. The secondary stage of the analysis is then

documented through a list of clustered themes for each participant and a breakdown of each of the final overarching themes across participants (available upon request).

6.5.4. Future research suggestions

A further avenue for future research, given the perceived lack of effectiveness of current safer gambling strategies within the current study, is to explore the impact of new safer gambling strategies upon gambling behaviour. Findings from the current study could inform the development of any new safer gambling strategies developed. For example, participants expressed concerns over the sincerity of safer gambling messaging posted by gambling companies, therefore future strategies should ensure that messages are not being delivered from sources which benefit financially from gambling. Participants also expressed that current safer gambling messages were seen as an afterthought as they were often included at the end of a gambling advert. As such, any future safer gambling strategies should be presented separately from marketing to ensure focus remains on the content of any safer gambling messages.

6.5.5. Conclusions

To conclude, the current study aimed to explore how frequent sports bettors think about gambling marketing and the impact it has upon behaviour. Participants argued that marketing was something that they could exploit for their own personal gain, either through increasing the value of bets or by reducing the risk associated with betting. However, they also acknowledged that marketing acted as a test of their own self-control by tempting them to bet in situations where they had not planned on doing so. Despite this, participants were keen to stress that marketing had little serious impact upon their behaviour and that marketing was only a risk

factor for other people who were seen to be more vulnerable to developing disordered gambling. Finally, participants saw safer gambling marketing strategies as being ineffective due to the perceived insincerity of incorporating safer gambling content within gambling advertisements. As such, it is important for future research to consider potential alternative strategies for encouraging safer gambling. Given the concerns highlighted around social media marketing of gambling within the previous chapters, the upcoming chapter will explore the potential for social media to be used in a more positive manner to effectively promote safer gambling.

Chapter 7. Study 5 – How successful is safer gambling promotion on social media and what type of messaging is most effective?

7.1. Abstract

Aim: The current study aimed to assess the effectiveness of delivering safer gambling messaging to regular gamblers on social media. It also aimed to assess whether the context and content of the message influenced its effectiveness in encouraging safer gambling behaviour. **Method:** A 3x2 mixed factorial design was employed, with an independent groups factor or experimental group and a repeated measures factor of experimental stage. 281 participants were randomly assigned to follow one of three Twitter accounts set up to deliver safer gambling messaging. The accounts either sent out informational messages, self-appraisal messages or emotional self-efficacy messages. Participants were asked to report their gambling behaviour both from the two weeks prior to following the accounts, in addition during to the two week intervention period, using behavioural information from their online gambling accounts. Participants also reported readiness to change gambling behaviour within the pre and post Time-Points. **Results:** A significant main effect of intervention stage highlighted reductions in gambling behaviour and increased readiness to change gambling behaviour. However, there was no significant main effect of condition and no significant interaction between intervention stage and condition upon gambling behaviour or readiness to change. **Discussion:** The findings suggest that social media may be an effective platform to promote safer gambling. However, it is interesting that those in the informational messages

condition, which have been shown in previous research to have no impact upon gambling behaviour, showed similar reductions in behaviour to those in the experimental conditions. Therefore, further research is needed to offer a deeper insight into these findings by using an alternative control condition or by increasing the time period which participants are asked to follow the safer gambling social media accounts.

7.2. Introduction

There is a need for the development of new safer gambling strategies to reduce the harm caused by gambling within Great Britain. As previously highlighted within the conducted literature review (see chapter 2), many currently used safer gambling strategies lack a strong empirical evidence base for effectively reducing gambling harms (McMahon et al., 2019). Building upon this, frequent gamblers within the previous study described how they felt that safer gambling messages within marketing were not very effective for a range of reasons, including their lack of helpful advice and their perceived insincerity. Whilst many current safer gambling strategies focus on distributing messages to gamblers during active gambling sessions, such strategies may be limited due to the high emotional states present during gambling sessions (Sohn et al., 2015) that may push bettors away from rational decision making. As such, there is a need for further research exploring the effectiveness of safer gambling messaging delivered outside of active gambling sessions.

One potential avenue for safer gambling messaging is to deliver it through social media. Previous research in other areas of public health, such as smoking cessation and cancer prevention, has shown evidence of social media interventions having high reach to target audiences (Gough et al., 2017) and being able to produce attitudinal and behavioural change (Laranjo et al., 2015; Naslund et al., 2017). In particular, previous messaging-based interventional health campaigns have advocated for the use of the platform Twitter over other social media networks - due to the website's greater open accessibility, wide-reaching capabilities for information distribution and its functionality for allowing researchers to pre-schedule the postings of timed messages directly onto users' content feeds (Pechmann et al., 2015). In comparison to traditional approaches which assess the effectiveness of safer gambling techniques only at the moment of active play, it is hoped that the

integration of safer gambling campaigns directly into the social media feeds of bettors would instead lead to a more 'prolonged' user exposure to the intervention over time – whereby its safer gambling messages can be successfully implemented through their embedding into the day-to-day online activities, behaviours and rituals of those gamblers who are most at risk.

Nevertheless, an important consideration within any safer gambling message is how best to frame such messaging to produce positive changes in behaviour. Previous research has consistently shown that providing gamblers with informational messages during active gambling sessions has no impact upon behaviour (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015; Monaghan & Blaszczynski, 2010). Self-appraisal messages have been shown to have a greater impact upon gambling behaviour (Gainsbury, Aro, et al., 2015; Harris & Parke, 2016; Monaghan & Blaszczynski, 2010), likely due to increasing autonomy within decision making (Pavey & Sparks, 2010) and through increasing self-awareness of gambling behaviour (Harris & Griffiths, 2017). Further research is needed however, in order to investigate whether findings can be replicated when messages are delivered outside of gambling sessions. Another type of messaging consistently used within the wider addiction literature, which is particularly good at capturing attention, is emotional messaging (Hammond, 2011; Harris et al., 2018). Fear appraisals are the most used type of emotional messaging, based upon the belief that individuals are motivated to protect themselves when they feel endangered. Whilst some evidence exists supporting the effectiveness of fear appeals in areas such as binge drinking, smoking and gambling (Carrera et al., 2010; Munoz et al., 2013; Wang et al., 2015), other research suggests their effectiveness is low in high-risk populations (De Vos et al., 2017) and when self-efficacy is low (Peters et al., 2013). Therefore, in order to develop safer gambling strategies which benefit those across the spectrum of

gambling-related harm - there is a need for other types of emotional messaging which promote self-efficacy to be explored.

One example of such an approach to safer gambling promotion can be seen within the current 'BetRegret' campaign being run by GambleAware, the leading independent gambling charity in Great Britain. The campaign aimed to provide bettors with safer gambling advertising that was both emotionally stimulating and clearly distinct from betting advertisements (GambleAware, 2020). For the first stage of the campaign, several short advertisements were created which were framed around situations where bettors may subsequently regret their betting decisions (e.g. betting when drunk or intoxicated). As such, the enlisted messages of the campaign took a preventative approach, whereby bettors were encouraged to identify with the emotion of regret often felt in those situations and to therefore avoid such behaviour in the future. Initial evaluation of the success of the first stage of the campaign demonstrated that bettors self-reported increased thoughts about behaviour change (GambleAware, 2020). They also reported making positive changes to their gambling behaviour, specifically on the behaviours highlighted within the campaign. Whilst this offers some initial evidence of the effectiveness of the type of messaging used within the campaign, further evaluation is required to assess its effectiveness in comparison to other types of safer gambling messaging.

7.2.1. Aims and Hypotheses

The impact of safer gambling messaging during active gambling sessions may be limited due to the high emotional states present during gambling sessions (Sohn et al., 2015). Previous research from other domains of public health suggests that social media can effectively reach target populations with health messaging and

impact upon behaviour (Gough et al., 2017; Laranjo et al., 2015; Naslund et al., 2017). As such, the current study first aims to assess the effectiveness of delivering safer gambling messages to sports bettors through social media. Whilst informational messages have been shown to have no impact upon gambling behaviour (Cloutier et al., 2010; Monaghan & Blaszczynski, 2010), self-appraisal messages during in-play gambling sessions have been shown to have a positive impact upon gambling behaviour (Gainsbury, Aro, et al., 2015; Harris & Parke, 2016). However, research is needed to assess whether this extends to messages delivered outside of a gambling session. Emotional messaging is particularly good at capturing the attention of a target audience (Hammond, 2011; Harris et al., 2018), however it has limited effectiveness when bettors' self-efficacy is low (Peters et al., 2013). Therefore, any emotional messaging strategy used should be accompanied by messages which promote increased self-efficacy. The second aim of the current study is to assess which is the most effective type of safer gambling message to deliver on social media. Finally, from the collection and analysis of participation demographic information within the current study, the third aim was to assess whether the finding from chapter 5, that gamblers following affiliates but not operators on social media is a predictor of their problem gambling scores, can be replicated. Based upon the literature presented here, the following predictions have been made:

H1 – It is predicted that bettors in both the self-appraisal messages and emotional, self-efficacy messages conditions will show an increased readiness to change gambling behaviour after receiving safer gambling messages on social media for 14 days, whilst those in the informational messages condition will not.

H2 – It is predicted that bettors in both the self-appraisal messages and emotional, self-efficacy messages conditions will show reductions in their betting behaviour during the 14 days where they are receiving safer gambling messages on social

media compared to the 14 days prior to receiving the messages. No changes in betting behaviour are expected for those in the informational messages condition.

7.3. Method

7.3.1. Design

The current study employed a 3x2 mixed factorial design. The independent groups factor was experimental condition with three levels: informational messages, self-appraisal messages and emotional/self-efficacy messages. Informational messages were used as a control condition, given previous research has consistently demonstrated they do not impact upon gambling behaviour (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015; Monaghan & Blaszczynski, 2010). The repeated measures factor was experimental stage with two levels: pre-intervention and post intervention. The dependent variables being assessed were readiness to change gambling behaviour and three measures of gambling behaviour over the past 14 days, including: number of bets placed, number of days where participants placed a bet and their total money staked. Several other variables were collected to assess the relationship between following gambling accounts on social media and disordered gambling. These included: the number of operator accounts that they follow, the number of affiliate accounts that they follow and their problem gambling scores.

7.3.2. Participants

Participants were recruited through the online participant recruitment website Prolific. An initial pre-screening survey was completed on July 9th 2020 by 1,001 individuals who live in Great Britain, watch live sports on TV and use social media –

this selection of screening criteria available on Prolific was chosen to increase the number of respondents who would meet the participant eligibility criteria assessed in the pre-screening survey. The eligibility criteria identified participants who stated that they had bet on sport at least once a month, on average, and would be willing to follow a social media account set up by the researcher for a period of two weeks.

683 people met these criteria and were invited to take part in the study through their anonymous Prolific identification code, with a target sample size of 300. Due to the large numbers meeting the eligibility criteria, those individuals who reported betting at least once every two weeks were first invited to take part in the study, in order to recruit a larger number of more frequent gamblers. Those who gambled once a month were then recruited to meet the target sample size.

Ultimately, 301 participants were identified and recruited following the screening process (Stage 1) of the study on July 10th and 11th. Eligible participants were then randomly assigned to a message-condition (Stage 2) and were asked to follow one of three associated social media accounts, set up for the purpose of the study for two-week intervention before completing the study (Stage 3). A total of 281 participants then completed the full messaging-intervention period on July 24th and 25th, with a dropout rate of 6.65%. See figure 3 for full breakdown of participant recruitment by condition of the study.

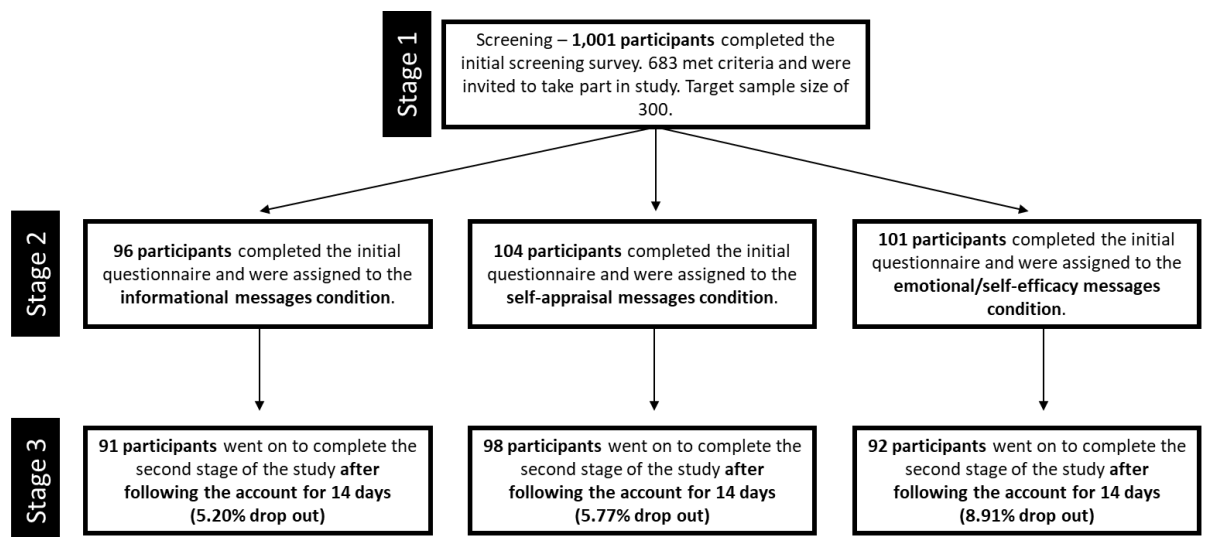


Figure 3

A figure to demonstrate the different stages in participant recruitment, including the number of participants included at each stage and dropout rates.

Participants were paid at an hourly rate of £6.60 an hour across the three stages of the study, resulting in participants receiving £0.11 for pre-screening, £1.10 for part 1 and £0.90 for part two. The age of participants within the final sample of 281 ranged from 18 to 64 (mean=36.60, SD=10.94). Within the informational message condition, ages ranged from 19 to 64 (mean=37.33, SD=11.80). Within the self-appraisal message condition, ages ranged from 18 to 61 (mean=35.96, SD=10.58). Within the emotional and self-efficacy message condition, ages ranged from 19 to 64 (mean=36.56, SD=10.51). A full breakdown of the categorical and ordinal demographic variables is provided in table 13 below. The sample was largely male (79.7%), in full-time employment (76.2%), white British (85.4%) and educated at undergraduate degree level or higher (67.6%)

Table 13

Participant demographic information (Frequency & Percentage) by gender, employment status, highest level of education, ethnicity and relationship status per messaging condition, N= 281.

	Informational		Self-Appraisal		Emotional/Self-Efficacy		Overall	
	N	%	N	%	N	%	N	%
Gender								
Male	74	81.3	80	81.6	70	76.1	224	79.7
Female	17	18.7	18	18.4	22	23.9	57	20.3
Employment Status								
Full-time	67	73.6	71	72.4	76	82.6	214	76.2
Part-time	2	2.2	12	12.2	6	6.5	20	7.1
Student	4	4.4	5	5.1	2	2.2	11	3.9
Self-employed	8	8.8	4	4.1	4	4.3	16	5.7
Unemployed	7	7.7	3	3.1	1	1.1	11	3.9
Other	3	3.3	3	3.1	3	3.3	9	3.2
Highest Level of Education								
GCSE or Equivalent	8	8.8	6	6.1	6	6.5	20	7.1
A-Level or Equivalent	23	25.3	25	25.5	23	25.0	71	25.3
Undergraduate Degree	39	42.9	46	46.9	39	42.4	124	44.1
Postgraduate Degree	21	23.1	18	18.4	22	23.9	61	21.7
Doctorate	-	-	1	1.0	1	1.1	2	0.7
Other	-	-	2	2.0	1	1.1	3	1.1
Ethnicity								
White British	83	91.2	78	79.6	79	85.9	240	85.4
Other	8	8.8	20	20.4	13	14.1	41	14.6
Relationship Status								
Single	19	20.9	26	26.5	20	21.7	65	23.1
In a relationship	27	29.7	30	30.6	29	31.5	86	30.6
Married	40	44.0	40	40.8	41	44.6	121	43.1
Divorced	4	4.4	2	2.0	1	1.1	7	2.5
Other	1	1.1	-	-	1	1.1	2	0.7

7.3.3. *Materials*

Problem Gambling Severity Index

The Problem Gambling Severity Index (PGSI) is a nine-item questionnaire (Ferris & Wynne, 2001) validated to assess levels of problematic gambling in the general population (Holtgraves, 2009) [see Appendix F]. Participants rate nine items based on their gambling behaviour over the previous four months on a four-point scale from never (0) to almost always (3). Example items include 'Have you bet more than you could afford to lose' and 'has gambling caused you any health problems, including stress or anxiety'? Participant scores are totalled out of 27 and are placed in one of four categories based upon their scores: no problem (0), low risk (1-2), moderate risk (3-7) and problem gambler (8+).

Gambling Readiness to Change Questionnaire

The Gambling Readiness to Change Questionnaire (GRCQ) is a nine item questionnaire (Neighbors et al., 2002) which assess how ready an individual is to make changes to their gambling behaviour (see Appendix J). Participants are required to rate statements such as 'sometimes I think I should cut down on my gambling' and 'I have just recently changed my gambling habits' on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Participant scores are either totalled through each sub-scale (pre-contemplation, contemplation and action), which each relate to a different stage of behaviour change within the stages of change model (Prochaska & DiClemente, 1986), or via a weighted total overall score. Within the current study, a total score was calculated and a higher score indicates a higher willingness to make changes to gambling behaviour. The GRCQ shows satisfactory reliability ($\alpha=0.81$) when using the total score and

demonstrates evidence of good convergent validity with gambling outcome measures (Neighbors et al., 2002).

Demographics + Gambling Activities Questionnaire + Social Media Use Questionnaire

The same in-house demographics questionnaire which was employed within study three was used to collect information on a range of relevant demographics, such as age, gender, employment status, highest level of education, ethnicity and relationship status (see Appendix C). Similarly, the same social media use questionnaire which was developed in study three was employed to ask participants how many gambling operator and affiliate accounts they follow on social media (see Appendix E). A short in-house gambling behaviour questionnaire was developed which asked participants to report their gambling behaviour over the last 14 days (see Appendix K). This asked how many days on which they had bet, how many bets they had placed and the total amount of money they had staked. These questions were accompanied by a message which read “on a separate browser or device, please log into all of your gambling accounts in order to answer the next three questions. This is very important to ensure the accuracy of the data you provide to this study”. This was done to attempt to remove the inaccuracy of self-reporting upon gambling behaviour (Auer & Griffiths, 2017). Finally, a short in-house questionnaire was developed to assess the reach and self-perceived impact of seeing the safer gambling messages on social media (see Appendix L). This asked participants to record how many days they recalled seeing the messages, how many messages they recalled seeing per day and whether they made any changes to their betting based upon seeing the messages. A text entry box was then used to enquire why they did or did not make changes to their behaviour.

Safer Gambling Messages

Three Twitter accounts were set up for participants to follow for 14 days. The first Twitter profile was an account which posted informational gambling messages. These messages were taken from both current gambling advice messages used within the gambling industry and several gambling charities. Example messages included 'Remember to only bet with money you can afford to lose #SaferGambling' and 'Remember to never chase your losses when gambling online #SaferGambling' (See Appendix M for full list of messages). The second Twitter account posted self-appraisal messages which actively encouraged participants to think about their own gambling behaviour. Example messages included 'Do you know how much money you have spent gambling in the past 24 hours? #SaferGambling' and 'Has gambling affected your mood at any point in the past 24 hours? #SaferGambling' (See Appendix N for full list of self-appraisal messages). The final Twitter account posted short emotional responsible gambling videos from the GambleAware 'BetRegret' campaign (GambleAware, 2020) alongside messages aiming to increase self-efficacy by giving specific suggestions as to how bettors could make their behaviour safer. Example messages include 'One way in which you can make your gambling safer is to go now and place deposit limits on all of your gambling accounts #SaferGambling' and 'One way in which you can make your betting safer is to set cooling off periods before you start to drink alcohol in order to avoid gambling when drunk #SaferGambling' (see Appendix O for full list of emotional videos and self-efficacy messages). tweets were scheduled to be posted in a randomised order at random intervals between 10am and 10pm everyday during the data collection period. Each account posted between four and eight messages each day, with the same number of messages posted to each individual account on any given day. This was done to reflect the type of natural variation which would likely be present if such a safer gambling strategy was employed on a wider scale in the future.

7.3.4. Procedure

The study received full ethical approval from Northumbria University Health and Life Sciences postgraduate ethics committee. Participants first accessed the pre-screening survey, which was hosted on Qualtrics, through Prolific. This required them to provide information on how frequently they bet on sport and whether they would be willing to follow a social media account set up for the purpose of the study for two weeks. Those who met the criteria to take part in the main study were then invited to take part in the main study through their anonymous Prolific identification code. Participants then completed the first part of the main study on Qualtrics. After reading the information sheet and providing informed consent, they first completed the demographics questionnaire. They then completed the gambling behaviour questionnaire, the social media questionnaire, the PGSI and the GRCQ, in that order. Qualtrics then randomly assigned participants to follow one of the three private social media accounts set up for the purposes of the study. The accounts were set as private to ensure that nobody who was not taking part in the study could see the messages posted. After being asked to follow an account, they were told that they would be able to see messages from the account on their Twitter feed for the next 14 days until they completed part two of the study. Participants were not specifically told to read or interact with the messages, in an attempt to make the data they provide more naturalistic. Once participants had followed the accounts for 14 days, they were invited to complete the second part of the main study through Prolific. On Qualtrics, they were first asked to complete the gambling behaviour questionnaire, the GRTC and the short questionnaire assessing the reach and impact of messages seen during the 14 days. Participants were then shown a debrief sheet. In total, the pre-screening survey and the two surveys for the main study took around 20 minutes to complete.

7.4. Results

7.4.1. Treatment of data

Data from both part one and part two of the study was downloaded from Qualtrics and combined into one data file in SPSS Version 25 to be analysed. After removing participants who did not complete both parts of the study, five missing data points for pre-intervention number of days bet were replaced by inputting the median value for the variable (Kaiser, 2014). Readiness to change gambling behaviour scores were then calculated through a weighted scoring system, whereby scores on precontemplation items are multiplied by minus two, contemplation items are taken at the original value and action items are multiplied by two. The weighted scores for each individual item were then added together to give a total readiness to change gambling behaviour score. Descriptive statistics were then calculated on the reach of the safer gambling messages (number of days messages were seen and number of messages seen per day) and two separate one-way independent group ANOVAs were run to assess whether the reach of the messages differed between conditions. Then, to assess the success of the messages on intention to change behaviour and on measures of gambling behaviour (number of bets placed, total money staked, number of days bet), four two-way mixed ANOVAs were carried out. For all six of the ANOVAs carried out, assumption testing was first carried out before proceeding with the analysis and have been reported throughout the section.

7.4.2. Reach of safer gambling messages on social media

Table 14

Mean (SD) number of days where participants saw the safer gambling messages on social media and the number of messages seen per day by condition and overall, n=275.

	INF (n=88)	S-A (n=95)	EMO/S-E (n=92)	OVR (n=275)
Number of days where messages were seen	7.26 (4.51)	7.06 (4.33)	6.21 (4.62)	6.84 (4.49)
Number of messages seen per day	2.08 (1.60)	2.21 (1.86)	1.97 (1.58)	2.09 (1.68)

Descriptive statistics were calculated to investigate the reach of the safer gambling messages delivered on social media. Five participants were removed from the analysis for providing data which was not a possible response (e.g. reporting seeing messages on over 14 days when this was the duration they were asked to follow accounts for) and one participant did not provide any data on how frequently they saw the messages. On average, participants saw messages from the accounts around every second day, albeit there was a large variability within the number of days individuals saw the messages. Additionally, participants saw around two messages from the accounts per day on average.

Two separate one-way independent groups ANOVAs were carried out to assess whether the reach of the messages differed depending on which condition

participants were assigned to. For days where messages were seen, inspection of studentized residuals showed there were no outliers (no values larger than 3 or less than -3). A normal Q-Q plot of the residuals showed that the data was approximately normally distributed. There was also homogeneity of variance, as demonstrated by Levene's test of homogeneity of variance ($p = .665$). The ANOVA showed that there was no significant difference in the number of days where messages were seen between conditions, $F(2, 272) = 1.424, p = .243$, partial eta squared = .10.

For number of messages seen per day, five outliers were highlighted as having studentized residual values of larger than three. The analysis was therefore run with and without the outliers, given the outliers were considered possible responses, and it was found they did not impact upon the overall findings. Therefore, the outliers remained within the analysis. This did mean that the data remained slightly skewed (as seen by normal Q-Q plot), however it is important to note that ANOVA analyses are robust to failures of assumptions of normality with large sample sizes (Driscoll, 1996). Levene's test of homogeneity ($p = .742$) showed that there was homogeneity of variance. It was found that there was no significant difference in the number of messages seen per days between conditions, $F(2, 272) = 0.487, p = .615$, partial eta squared = .004.

Table 15

Table to show the number and percentage of participants who reported making changes or not making changes to their betting behaviour after seeing the safer gambling messages by condition, $n=275$.

	INF (n=88)		S-A (n=95)		EMO/S-E (n=92)		OVR (n=275)	
	N	%	N	%	N	%	N	%
Yes	18	20.5	10	10.5	16	17.4	44	16.0
No	70	79.5	85	89.5	76	82.6	231	84.0

Participants also self-reported whether they had actively made changes to their gambling behaviour after seeing the messages on social media. Overall, most participants (84%) reported that they did not actively make changes to their behaviour after seeing the messages. A chi-squared test of independence was then run to assess whether there was a significant association between study condition and reporting making changes to betting behaviour. Findings revealed no significant association, $\chi^2(2) = 3.550$, $p = .170$.

7.4.3. Impact upon behaviour and intention to change

A series of four two-way mixed ANOVAs were carried out to assess the impact of intervention stage (pre and post intervention) and message condition (informational, self-appraisal and emotional/self-efficacy) upon three measures of gambling behaviour (number of bets placed, total money staked and number of days bet) and readiness to change gambling behaviour scores. Firstly, within each ANOVA, studentized residuals were examined to check for outliers and were plotted via normal Q-Q plots to assess whether data was normally distributed. For readiness to change, there were only one outlier with a residual of above three and data was normally distributed. However, for the measures of gambling behaviour, there were many outliers with residuals above a value of three and the data was skewed. Each variable of gambling behaviour was therefore transformed using a $\log_{10}(\text{variable} + 1)$ transformation. After transformation, each variable was approximately normally distributed across the cells of the study design. However, there were still three outliers for bets placed and five for total money staked. Therefore, the ANOVAs for these two variables and readiness to change gambling behaviour were ran with and without the outliers. It was found that there were the main findings were not altered via the inclusion of the outliers and therefore they were left in the analysis due to being considered possible responses. Finally, no tests of sphericity were conducted

due to the repeated measures factor only having two levels. Descriptive statistics are presented in table 16, including both the original variables and the transformed variables.

Table 16

Mean (SD) responses on each DV (readiness to change behaviour, number of bets placed, money staked and days bet) by both experimental stage (pre-intervention and during-intervention) and experimental condition (informational, self-appraisal and emotional/self-efficacy), N=281.

	Pre-intervention				During-intervention			
	INF (N=91)	S-A (N=98)	EMO/S -E (N=92)	OVR (N=281)	INF (N=91)	S-A (N=98)	EMO/S -E (N=92)	OVR (N=281)
RTC	0.49 (1.19)	0.59 (1.09)	0.50 (1.07)	0.53 (1.12)	0.78 (1.37)	0.76 (1.31)	0.65 (1.27)	0.73 (1.31)
Bets Placed	17.07 (40.23)	27.60 (81.77)	15.17 (20.52)	20.12 (54.81)	14.18 (29.33)	19.84 (40.73)	13.22 (20.39)	15.84 (31.54)
Money Staked (£)	201.61 (841.95)	203.60 (583.34)	174.19 (581.76)	193.33 (675.22)	170 (719.02)	340.76 (2061.43)	179.37 (837.97)	232.79 (1368.49)
Days Bet	5.32 (3.98)	6.47 (4.45)	6.28 (4.36)	6.04 (4.29)	5.09 (4.19)	5.61 (4.82)	5.71 (4.33)	5.47 (4.46)
Bets Placed (Transformed)	0.95 (0.46)	1.02 (0.52)	1.00 (0.41)	0.99 (0.47)	0.85 (0.50)	0.90 (0.58)	0.90 (0.45)	0.88 (0.51)
Money Staked (Transformed)	1.64 (0.60)	1.65 (0.69)	1.68 (0.63)	1.66 (0.64)	1.50 (0.74)	1.48 (0.85)	1.55 (0.69)	1.51 (0.76)
Days Bet (Transformed)	0.72 (0.28)	0.79 (0.29)	0.78 (0.28)	0.76 (0.28)	0.67 (0.33)	0.68 (0.38)	0.73 (0.31)	0.69 (0.34)

There was homogeneity of variance within each cell of the design for each DV ($p > 0.05$), except for 'during intervention' for bets placed, as assessed by Levene's test of homogeneity of variance. There was also homogeneity of covariances for each DV, as assessed by Box's test of equality of covariance matrices ($p > 0.001$). There was no statistically significant interaction between condition and intervention stage upon bets placed, [$F(2, 278) = 0.274, p = .761, \text{partial eta squared} = .002$], money staked [$F(2, 278) = 0.215, p = .806, \text{partial eta squared} = .002$], number of days bet [$F(2, 278) = 1.933, p = .147, \text{partial eta squared} = .014$] and readiness to change gambling behaviour [$F(2, 278) = 0.523, p = .593, \text{partial eta squared} = .004$].

There was also no significant main effect of condition on bets placed [$F(2, 278) = 0.476, p = .622, \text{partial eta squared} = .003$], money staked [$F(2, 278) = 0.150, p = .860, \text{partial eta squared} = .001$], number of days bet [$F(2, 278) = 1.003, p = .368, \text{partial eta squared} = .007$] or readiness to change gambling behaviour [$F(2, 278) = 0.177, p = .838, \text{partial eta squared} = .001$].

However, there was a significant main effect of intervention stage on bets played [$F(1, 278) = 31.743, p < 0.001, \text{partial eta squared} = .102$], money staked [$F(1, 278) = 27.232, p < 0.001, \text{partial eta squared} = .089$], number of days bet [$F(1, 278) = 20.359, p < 0.001, \text{partial eta squared} = .068$] and readiness to change gambling behaviour [$F(1, 278) = 11.787, p = 0.001, \text{partial eta squared} = .041$]. Each measure of gambling behaviour showed a reduction during the intervention compared to pre-intervention, whilst readiness to change gambling behaviour scores increased from pre to during intervention [see Table 16].

7.4.4. Qualitative Feedback on Impact of Messages

In order to gain a deeper understanding of why participants did or did not make changes to their gambling behaviour during the 14 days where they were asked to follow the social media accounts, participants were asked to provide a written explanation as to why they did or did not make changes. In total, 260 participants (93% of final sample) provided feedback and each response was coded individually for the main reason as to why they either did or did not change their behaviour. Once each response had been coded, codes were then grouped together and highlighted five main reasons as to why participants did not make changes to their behaviour after seeing the messages. These five reasons were seeing no need to change behaviour, not seeing messages, the content of the messages, due to their betting strategies rendering the messages irrelevant and personal factors. There were also two main reason identified as to why messages did lead to a change in behaviour. These were by encouraging participants to reflect on their own gambling behaviour and by increasing awareness of the problems gambling can cause. There was also a small number of responses (n=15) which were excluded from any of the final seven categories for responses due to either their response being unclear or their response not being relevant to the question asked. The number of responses within each category was then calculated. Given the lack of significant main effect of condition or interaction effect, it was decided that there would be no comparison of the frequency of reasons given between conditions. A more detailed description of the final seven categories and their frequencies will now be given.

No need to change gambling behaviour (n=108)

The most commonly reason cited for the messages not having any impact was that participants believed they had no need to change their gambling behaviour.

Participants stressed that their gambling was seen a recreational activity carried out for fun and that they only bet with low stakes and therefore they had no reason to change their behaviour after reading the messages. Additionally, a number of participants (n=36) stated the reason that the messages had no impact was because they were not problem gamblers. This demonstrates that for a large number of participants, messages were seen to be a reactive measure for those experiencing harm from their behaviour.

“The messages seemed to be aimed at getting people to gamble less and more responsibly. I would already consider myself to be a sensible, modest gambler”.

“My gambling isn't a problem, those messages are for problem gamblers, not me”.

Content of messages (n=29)

Another reason participants stated that messages were not effective was the content of the messages having no impact on them. One reason given for this was that the specific content of the messages was not relevant to them or their gambling behaviour. Some participants also stated that they had seen similar messages before taking part in the study and that they felt as though this limited the potential impact the messages could have had. Additionally, the messages were also said to not be persuasive enough and this limited the impact they could have upon betting behaviour.

“The messages, though helpful, weren't really relevant to my current behaviour.

Many tweets referred to either using deposit limits (which are already in place) or

avoiding gambling whilst under the influence of alcohol (I rarely drink). Good messages, but less relevant for me in particular”.

“The information was very general and nothing I don't see regularly, I have the same messages emailed to me by bookmakers etc and have read them all already dozens of times”.

Messages were not seen or were seen at the wrong time (n=24)

The third most common reason given for why messages had no impact upon behaviour is that several participants stated they didn't see messages from the accounts during the 14 days they were asked to follow the accounts. The reasons given for this by participants were that they followed a lot of accounts and therefore the messages got lost within their feed, as well as not using social media very often. Some participants also stated that they chose to ignore the messages or that the messages failed to grab their attention. There was also a small number of participants who stated that they saw messages during times where they would not be gambling and that messages may have had more of an impact if they had seen them when they were gambling.

“Did not see any messages from the account, my twitter feed was saturated with other content”.

“They didn't catch my attention enough in the feed”

Personal factors (n=21)

A range of personal factors were also put forward to explain why messages had limited impact. One such factor related to participants simply not wanting to place a bet during the 14-day period, therefore making the messages redundant. Another

reason was that participants did not want to make changes to their behaviour. Some participants stated that they were already following the advice given in the messages or that they had recently made changes to their betting behaviour. Finally, a small number of participants noted that messages had limited impact as their gambling behaviour had reached clinical levels and therefore their behaviour is not so easy to change.

“I dont gamble much and there was no occasions I felt like betting on anyway”.

“I felt that I had already put changes in place and cut my gambling down to a lower level”

Participant’s betting strategies rendered messages irrelevant (n=18)

The final reason given for messages having no impact upon behaviour was that participants argued that their specific betting strategies reduced the risk associated with betting and therefore they did not need to follow the advice given in the messages. For example, some participants explained they only participate in matched betting, whereby bettors take advantage of free bets and incentives offered by bookmakers to guarantee profits. Other participants explained how they already have systems in place to monitor their gambling behaviour and therefore do not need any further advice on managing their gambling. Furthermore, a small number of participants stated they were not interested in making changes to their gambling as their gambling is profitable. Finally, some participants argued that they only bet in response to the marketing offers and therefore the messages were irrelevant.

“my gambling is 99% Matched Betting, so although I place a large number of bets and bet significant sums, it is done with guaranteed profit in mind. I VERY rarely bet in the traditional sense and although i use all the tools of a gambler, I am not gambling as I am not losing (Ive made around £2000 in the last 18months)”.

“No need to make any changes, I track every bet in a spreadsheet and do a lot of research”

Encouraged reflection or action upon gambling behaviour (n=37)

The most common reason given for making changes to behaviour after message exposure were that messages had encouraged participants to reflect upon certain aspects of their gambling behaviour which the messages commented upon. For example, some participants stated that messages made them reflect upon why they were placing bets and made them realise they were betting due to being bored and decided that they were wasting money. Other participants discussed how specific aspects of the messages were actioned upon, such as setting limits upon time or money spent when gambling or through reducing their stakes. Additionally, a small number of participants stated that the messages encouraged them to act upon on concerns they had been having about their gambling behaviour. Finally, one participant argued that the messages provoked changes in their behaviour by increasing awareness of issues their gambling was causing them and one participant stated the messages acted as a reminder of problems which their gambling had previously caused them.

“I pondered on some messages I saw on the account and decided to follow one of the messages that says I can set deposit limits on my gambling account. I loved that message, i did it and it has helped me immensely”.

“It was already something I was thinking about, but seeing the Twitter only solidified my concerns. I took timeouts on my gambling accounts.”

Raised awareness of the problems gambling can cause (n=7)

The other reason given by a small number of participants for making changes to behaviour after seeing the messages was due to the message increasing awareness of the problems gambling can cause. More specifically, participants stated that the messages made them think about what could happen if they let their own gambling behaviour spiral out of control.

“Because it makes me worried about getting addicted back to gambling and I won't have no control over it, so seeing these messages would help me control my addiction better and help improve my life”.

7.4.5. Predictors of PGSI Scores

In order to explore whether findings replicated from study three, a multiple linear regression was carried out to investigate whether following operator or affiliate accounts was a significant predictor of PGSI scores. The analysis was performed after controlling for measures of gambling behaviour (pre-intervention) collected within the study that were expected to be related to PGSI scores. PGSI scores within the data ranged from 0 to 26 (mean = 4.59, SD = 5.41). Days spent gambling within the past 14 days ranged from 0 to 14 (mean = 6.04, SD = 4.29). Total money staked over the past 14 days ranged from £0.00 to £7000 (mean = £193.33, SD = £675.22). The number of bets placed over the past 14 days ranged from 0 to 728 (mean = 20.12, SD = 54.81). Whilst this mean and SD are inflated due to outliers within the dataset, all analyses run within this section were ran with and without outliers and were not found to impact the overall findings. Therefore, the decision was taken to retain these items within the dataset since they were considered possible responses. 108 of the 281 participants followed at least one operator

account on social media and 96 of the 281 participants followed at least one affiliate account on social media.

The first stage within the analysis was to check the assumptions of a multiple linear regression. Scatterplots between the predictor and outcome variables were first examined and highlighted a linear relationship between variables. Correlations ran between predictor variables then showed no multicollinearity (all $r < 0.8$). The data showed evidence of multivariate normality as residuals were normally distributed. Finally, a scatterplot of residuals against predicted values showed that the data was homoscedastic. The first model was then run and highlighted that the number of the previous days bet and following at least one affiliate account on social media were significant positive predictors of PGSI scores. However, neither number of bets placed in the past 14 days, total gambling spend in the past 14 days or following at least one operator account were found to be significant predictors of PGSI scores. In total, the model explained 10.3% of variance in PGSI scores. Full statistics for model 1 are reported in the table below.

Table 17*Findings from regression model 1 predicting PGSI scores.*

Predictor	<i>b</i>	<i>se(b)</i>	β	<i>p</i>	Fit
(Intercept)	2.469	0.563	-	<0.001	
Operator Account Followed (yes)	0.630	0.737	0.057	0.393	
Affiliate Account Followed (yes)	2.308	0.747	0.203	0.002*	
Bets Placed in Previous 14 Days	-0.008	0.007	-0.080	0.247	
Money Staked in Previous 14 Days	0.001	0.001	0.111	0.101	
Days Bet in Previous 14 Days	0.179	0.084	0.142	0.034*	
					$R^2 = 0.103$
					F(2, 275) =
					6.349, $p <$
					0.001

Note. *b* represents unstandardized regression weights, with *se* representing the standard error. β represents the standardized regression weights. * indicates $p < .05$. ** indicates $p < .01$.

A second regression model was then run to assess whether the number of affiliate accounts an individual follows predicts PGSI scores. Number of days bet in the previous 14 days was also included within the model as it was the only other significant predictor in model 1. This remained a significant predictor within this model and the number of affiliate accounts an individual follows was also found to be a significant positive predictor of PGSI scores. The model predicted less variance than model 1 though, at just 6.4%. Full statistics for model 2 are reported in the table below.

Table 18

Findings from regression model 2 predicting PGSI scores.

Predictor	b	se(b)	β	p	Fit
(Intercept)	2.936	0.540	-	<0.001	
Affiliate Accounts Followed	0.306	0.107	0.171	0.006**	
Days Bet in Previous 14 days	0.207	0.075	0.164	0.005**	

$R^2 =$
0.064
F(2, 278)
= 10.549,
p < 0.001

Note. *b* represents unstandardized regression weights, with *se* representing the standard error. β represents the standardized regression weights. * indicates $p < .05$. ** indicates $p < .01$.

7.5. Discussion

7.5.1. Summary of findings

The current study aimed to assess the impact of receiving safer gambling messages on social media upon gambling behaviour and readiness to change gambling behaviour, as well as assessing whether one particular type of message was more effective than others. Based upon previous literature, it was predicted that participants in the self-appraisal and emotional self-efficacy message conditions would show reduced gambling activity during the 14-day period where they were receiving the messages, in addition to an increased readiness to change gambling

behaviour at the end of those 14 days. It was also predicted that there would be no change in readiness to change behaviour or gambling behaviour within the informational messages condition, given previous research has highlighted that such messages have no impact upon gambling behaviour. Findings highlighted that the participants demonstrated reduced gambling behaviour within the 14-day period where they were asked to follow the accounts and increased readiness to change at the end of the 14-day period, regardless of which account they were asked to follow. Therefore, the findings only provide partial support for the hypotheses as the changes in behaviour identified within the self-appraisal and emotional self-efficacy conditions were also identified within the control condition of informational messages. As such, whilst findings may suggest an impact of receiving safer gambling messages on social media regardless of message type, changes in behaviour identified may be a result of knowing behaviour was being tracked rather than the impact of the messages.

Additional information collected within the study offers further insight into the main findings. In terms of reach, participants saw messages from the accounts on every second day and saw two messages a day. This was consistent across conditions of the study. However, only 16% of participants reported actively choosing to make changes to their gambling after seeing a safer gambling message on social media. Qualitative data provided an insight into why participants chose not to make changes to behaviour, with the most commonly identified reasons being that they saw no need to change their behaviour or that the content of the messages was not relevant to them. Of those who did change their behaviour, they stated that messages encouraged them to reflect upon their behaviour and increased their awareness of issues gambling can cause. Finally, the current study also aimed to assess whether the finding from chapter five, that following affiliates but not operators on social media is a predictor of problem gambling, replicates. Evidence

was found to support this as the initial regression model highlighted that following affiliates but not operators was a significant predictor of problem gambling scores. However, unlike in chapter 5, the second regression model also found that the number of affiliate accounts an individual follows was a significant predictor of problem gambling scores.

7.5.2. Contribution to existing literature

The finding that participants displayed reduced gambling behaviour during the 14-day period where they were asked to follow the account, compared to the 14 days previous, provides some initial evidence that receiving safer gambling messages on social media may have an impact upon behaviour. This is further supported by increased readiness to change gambling behaviour scores at the end of the 14-day period compared to before following the accounts. This would therefore appear to support research from other areas of public health which suggests social media can be an effective medium to produce behavioural change (Laranjo et al., 2015).

However, doubt is raised over the changes in behaviour observed being the result of message content due to the lack of a significant interaction effect. More specifically, given that previous research has demonstrated informational safer gambling messages to have a lack of impact upon gambling behaviour (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015), there was expected to be no changes in gambling behaviour identified within the informational messages control condition. However, participants within this condition did reduce their behaviour when following the accounts. One potential explanation for this is that informational messages were not appropriate as a control condition and do in fact have the potential to instigate changes in behaviour. This may be because messages within the current study were implemented outside of an active session, whereas previous studies have largely looked at their impact when delivered whilst participants were actively gambling. This could have allowed messages to become embedded within the daily

routines of participants whereby the prolonged exposure to messages, alongside the absence of high emotional states present during gambling sessions (Sohn et al., 2015), allows bettors to process the messages in a way which initiates behavioural change. An alternative explanation is that participants reduced their behaviour during the period where they followed the accounts due to demand characteristics (Orne, 1962) or as a direct impact of knowing their behaviour would be monitored over the two weeks, regardless of the account they were asked to follow. Therefore, future research should aim to clarify this by replicating the current study with a control condition where participants do not receive any safer gambling messages.

The current study supported previous research in demonstrating the potential for social media health messages to have a high reach within the intended population (Gough et al., 2017), with messages seen on average once every other day.

However, the variability in the number of days messages were seen was large. This suggests that there may be other factors which impact upon how frequently messages are seen by the intended audience. Whilst such factors were not assessed within the current study, it makes logical sense that factors such as the number of accounts an individual follows and the time they spend on social media would impact upon the likelihood of seeing messages. One potential solution for increasing the reach of messages would be to invest finances into promoted messages on social media in order to reach a larger number of individuals and to give tweets increased prominence upon an individual's timeline. Alternatively, the frequency of messages posted could be increased.

It was also highlighted that there was similar reach for messages across the three different conditions. This was a surprising finding given that emotional messages during in-play gambling sessions have been shown to be particularly good at capturing attention (Hammond, 2011; Harris et al., 2018). One potential reason for this may be that the emotional content was contained within a YouTube video that

participants were required to click to watch, whereas the informational and self-appraisal messages were presented only in the form of written messages. Therefore, it may be that emotional messages did not lead to increased attention upon messages due to requiring greater levels of interaction than other messages. Whilst this may be viewed as a limitation in that conditions did not require the same level of interaction from participants, it is argued that such a difference in message format is a result of the types of messages included within the study and is therefore a more accurate reflection of the reach such messages would have on social media.

Several reasons were put forward by participants as to why they did not change their behaviour during the study. The most common reason was that they did not see any need to change their behaviour as they did not encounter problems from their gambling. This finding can be explained by the previously covered Protection Motivation Theory [PMT] (Rogers, 1975), which explains that individuals make a judgment on their perceived vulnerability and susceptibility when viewing a health message. Therefore, if participants within the study did not view themselves as being vulnerable to developing gambling problems, this would explain why they did not actively look to change their behaviour after seeing the messages. Additionally, the fact that many participants commented upon the fact they did not have problems with gambling highlights that they see such safer messages as a reactionary measure rather than a general principle to follow. This highlights an inherent issue with currently used safer gambling approaches, which focus upon personal responsibility (Blaszczynski et al., 2011). Such approaches rely on individuals being able to identify when their gambling behaviour is causing them harm and then to take the appropriate measures to reduce such harm. If individuals do not recognise the harm which their behaviour may be causing them, or feel as though negative consequences they experience are not serious, then they are unlikely to perceive the messages or their content as relevant.

However, those individuals who did make changes to their gambling behaviour after seeing the messages mainly stated that this was due to messages making them reflect upon their gambling behaviour. Interestingly, this was the case across conditions and not just in the self-appraisal condition, where participants were encouraged to reflect upon certain aspects of their behaviour. This, along with the non-significant interaction effect, contrasts with findings on the impact of messages during in-play gambling sessions which have shown self-appraisal messages to be more useful than informational messages in encouraging changes in behaviour (Gainsbury, Aro, et al., 2015; Harris & Parke, 2016). This suggests that outside of gambling sessions, the impact of safer gambling messages may rely upon other factors than the type of message an individual sees. The use of personalised feedback messages has received some support within the literature when delivered within gambling sessions (Auer & Griffiths, 2013; Kim et al., 2014; McGivern et al., 2019), however this would be considerably more difficult to work into social media messaging due to needing information on an individual's behaviour in order to provide personalised feedback. As such, future research should focus upon exploring the personal factors which impact upon the successfulness of different types of safer gambling messages.

The current study also builds upon the findings of study three in highlighting that following affiliate accounts on social media, but not operator accounts, is a significant predictor of problem gambling scores. This adds further weight to the argument that the previously established relationship between problem gambling scores and social media marketing (Gainsbury, King, et al., 2016) is a related to affiliate marketing rather than operator marketing. The current study also found that the number of affiliate accounts an individual follows was a significant predictor of problem gambling scores in the second model. This differs from the findings within chapter five and is likely due to the increased power of the current study resulting

from a larger sample size. However, the initial model accounted for a larger amount of variance in problem gambling scores, suggesting whether an individual follows an affiliate account is a better predictor than knowing how many affiliate accounts an individual follows. Whilst the direction of such a relationship remains unclear, this finding highlights the importance of future research on social media marketing of gambling considering affiliate marketing given the positive association with problem gambling scores.

7.5.3. Evaluation of current study

The current study has several strengths. Firstly, the study obtained a more objective measure of gambling behaviour than in a range of previous studies by asking participants to log into their online gambling accounts to view their accounts before reporting their gambling behaviour. Whilst this does not completely remove the issue of participants providing false information, it does counter the memory biases which have been previously identified with asking participants to remember how much they have gambled (Auer & Griffiths, 2017; Braverman et al., 2014). It also gives the benefit of requiring participants to report their behaviour at less frequent intervals than in other studies which have sought to counter the impact of memory biases (Browne et al., 2019). This may explain a further strength of the current study, in that there was limited drop out from stage two to stage three of the study. This reduces the potential impact of dropouts biasing findings.

Another strength of the current study is that by collecting information on the reach of messages, it can be confidently stated that the messages were seen by participants regularly throughout the study duration. This therefore aids the interpretation of the main findings as the public health messaging must be able to successfully reach the target population in order to have an impact upon behaviour (Lister et al., 2015).

Additionally, the inclusion of a single qualitative question at the end of the study was useful in obtaining a deeper understanding as to participant's thoughts upon the messages and why they did or did not encourage them to change behaviour. This highlighted some wider issues around personal responsibility approaches to safer gambling, whereby messages are often seen as not being relevant by gamblers. This supports the findings of the previous chapter, whereby safer gambling was thought of as more a reactionary concept rather than a precautionary one. As such, this highlights the fact that the use of safer gambling messages to prevent escalating gambling problems may be limited by the misinterpretation of the purpose of such messaging.

However, one limitation of the current study is that data on participant's gambling was only collected for the two weeks prior to following the account and the two weeks whilst they were following the account. If participants had been asked to follow the account for a longer period, or if data had been collected post following the accounts, this may have allowed for further insight into the significant main effect observed in the study. This is because participants may be less likely to show demand characteristics over a longer time period. As such, there would be more confidence in the main effect observed being a result of receiving the messages as opposed to reducing behaviour as a result of knowing they were taking part in a study. However, increasing the period between the different parts of the study would likely have resulted in a larger drop out rate which also has the potential to impact negatively upon findings if there is a systematic pattern to the types of individual who are more likely to drop out (Wolke et al., 2009).

A further limitation of the current study is that bet success was not taken into consideration when assessing betting behaviour within the study. Each dependent variable within the study has the potential to be impacted by betting success, such that bettors may increase or decrease their frequency of betting depending upon

how often they are winning over any given period. For example, evidence has shown that gamblers who received warning messages when winning were significantly less likely to reduce bet stakes than those who received such messages when losing (Ginley et al., 2016). As such, it may be argued that the dependent variables assessed within the current study lack a certain level of context due to not considering how much money was won or lost by participants. However, if profit or loss was measured instead, this would be heavily influenced by chance and would not be an accurate reflection of the risk taken by participants within their betting behaviour. Finally, another potential limitation of the current study is that it could be argued that watching the emotional messages requires more investment from participants than either of the other two message types. This is because emotional messages were in the form of a video whereas the other messages were just in written text. Whilst emotional messages were seen as commonly as the other messages, there was no data collected which indicated whether participants were watching the videos provided or not. As such, it may be that the emotional condition did not lead to greater reductions in behaviour simply due to participants not engaging with the emotional video content.

7.5.4. *Future Directions*

In order to build upon the findings of the current study, future research should focus on replicating the current study with a different control condition. This suggestion would aim to address whether the main effect observed within the current study was due to messages having an impact directly or due to a placebo-like effect whereby participants moderated behaviour simply as a result of knowing they would have to report their behaviour. For example, if a fourth 'waiting list' condition was included whereby participants do not receive any messages over the two-week period, this addition to the study would be able to assess whether a similar reduction in

behaviour was present and therefore whether changes in behaviour were due to receiving messages or not. Alternatively, future research could take a longitudinal approach in order to assess the impact of following the accounts over a longer period. This would limit the possibility of participants modifying their behaviour as a result of knowing their behaviour was being observed as this would be much harder to maintain over a longer time period. Finally, given the additional evidence provided of a relationship between following affiliate marketing on social media and problem gambling scores, future research should investigate this relationship in further detail by controlling for other factors known to be related to problem gambling scores.

7.5.5. Conclusions

The current study aimed to assess the reach and effectiveness of delivering safer gambling messages to frequent gamblers on social media. It also aimed to assess whether one type of safer gambling messaging was particularly effective in helping individuals make positive changes towards their gambling behaviour. The findings of the study suggested that social media safer gambling messages may have led to reductions in gambling behaviour during the period where participants were asked to follow the account. However, the lack of a significant interaction effect creates doubt over this given that the control group of those receiving informational safer gambling messages, which have been shown in previous research to have no impact upon gambling behaviour (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015), demonstrated a similar reduction in behaviour to the two experimental conditions. These doubts are further exacerbated by the fact that less than one in five participants within the study reported actively choosing to make changes to their behaviour after seeing the messages, albeit the impact of the messages could be more subtle than this. Qualitative feedback suggested the most common reason for not changing behaviour was due to not seeing any need to change their behaviour,

highlighting a limitation of personal responsibility approaches to safer gambling.

Future research should aim to offer further insight into the current findings by replicating the study with an additional control condition or by asking participants to follow the Twitter accounts for a longer time period.

Chapter 8. Overall Discussion

8.1. Summary of Findings

The first aim of the thesis was to develop an understanding of how gambling is marketed on social media by both gambling operators and gambling affiliates. Findings across studies one and two highlighted the large frequency of gambling content posted by operators and affiliates on social media. It was found that affiliates posted more frequently than operators and posted a higher frequency of content made for the purpose of direct advertising or betting assistance.

Alternatively, operators posted a higher frequency of content aimed at building their brand on social media, such as sports news and humour. Neither operators or affiliates made many posts encouraging safer gambling and there were no age restrictions on following affiliate accounts. Several potentially dangerous narratives around gambling were highlighted within both operator and affiliate marketing, including that sports betting is exciting and that sports betting is a skill. The average odds of bets advertised was just under decimal odds of 6.0, with no significant difference observed between operators and affiliates. Only one in five advertised bets were successful and simulation data of randomly chosen bets suggested the chances of making profit on advertised bets decreased as the number of bets included within the simulations increased.

The second aim of the thesis was to develop an understanding as to how bettors respond to gambling marketing on social media. It was highlighted through an online experimental study that bettors adjust their response to social media marketing depending upon bet complexity, reporting higher confidence for lower complexity bets. Participants also reported increased confidence for medium complexity bets when advertised on an affiliate account rather than an operator account, however there was no difference observed for low or high complexity bets. This suggests that

affiliate marketing has the potential to inflate bettor's confidence for certain types of bets which may subsequently lead to riskier behaviour. The third aim of the thesis was to explore how gamblers think about gambling marketing and its impact upon gambling behaviour. Participants thought of marketing as something which they could exploit for their own personal gain, yet also acknowledged that marketing acted as temptation to gamble. However, it was argued that marketing was only a risk factor for 'other people' who were seen to be more vulnerable to developing disordered gambling. Finally, safer gambling marketing was perceived as insincere due to often being included within gambling advertisements.

The final aim of the thesis was to assess whether safer gambling can be promoted successfully on social media and if so, to investigate which type of messaging is the most effective in producing attitudinal or behavioural change. Findings from study five suggested that social media safer gambling messages may have led to reductions in gambling behaviour during the period where participants were asked to follow the account. However, similar changes were observed in all three message conditions. This creates doubt over the reason for the observed reduction in behaviour given that the control group of those receiving informational safer gambling messages, which have been shown in previous research to have no impact upon gambling behaviour (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015), showed a similar reduction in behaviour to the two experimental conditions. There was therefore no evidence found that one type of message was more effective than the other in producing changes in gambling behaviour.

8.2. Contribution to Existing Literature

As discussed within each individual study chapter, the thesis has helped to make numerous advances within the existing literature on social media marketing of gambling. For example, there was previously minimal amounts of research on social media marketing of gambling within the UK and this was limited to the amounts spent on marketing and the numbers of individuals following gambling accounts on social media (GambleAware, 2018; Gambling Commission, 2018a, 2018d). The studies reported within chapters three, four and five have built upon this by not only highlighting the types of content included within social media marketing of gambling but also by demonstrating how bettors may respond to such marketing. The findings of study one are also strongly aligned with a recently published content analysis into British gambling operators' social media marketing of gambling at the start of the 2018/2019 Premier League football season (Killick & Griffiths, 2019). This study applied the nine content categories highlighted in study one to operator tweets using a deductive coding approach. Both studies highlight the limited inclusion of safer gambling information within operator tweets, the high integration between gambling and sport, and the inclusion of content aimed at building a brand on social media. As such, this offers further credibility to the findings of study one and suggests that the content within operator social media marketing may stay consistent over the short-term, given the tweets analysed were around three months apart.

The thesis also built upon international research which has looked at how gambling is marketed upon social media in Australia (Gainsbury, Delfabbro, et al., 2016). Similar types of content were found within the marketing strategies of UK and Australian gambling operators, such as customer engagement, humour, sports news and direct advertising. However, the current study advanced upon these findings by exploring the frequency of such types of content. This highlighted that over half of the posts made were discussing sports news or attempting humour, with

less than one quarter acting as direct advertisements. This suggests that the majority of gambling operator content on social media is made for the purpose of building their brand. Both studies also investigated the underlying messages portrayed through operators' marketing, with each finding that gambling was portrayed as exciting. However, study one in the current thesis also found that gambling was presented as a skilled activity. This is concerning given the cognitive distortions around perceived control associated with disordered gambling (Fortune & Goodie, 2012) and the fact that sports bettor consistently overestimate their ability to predict the outcome of sporting events (Cantinotti et al., 2004; Khazaal et al., 2012).

A further area where this thesis has made a major contribution to academic literature is on the topic of gambling affiliate marketing. Prior to the publication of study one, very little focus had been given to affiliate marketing within empirical academic literature. One study had highlighted the large number of followers of gambling affiliate accounts on social media (Miller et al., 2016) and research from a leading gambling charity found that affiliate marketing spend was around one fifth of total marketing spend in the United Kingdom (GambleAware, 2018). Studies one and two were able to build upon this by highlighting both the types of content and bets posted on social media by affiliates, as well as how this differed from operators. Findings highlighted how a larger percentage of affiliate posts were dedicated to direct advertising and betting assistance than operator posts. It was also shown that affiliates posted updates on a larger frequency of winning bets than losing bets, despite the majority of affiliate advertised bets being losing bets. There was also very limited safer gambling information posted by affiliates and no age restrictions set on following affiliate accounts. As such, these studies provide initial evidence of the potentially dangerous aspects of affiliate marketing.

Building upon this, study three explored how bettors respond to different complexity bets based upon whether they were presented on an operator social media account or an affiliate social media account. It was found that bettors reported higher confidence in medium complexity bets when advertised on an affiliate account, however there was no such difference in confidence for low or high complexity bets when reported on the two different types of accounts. This study was therefore the first study to present evidence that affiliate marketing may artificially increase bettor's confidence of certain types of bets, which has the potential to lead to riskier gambling behaviour. Additionally, demographic information collected in both studies three and five was used to highlight that following affiliate accounts, but not operator accounts, on social media was a significant positive predictor of problem gambling scores. This builds upon previous research which demonstrated a positive relationship between self-reported social media marketing exposure and disordered gambling (Gainsbury, King, et al., 2016) by highlighting that this relationship is stronger with affiliate marketing than operator marketing. Whilst the current research is unable to assess the direction of such a relationship between following affiliate accounts and problem gambling scores, it does highlight that those following a larger number of affiliate accounts seem to be at an increased risk of disordered gambling.

Findings from study two have also advanced our knowledge of the types of bets advertised on social media by gambling operators and affiliates, as well as their success. Previous research has highlighted that bets advertised within bookmaker windows and television adverts tended to be complex bets which required a combination of selections across different markets (Newall, 2015, 2017; Newall, Thobhani, et al., 2019). Such bets have been highlighted to lead to a larger number of bettors being in a losing position and bettors have demonstrated a poor understanding of the success probability of more complex bets (Newall, 2017).

Similar findings have been highlighted within the current thesis, with advertised bets on social media giving an implied possibility, on average, of around a 15% chance of winning. Simulation data also highlighted that the chance an individual bettor had of making a profit from a random selection of advertised bets decreased as the number of bets included in the simulation increased. As such, the current thesis has expanded our knowledge in this area by demonstrating that patterns within television advertising of gambling extend to social media marketing, albeit at an increased frequency.

Another contribution that the thesis has made to gambling literature is that it has advanced understanding on how frequent bettors who are not diagnosed with gambling disorder think about gambling marketing. Previous qualitative research had been carried out internationally on the impact of gambling marketing (Binde, 2009a; Lopez-Gonzalez et al., 2019). However, the samples of these studies were international and were treatment-seeking disordered gamblers. Some similarities were identified in terms of the role of marketing in exacerbating gambling problems and making it difficult to maintain a decision to stop gambling. However, the findings of study four also highlighted how frequent bettors viewed marketing as something that they could manipulate for their own gain, suggesting some differences in the way marketing is perceived between frequent bettors and disordered gamblers. Findings were also largely aligned with two recently published studies which explored young adults' perceptions of marketing strategies within the United Kingdom (Killick & Griffiths, 2020; Torrance et al., 2020). Whilst slight differences in sampling strategies, data collection and data analysis were observed across all three studies, similar findings were highlighted in relation to marketing acting as temptation to gambling, increasing perceived control with certain offers and safer gambling marketing lacking impact upon behaviour. Taken together, the three

studies therefore provide strong evidence that the way bettors think about gambling marketing in Great Britain may lead to riskier gambling behaviour.

Finally, the current thesis has also helped advance knowledge on safer gambling literature. Whilst many previous studies had considered the impact of safer gambling messaging during active gambling sessions (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015; Monaghan & Blaszczynski, 2010), relatively few had considered the impact of delivering such messages outside of a gambling session. Based on the success of social media campaigns in other public health domains [e.g. cancer prevention, smoking cessation and health behaviour change] (Gough et al., 2017; Laranjo et al., 2015; Naslund et al., 2017), study five aimed to assess the reach and effectiveness of safer gambling messages on social media. Findings provided some initial evidence that such messages on social media may lead to a reduction in gambling behaviour and increased readiness to change gambling behaviour. However, future research is needed to assess whether the changes observed were due to the messages or a result of demand characteristics. This is because similar changes were observed in the informational messages control condition to the experimental conditions and informational messages have been shown to have limited impact upon gambling behaviour in previous research (Cloutier et al., 2010; Gainsbury, Aro, et al., 2015; Monaghan & Blaszczynski, 2010). Whilst this may lead towards findings being the result of demand characteristics instead of a true effect of the messages, it may be the case that informational messages are more effective outside of gambling sessions than within gambling sessions.

8.3. Policy Implications

The findings of the current thesis may be used to inform policies around gambling marketing in numerous ways. From August 2019, leading gambling companies agreed to a whistle to whistle ban on gambling marketing on television (Purves et al., 2020). Whilst such a ban is encouraging in terms of reducing marketing exposure for vulnerable populations, it does raise concerns that this impact may be offset by increases in other forms of marketing, such as online marketing. These concerns are amplified by the findings within this thesis, whereby numerous concerns have been raised around the content of social media marketing of gambling, the underlying messages associated with such content and how bettors respond to this marketing. As such, it is important for future gambling legislature, namely the ongoing review of the Gambling Act (Department For Digital, Culture, Media & Sport, 2020), to consider the role of social media when creating policies around gambling marketing. In particular, attention should be paid to the frequency of social media marketing and the types of bets advertised on these platforms. This is due to the fact that social media marketing has the potential to be constantly available to bettors. Also, the simulation data from study two demonstrated that more bettors would end up in a losing position when betting on a higher frequency of advertised bets.

Additionally, findings from the current thesis highlight a need for increased regulation of affiliate marketing of gambling. Currently, gambling operators are held responsible for any marketing carried out on their behalf by affiliates, with no specific regulations set for affiliate marketing (Industry Group for Responsible Gambling, 2019). However, the current thesis has highlighted that there are unique risks associated with affiliate marketing, as compared to operator marketing. For example, affiliates posted a larger frequency of advertised bets, including highly attractive sign up offers, and bettors were shown to have increased confidence in

certain types of bets when advertised on an affiliate account. Additionally, affiliate 'tips' were largely unsuccessful but winning bets were commented upon far more often than losing bets were, thus creating an unrealistic image of the success of suggested bets. As such, it is recommended that affiliates who present themselves as tipsters should be made to accurately keep track of the success of their suggested bets and that this information should be readily available to their followers. They should also be required to make it clear to their followers exactly how they are affiliated with the gambling industry, in order to allow bettors to make an informed decision as to the trustworthiness of tips provided. Finally, it was observed that affiliate accounts did not have any age restrictions on following the accounts and this should be addressed given the levels of gambling advertising on such accounts.

8.4. Evaluation of Thesis Strengths and Limitations

One of the main strengths of the thesis is that it has combined a range of methods to allow for the topic of social media marketing to be explored from multiple angles (Almalki, 2016). For example, studies one and two took an observational approach to investigate the types of gambling content posted on social media and the types of bets advertised within such marketing. Study two also took a novel approach to assessing the likelihood of making a profit from advertised bets by running simulations of increasing numbers of randomly chosen bets. Not only did this highlight the low chance of making a profit from such bets, it also demonstrated how the chances of making a profit decreased as the number of bets included within the simulations increased. Studies three and five used experimental, quantitative designs to test how individuals respond to social media marketing and whether safer gambling could be effectively promoted on social media. Study four took a qualitative approach through the use of IPA to explore how regular bettors think

about gambling marketing. This has therefore allowed for a more holistic understanding of social media marketing of gambling to be developed, from how such marketing is carried out to how bettors think about, and respond to this marketing, as well as the potential future use of marketing to promote safer gambling.

A further strength of the current thesis is that it has advanced knowledge of how gambling is marketed on social media within Great Britain. Most of the previous literature in this area published prior to the commencement of study one was conducted in Australia (Gainsbury, Delfabbro, et al., 2016; Gainsbury, King, et al., 2015; Thomas et al., 2015), where they have their own regulations around gambling marketing (Ad Standards, 2021). As such, the thesis has highlighted numerous similarities between the types of content posted on social media by operators in Great Britain and Australia. However, it was also able to build upon this by quantifying the frequency of such content and by exploring the types of bets advertised within this marketing. This developed a deeper understanding of how operators are using social media for marketing. Additionally, the thesis also explored the understudied topic of gambling affiliate marketing. From this, numerous concerning elements of affiliate marketing were highlighted and a relationship between following affiliate accounts and higher PGSI scores was identified, highlighting the need for increased regulation of affiliate marketing.

A limitation of the current thesis is that it was focused solely on one specific type of social media in Twitter. Whilst this was a result of sampling within the initial study, whereby it was observed that Twitter was the only social media platform used by all leading operators in the country, there may still be subtle differences in how different types of social media platforms are used in advertising gambling. As such, it may be argued that the findings are actually reflective of Twitter marketing of gambling rather than broader social media marketing of gambling. However, given

that Twitter is the most frequently used social media platform used to advertise gambling, it would still be reflective of the majority of social media marketing carried out by operators. A further potential limitation of the current project is that it is possible there may be trends within social media marketing. Therefore, the observational studies within the thesis may just provide a snapshot of how gambling was being marketed on social media at the particular time the data was collected. However, another study was published shortly after study one which concluded that their findings were similar to study one in terms of content posted by operators (Killick & Griffiths, 2019). Whilst this provides some initial evidence that strategies may remain consistent over a short time period, there is a need for further replications to assess whether they remain consistent over a longer time period.

One inherent limitation of research aiming to assess the impact of gambling marketing is that it is extremely difficult to establish causal relationships between marketing and gambling related harm. This is due to the fact that marketing is just one factor which may potentially contribute towards gambling harm, alongside a range of other personal, social and cultural factors (Rogers et al., 2019). It is then even harder to pinpoint the impact of one specific type of marketing upon gambling harm due to the range of different marketing strategies employed by the industry. As such, the studies within the current thesis instead focus on demonstrating ways in which social media marketing has the potential to cause harm and establishing a relationship between interacting with social media marketing and gambling harm. For example, study three used a carefully designed online experiment to highlight that bettors place increased confidence in certain bets advertised on affiliate accounts compared to operator accounts. Whilst this does not prove that affiliate marketing causes gambling harm, it does highlight that affiliate marketing has the potential to lead to larger losses than operator marketing for certain types of bets. Another limitation of the current project is that none of the studies investigated how

operators or affiliates interact with customers on social media. This was a result of a limitation of the software (NCApture) used to download tweets within study one. Given the positioning of affiliates as tipping accounts or betting communities, future research should assess whether there are differences in how they interact with customers compared to gambling operators.

8.5. Future Research

Numerous potential avenues for future research arise from the findings of the current thesis. First, numerous areas for concern were highlighted regarding how gambling is perceived through posts made on social media. Whilst these highlighted concerns make sense from a theoretical viewpoint of previously established cognitive biases around gambling, research is needed to empirically assess whether these strategies reinforce these biases and lead to riskier behaviour. For example, researchers should address whether the over-representation of gambling wins (as opposed to gambling losses) on social media contributes to the development of a distorted expectancy of winning in gambling within at-risk populations. Also, it should be assessed as to whether promotions on social media aimed at reducing perceptions of risk on a specific bet are successful and if so, whether this expands to a lower perception of risk around gambling outside of the special offers.

Additionally, given the potentially dangerous aspects of gambling marketing on Twitter highlighted throughout the first three studies, future research should explore trends in social media marketing over a longer period. This is particularly relevant given the increasing spend on online forms of marketing (GambleAware, 2018) and the rapidly evolving nature of social media - as new forms of social media emerge and rise in popularity, they will offer operators and affiliates new potential avenues for marketing. An example of this can be seen in the increasing popularity of casino

game streams on the streaming platform Twitch (Cooney, 2021). Such streams involve individuals, who are often affiliated with the gambling industry, gambling with real money whilst their viewers watch along. Additionally, taking a longitudinal approach to assess social media marketing of gambling will allow researchers to develop a deeper understanding of how any relevant policy changes which are brought in impact upon social media gambling. One potential cause of regulatory change may be the ongoing review of the 2005 Gambling Act being carried out by the British government (Department For Digital, Culture, Media & Sport, 2020). One of the main focuses of the review is to assess the harms caused by gambling marketing and, as such, future research should investigate how different types of marketing are impacted by any changes which are made.

A further suggestion for future research stemming from current findings is to explore how personal factors may impact upon responses to social media marketing. Given that bettors in study three were found to report increased confidence in certain types of bets when advertised on affiliate accounts compared to operator accounts, it should be assessed as to whether particular demographics are more likely to place increased confidence in affiliate bets. For example, it may be the case that those with less betting experience, often those who are just reaching the legal age to gamble, may be more likely to be influenced by affiliate marketing due to the way it is presented on social media. This would be particularly concerning due to the fact there are currently no age restrictions in place for following affiliate accounts on social media.

Moreover, large scale quantitative research should be carried out to assess bettors' understanding of affiliate marketing and whether knowledge of the nature of the relationship between affiliates and the gambling industry impacts upon their trust in affiliate marketing and perceptions of bets they advertise. This would not only allow researchers to develop a more in-depth understanding of who may be at risk from

affiliate marketing on social media, but it would also have potential implications for increased regulation of affiliate marketers. Additionally, longitudinal qualitative research should be carried out to explore gamblers' perceptions of marketing strategies at different points within their lives. This is particularly relevant due to the constantly evolving nature of gambling marketing (Newall, Moodie, et al., 2019) and the fact that levels of gambling behaviour often changes over time (Reith & Dobbie, 2013). As such, taking a longitudinal approach will allow researchers to explore how such factors impact upon perceptions of gambling marketing and keep track of how new marketing strategies are perceived gamblers. Future research would also benefit from co-operation from the gambling and affiliate industries to investigate the uptake of affiliate offers and to investigate the demographics of individuals most likely to follow affiliate tips. In the likely absence of such co-operation, researchers should investigate the types of bets and offers most advertised upon social media, the success of these bets and the profiles of individuals who most commonly interact with affiliates on social media.

Another important area for future research is to examine the exposure to, and impact of, social media marketing on those under the legal age to gamble. A recent study using wearable cameras found high levels of exposure to other types of gambling marketing for children (Smith et al., 2020) and many studies have found that children show evidence of high levels of recall of gambling sponsorship (Djohari et al., 2019; Nyemcsok et al., 2018; Thomas et al., 2016). Whilst some barriers are in place to prevent children from being exposed to gambling marketing on social media, such as age barriers on following accounts, many of these are ineffective. One reason for this is that it requires individuals to have an account with the social media website and relies upon them being honest about their age. Additionally, it was highlighted within study one that affiliate accounts on Twitter had no age barrier on following the account and therefore children would be able to follow the account.

Consequently, research should aim to assess whether such barriers are effective in preventing gambling marketing exposure on social media and if not, what the impact of engaging with marketing on social media has been for those under the legal gambling age.

Future research should also focus on further exploring the effectiveness of social media as a platform to effectively deliver safer gambling messaging. Initially, research is needed to clarify whether the observed reduction in gambling behaviour in study five was in fact a result of receiving the safer gambling messages or a result of demand characteristics. If this confirms that social media is an effective platform for delivering safer gambling messages, focus should then switch to how to optimise the delivery of such messages. For example, research could assess whether message frequency or the type of social media platform messages are posted on has an impact upon the success of messages. Further studies would also need to be conducted to assess whether changes are maintained over a longer time period. However, if a follow-up study reveals that the observed decrease in behaviour in study five was due to demand characteristics, research should then consider other potential avenues for safer gambling promotion. An important factor in any such research, given the perceived lack of relevance the messages in study five had to bettors, will be to explore how to get a wider range of bettors interacting with safer gambling content.

8.6. Conclusions

In summary, the current thesis aimed to assess how gambling is marketed on social media within Great Britain, how bettors think about and respond to such marketing, and explore the potential effectiveness of social media as a platform to deliver safer gambling messaging. Findings highlighted concerns about both the frequency and

content of social media marketing. In particular, operator marketing focused on content aimed at normalising gambling and affiliate marketing posted a larger number of direct advertisements. This is potentially concerning due to the finding in study three that bettors placed increased confidence in certain types of bets when advertised on an affiliate account compared to an operator account, and the replicated findings across studies three and five that following an affiliate account on social media was a significant predictor of higher problem gambling scores. Both types of accounts were found to advertise bets which would likely lead to bettors losing money, with simulation data highlighting the chances of making money decreasing as the number of bets included within simulations increased. Marketing was found to convey gambling as a skilled yet risky activity, which is a narrative which was then evident within interviews of frequent bettors. However, bettors argued that they were able to use marketing to reduce the perceived risk associated with their behaviour and use marketing offers in a skilled manner to increase their chances of winning. Limited safer gambling messages were observed on social media and participants in the interview study argued that current safer gambling strategies lack effectiveness. The final study demonstrated that presenting safer gambling messages on social media has the potential to result in decreased gambling behaviour over a short time period, however further research is needed to clarify whether the messages were responsible for the observed changes.

References:

- Ad Standards. (2021). *Gambling Advertising*.
<https://adstandards.com.au/issues/gambling-advertising>
- Ajzen, I. (1991). The Theory of Planned Behavior Organizational Behavior and Human Decision Processes. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. *Telematics and Informatics*, 34(7), 1177–1190. <https://doi.org/10.1016/j.tele.2017.05.008>
- Ali, Z., Shabbir, M. A., Rauf, M., & Hussain, A. (2016). To assess the impact of social media marketing on consumer perception. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(3), 69–77.
- Almalki, S. (2016). Integrating Quantitative and Qualitative Data in Mixed Methods Research—Challenges and Benefits. *Journal of Education and Learning*, 5(3), 288. <https://doi.org/10.5539/jel.v5n3p288>
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). American Psychiatric Pub.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*. American Psychiatric Pub.
- Archer, M., Bhaskar, R., Collier, A., Lawson, T., & Norrie, A. (2013). *Critical realism: Essential readings*. Routledge.
- ASA. (2019a). *Broadcast Code*. <https://www.asa.org.uk/codes-and-rulings/advertising-codes/broadcast-code.html>

- ASA. (2019b). *Non-broadcast Code*. <https://www.asa.org.uk/codes-and-rulings/advertising-codes/non-broadcast-code.html>
- Auer, M., & Griffiths, M. D. (2013). Voluntary Limit Setting and Player Choice in Most Intense Online Gamblers: An Empirical Study of Gambling Behaviour. *Journal of Gambling Studies*, 29(4), 647–660. <https://doi.org/10.1007/s10899-012-9332-y>
- Auer, M., & Griffiths, M. D. (2017). Self-Reported Losses Versus Actual Losses in Online Gambling: An Empirical Study. *Journal of Gambling Studies*, 33(3), 795–806. <https://doi.org/10.1007/s10899-016-9648-0>
- Barker, A. B., Whittamore, K., Britton, J., & Cranwell, J. (2019). Content analysis of tobacco content in UK television. *Tobacco Control*, 28(4), 381–385. <https://doi.org/10.1136/tobaccocontrol-2018-054427>
- Barrault, S., Mathieu, S., Brunault, P., & Varescon, I. (2019). Does gambling type moderate the links between problem gambling, emotion regulation, anxiety, depression and gambling motives. *International Gambling Studies*, 19(1), 54–68.
- Barreda, A. A., Bilgihan, A., Nusair, K., & Okumus, F. (2015). Generating brand awareness in Online Social Networks. *Computers in Human Behavior*, 50, 600–609. <https://doi.org/10.1016/j.chb.2015.03.023>
- bet365. (2019). *Affiliate Programme*. https://www.bet365affiliates.com/UI/Pages/Affiliates/?ContentPath=%2FAffiliates%2Fv2_Root%2FinformationPages%2FAffiliateProgramme
- Binde, P. (2009a). Exploring the impact of gambling advertising: An interview study of problem gamblers. *International Journal of Mental Health and Addiction*, 7(4), 541–554. <https://doi.org/10.1007/s11469-008-9186-9>

- Binde, P. (2009b). Gambling motivation and involvement: a review of social science research. *Statens Folkhälsoinstitut, Rapport R, 20*.
- Binde, P. (2014). *Gambling advertising: A critical research review*.
https://about.gambleaware.org/media/1165/binde_rgt_report_gambling_advertising_2014_final_color_115p.pdf
- Binde, P., Romild, U., & Volberg, R. A. (2017). Forms of gambling, gambling involvement and problem gambling: evidence from a Swedish population survey. *International Gambling Studies, 17*(3), 490–507.
<https://doi.org/10.1080/14459795.2017.1360928>
- Black, D. W., Monahan, P. O., Temkit, M., & Shaw, M. (2006). A family study of pathological gambling. *Psychiatry Research, 141*(3), 295–303.
<https://doi.org/10.1016/j.psychres.2005.12.005>
- Blaszczynski, A., Collins, P., Fong, D., Ladouceur, R., Nower, L., Shaffer, H. J., Tavares, H., & Venisse, J. L. (2011). Responsible Gambling: General Principles and Minimal Requirements. *Journal of Gambling Studies, 27*(4), 565–573. <https://doi.org/10.1007/s10899-010-9214-0>
- Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction, 97*(5), 487–499.
<https://doi.org/10.1046/j.1360-0443.2002.00015.x>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braverman, J., Tom, M. A., & Shaffer, H. J. (2014). Accuracy of self-reported versus actual online gambling wins and losses. *Psychological Assessment, 26*(3), 865.
- Brocki, J. M., & Wearden, A. J. (2006). A critical evaluation of the use of

interpretative phenomenological analysis (IPA) in health psychology.

Psychology and Health, 21(1), 87–108.

Browne, M., Greer, N., Rawat, V., & Rockloff, M. (2017). A population-level metric for gambling-related harm. *International Gambling Studies*, 17(2), 163–175.

<https://doi.org/10.1080/14459795.2017.1304973>

Browne, M., Hing, N., Russell, A. M. T., Thomas, A., & Jenkinson, R. (2019). The impact of exposure to wagering advertisements and inducements on intended and actual betting expenditure: An ecological momentary assessment study.

Journal of Behavioral Addictions, 8(1), 146–156.

<https://doi.org/10.1556/2006.8.2019.10>

Bunn, C., Ireland, R., Minton, J., Holman, D., Philpott, M., & Chambers, S. (2018). Shirt sponsorship by gambling companies in the English and Scottish Premier Leagues: global reach and public health concerns. *Soccer and Society*, 0970,

1–12. <https://doi.org/10.1080/14660970.2018.1425682>

Calado, F., & Griffiths, M. D. (2016). Problem gambling worldwide: An update and systematic review of empirical research (2000–2015). *Journal of Behavioral Addictions*, 5(4), 592–613.

<https://doi.org/10.1556/2006.5.2016.073>

Cantinotti, M., Ladouceur, R., & Jacques, C. (2004). Sports betting: Can gamblers beat randomness? *Psychology of Addictive Behaviors*, 18(2), 143–147.

<https://doi.org/10.1037/0893-164X.18.2.143>

Carrera, P., Munoz, D., & Caballero, A. (2010). Mixed emotional appeals in emotional and danger control processes. *Health Communication*, 25(8), 726–736.

Cassidy, R., & Ovenden, N. (2017). *Frequency, duration and medium of advertisements for gambling and other risky products in commercial and public*

service broadcasts of English Premier League football.

[http://research.gold.ac.uk/20926/1/Frequency%2C duration and medium of advertisements for gambling and other risky products in commercial and public service broadcasts of English Premier League football %283%29.pdf](http://research.gold.ac.uk/20926/1/Frequency%2C%20duration%20and%20medium%20of%20advertisements%20for%20gambling%20and%20other%20risky%20products%20in%20commercial%20and%20public%20service%20broadcasts%20of%20English%20Premier%20League%20football%20%283%29.pdf)

Chan, E. M. Lo, Dowling, N. A., Jackson, A. C., & Shek, D. T. (2016). Gambling related family coping and the impact of problem gambling on families in Hong Kong. *Asian Journal of Gambling Issues and Public Health*, 6(1), 1–12.
<https://doi.org/10.1186/s40405-016-0009-9>

Cloutier, M., Ladouceur, R., & Sévigny, S. (2010). Responsible Gambling Tools : Pop-Up Messages and Pauses on Video Lottery Terminals Responsible Gambling Tools : Pop-Up Messages and Pauses on Video Lottery Terminals. *The Journal of Psychology*, 140(5). <https://doi.org/10.3200/JRLP.140.5.434-438>

Conolly, A., Davies, B., Fuller, E., Heinze, N., & Wardle, H. (2018). *Gambling behaviour in Great Britain in 2016* (Issue September).
<https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-behaviour-in-Great-Britain-2016.pdf>

Cooney, B. (2021). *Moistcr1tikal criticizes “dangerous” Twitch gambling streams.* Dexerto. <https://www.dexerto.com/entertainment/moistcr1tikal-criticizes-dangerous-twitch-gambling-streams-1559885/>

Cowlshaw, S., Merkouris, S. S., Dowling, N. A., Rodda, S., Suomi, A., & Thomas, S. L. (2019). Locating gambling problems across a continuum of severity: Rasch analysis of the Quinte Longitudinal Study (QLS). *Addictive Behaviors*, 92(December 2018), 32–37. <https://doi.org/10.1016/j.addbeh.2018.12.016>

Cowlshaw, Sean, & Kessler, D. (2016). Problem gambling in the UK: implications for health, psychosocial adjustment and health care utilization. *European*

Addiction Research, 22(2), 90–98.

Davison, W. P. (1983). The third-person effect in communication. *Public Opinion Quarterly*, 47(1), 1–15. <https://doi.org/10.1086/268763>

De Benedictis, S., Orgad, S., & Rottenberg, C. (2019). #MeToo, popular feminism and the news : A content analysis of UK newspaper coverage. *European Journal of Cultural Studies*, 22(5–6), 718–738. <https://doi.org/10.1177/1367549419856831>

De Vos, S., Crouch, R., Quester, P., & Ilicic, J. (2017). Examining the Effectiveness of Fear Appeals in Prompting Help-Seeking: The Case of At-Risk Gamblers. *Psychology & Marketing*, 34(6), 648–660. <https://doi.org/10.1002/mar.21012>

Deans, E. G., Thomas, S. L., Daube, M., & Derevensky, J. (2016). “I can sit on the beach and punt through my mobile phone”: The influence of physical and online environments on the gambling risk behaviours of young men. *Social Science and Medicine*, 166, 110–119. <https://doi.org/10.1016/j.socscimed.2016.08.017>

Deans, E. G., Thomas, S. L., Derevensky, J., & Daube, M. (2017). The influence of marketing on the sports betting attitudes and consumption behaviours of young men: Implications for harm reduction and prevention strategies. *Harm Reduction Journal*, 14(1), 1–12. <https://doi.org/10.1186/s12954-017-0131-8>

Department For Digital Culture Media & Sport. (2020). *Review of the Gambling Act 2005 Terms of Reference and Call for Evidence*. <https://www.gov.uk/government/publications/review-of-the-gambling-act-2005-terms-of-reference-and-call-for-evidence/review-of-the-gambling-act-2005-terms-of-reference-and-call-for-evidence>

Derevensky, J. L., & Gilbeau, L. (2015). Adolescent Gambling: Twenty-five Years of

Research. *Canadian Journal of Addiction*, 6(2), 4–12.

<http://offcampus.lib.washington.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=109985837&site=ehost-live>

Djohari, N., Weston, G., Cassidy, R., Wemyss, M., & Thomas, S. (2019). Recall and awareness of gambling advertising and sponsorship in sport in the UK: A study of young people and adults. *Harm Reduction Journal*, 16(1), 1–12.

<https://doi.org/10.1186/s12954-019-0291-9>

Dowling, N. A., Cowlshaw, S., Jackson, A. C., Merkouris, S. S., Francis, K. L., & Christensen, D. R. (2015). Prevalence of psychiatric co-morbidity in treatment-seeking problem gamblers: A systematic review and meta-analysis. *Australian and New Zealand Journal of Psychiatry*, 49(6), 519–539.

<https://doi.org/10.1177/0004867415575774>

Dowling, N., Suomi, A., Jackson, A., Lavis, T., Patford, J., Cockman, S., Thomas, S., Bellringer, M., Koziol-Mclain, J., Battersby, M., Harvey, P., & Abbott, M. (2016). Problem Gambling and Intimate Partner Violence: A Systematic Review and Meta-Analysis. *Trauma, Violence, and Abuse*, 17(1), 43–61.

<https://doi.org/10.1177/1524838014561269>

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

<https://doi.org/10.1080/13668803.2010.488096>

Driscoll, W. C. (1996). Robustness of the ANOVA and Tukey-Kramer statistical tests. *Computers & Industrial Engineering*, 31(1–2), 265–268.

Festinger, L. (1957). *A theory of cognitive dissonance* (Vol. 2). Stanford university press.

Fortune, E. E., & Goodie, A. S. (2012). Cognitive distortions as a component and

treatment focus of pathological gambling: A review. *Psychology of Addictive Behaviors*, 26(2), 298–310. <https://doi.org/10.1037/a0026422>

Gainsbury, S. M. (2015). Online Gambling Addiction: the Relationship Between Internet Gambling and Disordered Gambling. *Current Addiction Reports*, 2(2), 185–193. <https://doi.org/10.1007/s40429-015-0057-8>

Gainsbury, S. M., Aro, D., Ball, D., Tobar, C., & Russell, A. (2015). Optimal content for warning messages to enhance consumer decision making and reduce problem gambling. *Journal of Business Research*, 68(10), 2093–2101. <https://doi.org/10.1016/j.jbusres.2015.03.007>

Gainsbury, S. M., Delfabbro, P., King, D. L., & Hing, N. (2016). An Exploratory Study of Gambling Operators' Use of Social Media and the Latent Messages Conveyed. *Journal of Gambling Studies*, 32(1), 125–141. <https://doi.org/10.1007/s10899-015-9525-2>

Gainsbury, S. M., King, D. L., Hing, N., & Delfabbro, P. (2015). Social media marketing and gambling : An interview study of gambling operators in Australia. *International Gambling Studies*, 15(3), 377–393. <https://doi.org/10.1080/14459795.2015.1058409>

Gainsbury, S. M., King, D. L., Russell, A. M. T., Delfabbro, P., Derevensky, J., & Hing, N. (2016). Exposure to and engagement with gambling marketing in social media: Reported impacts on moderate-risk and problem gamblers. *Psychology of Addictive Behaviors*, 30(2), 270–276. <https://doi.org/10.1037/adb0000156>

GambleAware. (2018). *Gambling companies spend £1.2 billion marketing online, five times more than on television ads*. <https://about.gambleaware.org/media/1857/2018-11-24-gambling-marketing-online-five-times-tv-ad-spend.pdf>

- GambleAware. (2020). *Avoiding Bet Regret: An overview of the campaign to date*.
<https://www.begambleaware.org/sites/default/files/2021-01/THESTORYOFBETREGRETFinal.pdf>
- Gambling Commission. (2018a). *Gambling participation in 2017: behaviour, awareness and attitudes*. <http://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-participation-in-2017-behaviour-awareness-and-attitudes.pdf>
- Gambling Commission. (2018b). *Industry Statistics*. <http://live-gamblecom.cloud.contensis.com/PDF/survey-data/Gambling-industry-statistics.pdf>
- Gambling Commission. (2018c). *LeoVegas penalised for advertising and marketing failings*. <https://www.gamblingcommission.gov.uk/news-action-and-statistics/News/leovegas-penalised-for-advertising-and-marketing-failings#LeoVegasGamingLimited>
- Gambling Commission. (2018d). *Young People & Gambling 2018*.
<https://www.gamblingcommission.gov.uk/pdf/survey-data/young-people-and-gambling-2018-report.pdf>
- Gambling Commission. (2019a). *Advertising/marketing rules and regulations*.
<https://www.gamblingcommission.gov.uk/for-gambling-businesses/Compliance/General-compliance/Social-responsibility/Advertising-marketing-rules-and-regulations.aspx>
- Gambling Commission. (2019b). *Gambling participation in 2018: behaviour, awareness and attitudes* (Issue February).
<https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-participation-in-2018-behaviour-awareness-and-attitudes.pdf>
- Gambling Commission. (2019c). *Industry Statistics*.

<https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-industry-statistics.pdf>

Gambling Commission. (2020a). *Gambling participation in 2019: behaviour, awareness and attitudes*.

<https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-participation-in-2019-behaviour-awareness-and-attitudes-superseded.pdf>

Gambling Commission. (2020b). *Safer gambling*.

<https://www.gamblingcommission.gov.uk/for-the-public/Safer-gambling/Safer-gambling.aspx>

Ginley, M. K., Whelan, J. P., Keating, H. A., & Meyers, A. W. (2016). Gambling warning messages: The impact of winning and losing on message reception across a gambling session. *Psychology of Addictive Behaviors, 30*(8), 931.

Giorgi, A. (2010). Phenomenology and the practice of science. *Existential Analysis: Journal of the Society for Existential Analysis, 21*(1).

Goodwin, B. C., Browne, M., Rockloff, M., & Rose, J. (2017). A typical problem gambler affects six others. *International Gambling Studies, 17*(2), 276–289. <https://doi.org/10.1080/14459795.2017.1331252>

Gough, A., Hunter, R. F., Ajao, O., Sci, C., Jurek, A., Mckeown, G., Hong, J., Barrett, E., Ferguson, M., & Mcelwee, G. (2017). *Tweet for Behavior Change : Using Social Media for the Dissemination of Public Health Messages Corresponding Author : 3*, 1–17. <https://doi.org/10.2196/publichealth.6313>

Grant, J. E., Kushner, M. G., & Kim, S. W. (2002). Pathological gambling and alcohol use disorder. *Alcohol Research and Health, 26*(2), 143–150.

Griffiths, M. D., Estévez, A., Guerrero-Solé, F., & Lopez-Gonzalez, H. (2018). Sports betting marketing and advertising: a brief overview. *Casino and Gaming*

International, 33, 51–55. <https://aifs.gov.au/agrc/publications/sports-betting-and-advertising/export>

Hammond, D. (2011). Health warning messages on tobacco products: A review. *Tobacco Control*, 20(5), 327–337. <https://doi.org/10.1136/tc.2010.037630>

Hanss, D., Mentzoni, R. A., Griffiths, M. D., & Pallesen, S. (2015). The impact of gambling advertising: Problem gamblers report stronger impacts on involvement, knowledge, and awareness than recreational gamblers. *Psychology of Addictive Behaviors*, 29(2), 483–491. <https://doi.org/10.1037/adb0000062>

Harris, A., & Griffiths, M. D. (2017). A Critical Review of the Harm-Minimisation Tools Available for Electronic Gambling. *Journal of Gambling Studies*, 33(1), 187–221. <https://doi.org/10.1007/s10899-016-9624-8>

Harris, A., & Griffiths, M. D. (2018). The Impact of Speed of Play in Gambling on Psychological and Behavioural Factors: A Critical Review. *Journal of Gambling Studies*, 34(2), 393–412. <https://doi.org/10.1007/s10899-017-9701-7>

Harris, A., & Parke, A. (2016). The Interaction of Gambling Outcome and Gambling Harm-Minimisation Strategies for Electronic Gambling: the Efficacy of Computer Generated Self-Appraisal Messaging. *International Journal of Mental Health and Addiction*, 14(4), 597–617. <https://doi.org/10.1007/s11469-015-9581-y>

Harris, A., Parke, A., & Griffiths, M. D. (2018). The Case for Using Personally Relevant and Emotionally Stimulating Gambling Messages as a Gambling Harm-Minimisation Strategy. *International Journal of Mental Health and Addiction*, 16(2), 266–275. <https://doi.org/10.1007/s11469-016-9698-7>

Hartmann, M., & Blaszczynski, A. (2018). The Longitudinal Relationships Between

Psychiatric Disorders and Gambling Disorders. *International Journal of Mental Health and Addiction*, 16(1), 16–44. <https://doi.org/10.1007/s11469-016-9705-z>

Hing, N., Cherney, L., Blaszczynski, A., Gainsbury, S. M., & Lubman, D. I. (2014).

Do advertising and promotions for online gambling increase gambling consumption? An exploratory study. *International Gambling Studies*, 14(3), 394–409. <https://doi.org/10.1080/14459795.2014.903989>

Hing, N., Li, E., Vitartas, P., & Russell, A. M. T. (2018). On the Spur of the Moment:

Intrinsic Predictors of Impulse Sports Betting. *Journal of Gambling Studies*, 34(2), 413–428. <https://doi.org/10.1007/s10899-017-9719-x>

Hing, N., Nuske, E., Gainsbury, S. M., & Russell, A. M. T. (2016). Perceived stigma

and self-stigma of problem gambling: perspectives of people with gambling problems. *International Gambling Studies*, 16(1), 31–48.

<https://doi.org/10.1080/14459795.2015.1092566>

Hing, N., Russell, A. M. T., Thomas, A., & Jenkinson, R. (2019). Wagering

Advertisements and Inducements: Exposure and Perceived Influence on Betting Behaviour. *Journal of Gambling Studies*, 0123456789.

<https://doi.org/10.1007/s10899-018-09823-y>

Hing, N., Sproston, K., Brook, K., & Brading, R. (2017). The Structural Features of

Sports and Race Betting Inducements: Issues for Harm Minimisation and Consumer Protection. *Journal of Gambling Studies*, 33(2), 685–704.

<https://doi.org/10.1007/s10899-016-9642-6>

Hocevar, K. P., Metzger, M., & Flanagin, A. J. (2017). Source credibility, expertise,

and trust in health and risk messaging. In *Oxford Research Encyclopedia of Communication*.

Holland, R. W., Meertens, R. M., & Van Vugt, M. (2002). Dissonance on the road:

Self-esteem as a moderator of internal and external self-justification strategies.

Personality and Social Psychology Bulletin, 28(12), 1713–1724.

<https://doi.org/10.1177/014616702237652>

Houghton, S., McNeil, A., Hogg, M., & Moss, M. (2019). Comparing the Twitter posting of British gambling operators and gambling affiliates: a summative content analysis. *International Gambling Studies*, 19(2), 312–326.

<https://doi.org/10.1080/14459795.2018.1561923>

Houghton, S., Moss, M., & Casey, E. (2020). Affiliate marketing of sports betting – a cause for concern? *International Gambling Studies*, 20(2), 240–245.

<https://doi.org/10.1080/14459795.2020.1718737>

Hudson, S., Huang, L., Roth, M. S., & Madden, T. J. (2016). The influence of social media interactions on consumer-brand relationships: A three-country study of brand perceptions and marketing behaviors. *International Journal of Research in Marketing*, 33(1), 27–41. <https://doi.org/10.1016/j.ijresmar.2015.06.004>

Industry Group for Responsible Gambling. (2019). *Gambling Industry Code for Socially Responsible Advertising*. <http://igr.org.uk/wp/wp-content/uploads/2019/01/Gambling-Industry-Code-for-Socially-Responsible-Advertising-5th-Edition.pdf>

Iyer, G. R., Blut, M., Xiao, S. H., & Grewal, D. (2020). Impulse buying: a meta-analytic review. *Journal of the Academy of Marketing Science*, 48(3), 384–404.

<https://doi.org/10.1007/s11747-019-00670-w>

Janis, I. L. (1967). Effects of fear arousal on attitude change: Recent developments in theory and experimental research. In *Advances in experimental social psychology* (Vol. 3, pp. 166–224). Elsevier.

Jones, C., Pinder, R., & Robinson, G. (2019). Gambling Sponsorship and

- Advertising in British Football: A Critical Account. *Sport, Ethics and Philosophy*, 00(00), 1–13. <https://doi.org/10.1080/17511321.2019.1582558>
- Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, 80(4), 237–251. <https://doi.org/10.1037/h0034747>
- Kaiser, J. (2014). Dealing with missing values in data. *Journal of Systems Integration*, 5(1), 42–51.
- Khazaal, Y., Chatton, A., Billieux, J., Bizzini, L., Monney, G., Fresard, E., Thorens, G., Bondolfi, G., El-Guebaly, N., Zullino, D., & Khan, R. (2012). Effects of expertise on football betting. *Substance Abuse: Treatment, Prevention, and Policy*, 7, 2–7. <https://doi.org/10.1186/1747-597X-7-18>
- Killick, E. A., & Griffiths, M. D. (2019). A Content Analysis of Gambling Operators' Twitter Accounts at the Start of the English Premier League Football Season. *Journal of Gambling Studies*, 1–23. <https://doi.org/10.1007/s10899-019-09879-4>
- Killick, E. A., & Griffiths, M. D. (2020). A Thematic Analysis of Sports Bettors' Perceptions of Sports Betting Marketing Strategies in the UK. *International Journal of Mental Health and Addiction*.
- Kim, H. S., Wohl, M. J. A., Gupta, R., & Derevensky, J. L. (2017). Why do young adults gamble online? A qualitative study of motivations to transition from social casino games to online gambling. *Asian Journal of Gambling Issues and Public Health*, 7(1), 6. <https://doi.org/10.1186/s40405-017-0025-4>
- Kim, H. S., Wohl, M. J. A., Stewart, M. J., Sztainert, T., & Gainsbury, S. M. (2014). Limit your time, gamble responsibly: Setting a time limit (via pop-up message) on an electronic gaming machine reduces time on device. *International Gambling Studies*, 14(2), 266–278.

<https://doi.org/10.1080/14459795.2014.910244>

- King, D. L., Delfabbro, P. H., Kaptsis, D., & Zwaans, T. (2014). Adolescent simulated gambling via digital and social media: An emerging problem. *Computers in Human Behavior, 31*, 305–313.
- Kok, G., Peters, G. J. Y., Kessels, L. T. E., ten Hoor, G. A., & Ruiter, R. A. C. (2018). Ignoring theory and misinterpreting evidence: the false belief in fear appeals. *Health Psychology Review, 12*(2), 111–125.
<https://doi.org/10.1080/17437199.2017.1415767>
- Ladouceur, R., Shaffer, P., Blaszczynski, A., & Shaffer, H. J. (2017). Responsible gambling: a synthesis of the empirical evidence. *Addiction Research and Theory, 25*(3), 225–235. <https://doi.org/10.1080/16066359.2016.1245294>
- Lamont, M., Hing, N., & Vitartas, P. (2016). Affective response to gambling promotions during televised sport: A qualitative analysis. *Sport Management Review, 19*(3), 319–331. <https://doi.org/10.1016/j.smr.2015.06.002>
- Langham, E., Thorne, H., Browne, M., Donaldson, P., Rose, J., & Rockloff, M. (2016). Understanding gambling related harm: A proposed definition, conceptual framework, and taxonomy of harms. *BMC Public Health, 16*(1). <https://doi.org/10.1186/s12889-016-2747-0>
- Laranjo, L., Arguel, A., Neves, A. L., Gallagher, A. M., Kaplan, R., Mortimer, N., Mendes, G. A., & Lau, A. Y. S. (2015). The influence of social networking sites on health behavior change: a systematic review and meta-analysis. *Journal of the American Medical Informatics Association, 22*(1), 243–256.
<https://doi.org/10.1136/amiajnl-2014-002841>
- Lee, D., Hosanagar, K., & Nair, H. S. (2018). Advertising Content and Consumer Engagement on Social Media: Evidence from Facebook. *Management*

Science, July, mncs.2017.2902. <https://doi.org/10.1287/mncs.2017.2902>

Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. *Annual Review of Psychology*, 66, 799–823.

<https://doi.org/10.1146/annurev-psych-010213-115043>

Leventhal, H. (1970). Findings and theory in the study of fear communications. In *Advances in experimental social psychology* (Vol. 5, pp. 119–186). Elsevier.

Li, E., Langham, E., Browne, M., Rockloff, M., & Thorne, H. (2018). Gambling and Sport: Implicit Association and Explicit Intention Among Underage Youth.

Journal of Gambling Studies. <https://doi.org/10.1007/s10899-018-9756-0>

Lister, C., Royne, M., Payne, H. E., Cannon, B., Hanson, C., & Barnes, M. (2015).

The laugh model: reframing and rebranding public health through social media.

American Journal of Public Health, 105(11), 2245–2251.

Lopez-Gonzalez, H., & Griffiths, M. D. (2016). Understanding the convergence of markets in online sports betting. *International Review for the Sociology of Sport*, 1–17.

<https://doi.org/10.1177/1012690216680602>

Lopez-Gonzalez, H., Griffiths, M. D., Jiminez-Murcia, S., & Estévez, A. (2019). The perceived influence of sports betting marketing techniques on disordered gamblers in treatment.

European Sport Management Quarterly, 1–34.

Lopez-Gonzalez, Hibai, Estevez, A., & Griffiths, M. D. (2017). Marketing and

Advertising Online Sports Betting: A Problem Gambling Perspective. *Journal of Sport and Social Issues*, 41(3), 256–272.

<https://doi.org/10.1177/0193723517705545>

Lopez-Gonzalez, Hibai, Estévez, A., & Griffiths, M. D. (2017). Controlling the illusion of control: a grounded theory of sports betting advertising in the UK.

International Gambling Studies, 9795(September), 1–17.

<https://doi.org/10.1080/14459795.2017.1377747>

- Lopez-Gonzalez, Hibai, Estévez, A., Jiménez-Murcia, S., & Griffiths, M. D. (2017). Alcohol Drinking and Low Nutritional Value Food Eating Behavior of Sports Bettors in Gambling Advertisements. *International Journal of Mental Health and Addiction*, 1–9. <https://doi.org/10.1007/s11469-017-9789-0>
- Lopez-Gonzalez, Hibai, & Griffiths, M. D. (2017). Betting, Forex Trading, and Fantasy Gaming Sponsorships—a Responsible Marketing Inquiry into the ‘Gamblification’ of English Football. *International Journal of Mental Health and Addiction*, 1–16. <https://doi.org/10.1007/s11469-017-9788-1>
- Lopez-Gonzalez, Hibai, Guerrero-Solé, F., & Griffiths, M. D. (2017). A content analysis of how ‘normal’ sports betting behaviour is represented in gambling advertising. *Addiction Research and Theory*, 26(3), 238–247. <https://doi.org/10.1080/16066359.2017.1353082>
- Lopez-Gonzalez, Hibai, & Tulloch, C. D. (2015). Enhancing media sport consumption: Online gambling in European football. *Media International Australia*, 155, 130–139. <https://doi.org/10.1177/1329878X1515500115>
- Lorains, F. K., Cowlishaw, S., & Thomas, S. A. (2011). Prevalence of comorbid disorders in problem and pathological gambling: Systematic review and meta-analysis of population surveys. *Addiction*, 106(3), 490–498. <https://doi.org/10.1111/j.1360-0443.2010.03300.x>
- Macey, J., & Hamari, J. (2019). eSports, skins and loot boxes: Participants, practices and problematic behaviour associated with emergent forms of gambling. *New Media and Society*, 21(1), 20–41. <https://doi.org/10.1177/1461444818786216>
- McGivern, P., Hussain, Z., Lipka, S., & Stupple, E. (2019). The impact of pop-up

warning messages of losses on expenditure in a simulated game of online roulette: A pilot study. *BMC Public Health*, 19(1), 1–8.
<https://doi.org/10.1186/s12889-019-7191-5>

McMahon, N., Thomson, K., Kaner, E., & Bambra, C. (2019). Effects of prevention and harm reduction interventions on gambling behaviours and gambling related harm: An umbrella review. *Addictive Behaviors*, 90(October 2018), 380–388.
<https://doi.org/10.1016/j.addbeh.2018.11.048>

McMullan, J. L., & Miller, D. (2008). All in! The commercial advertising of offshore gambling on television. *Journal of Gambling Issues*, 22(22), 230–251.
<https://doi.org/10.4309/jgi.2008.22.6>

Mercier, J., Sévigny, S., Jacques, C., Goulet, A., Cantinotti, M., & Giroux, I. (2018). Sports Bettors: A Systematic Review. *Journal of Gambling Issues*, 38.
<https://doi.org/10.4309/jgi.2018.38.11>

Meshi, D., Biele, G., Korn, C. W., & Heekeren, H. R. (2012). How Expert Advice Influences Decision Making. *PLoS ONE*, 7(11), 1–12.
<https://doi.org/10.1371/journal.pone.0049748>

Miller, C., Krasodonski-Jones, A., & Smith, J. (2016). *Gambling and Social Media*.
<https://about.gambleaware.org/media/1191/gambling-social-media-report-demos.pdf>

Monaghan, S., & Blaszczynski, A. (2010). Impact of mode of display and message content of responsible gambling signs for electronic gaming machines on regular gamblers. *Journal of Gambling Studies*, 26(1), 67–88.

Monaghan, S., Blaszczynski, A., & Nower, L. (2009). Do warning signs on electronic gaming machines influence irrational cognitions? *Psychological Reports*, 105(1), 173–187.

- Munoz, Y., Chebat, J. C., & Borges, A. (2013). Graphic Gambling Warnings: How they Affect Emotions, Cognitive Responses and Attitude Change. *Journal of Gambling Studies*, 29(3), 507–524. <https://doi.org/10.1007/s10899-012-9319-8>
- Naslund, J. A., Kim, S. J., Aschbrenner, K. A., Mcculloch, L. J., Brunette, M. F., Dallery, J., Bartels, S. J., & Marsch, L. A. (2017). Addictive Behaviors Systematic review of social media interventions for smoking cessation. *Addictive Behaviors*, 73(October 2016), 81–93. <https://doi.org/10.1016/j.addbeh.2017.05.002>
- Neighbors, C., Lostutter, T. W., Larimer, M. E., & Takushi, R. Y. (2002). Measuring gambling outcomes among college students. *Journal of Gambling Studies*, 18(4), 339–360.
- Newall, P. W. S. (2015). How bookies make your money. *Judgment and Decision Making*, 10(3), 225–231.
- Newall, P. W. S. (2017). Behavioral complexity of British gambling advertising. *Addiction Research & Theory*, 25(6), 505–511. <https://doi.org/10.1080/16066359.2017.1287901>
- Newall, P. W. S., Moodie, C., Reith, G., Stead, M., Critchlow, N., Morgan, A., & Dobbie, F. (2019). Gambling Marketing from 2014 to 2018: a Literature Review. *Current Addiction Reports*, 6(2), 49–56. <https://doi.org/10.1007/s40429-019-00239-1>
- Newall, P. W. S., Thobhani, A., Walasek, L., & Meyer, C. (2019). Live-odds gambling advertising and consumer Protection. *PLoS ONE*, 14(6), 1–18. <https://doi.org/10.1371/journal.pone.0216876>
- Newall, P. W. S., Walasek, L., & Ludvig, E. A. (2020). Equivalent gambling warning labels are perceived differently. *Addiction*, 115(9), 1762–1767.

<https://doi.org/10.1111/add.14954>

Nixon, G., Evans, K., Grant Kalischuk, R., Solowoniuk, J., McCallum, K., & Hagen, B. (2013). Female Gambling, Trauma, and the Not Good Enough Self: An Interpretative Phenomenological Analysis. *International Journal of Mental Health and Addiction*, 11(2), 214–231. <https://doi.org/10.1007/s11469-012-9413-2>

Nyemcsok, C., Thomas, S. L., Bestman, A., Pitt, H., Daube, M., & Cassidy, R. (2018). Young people's recall and perceptions of gambling advertising and intentions to gamble on sport. *Journal of Behavioral Addictions*, 7(4), 1068–1078. <https://doi.org/10.1556/2006.7.2018.128>

Ofcom. (2013). *Ofcom publishes research on TV gambling adverts*. <https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2013/ofcom-publishes-research-on-tv-gambling-adverts>

Okazaki, S., & Taylor, C. R. (2013). Social media and international advertising: theoretical challenges and future directions. *International Marketing Review*, 30(1), 56–71. <https://doi.org/10.1108/02651331311298573>

Orne, M. T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, 17(11), 776.

Parke, A., & Griffiths, M. (2012). Beyond illusion of control: An interpretative phenomenological analysis of gambling in the context of information technology. *Addiction Research and Theory*, 20(3), 250–260. <https://doi.org/10.3109/16066359.2011.600480>

Parke, Adrian, Harris, A., Parke, J., Rigbye, J., & Blaszczynski, A. (2015). Responsible marketing and advertising in gambling: A critical review. *The*

Journal of Gambling Business and Economics, 8(3), 21–35.

Pattinson, J., & Parke, A. (2017). The experience of high-frequency gambling behavior of older adult females in the United Kingdom: An interpretative phenomenological analysis. *Journal of Women and Aging*, 29(3), 243–253. <https://doi.org/10.1080/08952841.2015.1138047>

Pavey, L. J., & Sparks, P. (2010). Autonomy and reactions to health-risk information. *Psychology and Health*, 25(7). <https://doi.org/10.1080/08870440902929528>

Pechmann, C., Pan, L., Delucchi, K., Lakon, C. M., & Prochaska, J. J. (2015). Development of a Twitter-based intervention for smoking cessation that encourages high-quality social media interactions via automessages. *Journal of Medical Internet Research*, 17(2), e50.

Peters, G. J. Y., Ruiter, R. A. C., & Kok, G. (2013). Threatening communication: A critical re-analysis and a revised meta-analytic test of fear appeal theory. *Health Psychology Review*, 7(SUPPL1). <https://doi.org/10.1080/17437199.2012.703527>

Pietkiewicz, I., Smith, J. A., Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using Interpretative Phenomenological Analysis in qualitative research psychology. *Czasopismo Psychologiczne Psychological Journal*, 20(1), 7–14. <https://doi.org/10.14691/cppj.20.1.7>

Pitt, H., Thomas, S. L., Bestman, A., Daube, M., & Derevensky, J. (2017). What do children observe and learn from televised sports betting advertisements? A qualitative study among Australian children. *Australian and New Zealand Journal of Public Health*, 41(6), 604–610. <https://doi.org/10.1111/1753-6405.12728>

- Potenza, M. N. (2008). The neurobiology of pathological gambling and drug addiction: An overview and new findings. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1507), 3181–3189.
<https://doi.org/10.1098/rstb.2008.0100>
- Potenza, M. N. (2014). The neural bases of cognitive processes in gambling disorder. *Trends in Cognitive Sciences*, 18(8), 429–438.
<https://doi.org/10.1016/j.tics.2014.03.007>
- Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: toward a more integrative model of change. *Psychotherapy: Theory, Research & Practice*, 19(3), 276.
- Prochaska, J. O., & DiClemente, C. C. (1986). *Toward a comprehensive model of change*. Springer.
- Purves, R. I., Critchlow, N., Morgan, A., Stead, M., & Dobbie, F. (2020). Examining the frequency and nature of gambling marketing in televised broadcasts of professional sporting events in the United Kingdom. *Public Health*, 184, 71–78.
<https://doi.org/10.1016/j.puhe.2020.02.012>
- Rafter, K., Flynn, R., McMenamin, I., & O'Malley, E. (2014). Does commercial orientation matter for policy-game framing? A content analysis of television and radio news programmes on public and private stations. *European Journal of Communication*, 29(4), 433–448. <https://doi.org/10.1177/0267323114532204>
- Reilly, C., & Smith, N. (2013). *The evolving definition of pathological gambling in the DSM-5*. White Paper.
http://www.ncrg.org/sites/default/files/uploads/docs/white_papers/ncrg_wpdsm5_may2013.pdf
- Reith, G., & Dobbie, F. (2013). Gambling careers: A longitudinal, qualitative study of

gambling behaviour. *Addiction Research and Theory*, 21(5), 376–390.

<https://doi.org/10.3109/16066359.2012.731116>

Rockloff, M. J., Browne, M., Russell, A. M. T., Hing, N., & Greer, N. (2019). Sports betting incentives encourage gamblers to select the long odds: An experimental investigation using monetary rewards. *Journal of Behavioral Addictions*, 1–9. <https://doi.org/10.1556/2006.8.2019.30>

Rogers, R. D., Wardle, H., Sharp, C. A., Dymond, S., Davies, T. J., Hughes, K., & Astbury, G. (2019). *Framing a public health approach to gambling harms in Wales: Challenges and opportunities*.

https://www.researchgate.net/profile/Catherine_Sharp/publication/330842203_Framing_a_public_health_approach_to_gambling_harms_in_Wales_Challenges_and_opportunities_Framing_a_public_health_approach_to_gambling_harms_in_Wales_Challenges_and_opportunities_Af

Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change¹. *The Journal of Psychology*, 91(1), 93–114.

Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In *Advances in experimental social psychology* (Vol. 10, pp. 173–220). Elsevier.

RStudio Team. (2020). *RStudio: Integrated Development for R*. PBC.

<http://www.rstudio.com/>.

Ruiter, R. A. C., Kessels, L. T. E., Peters, G. J. Y., & Kok, G. (2014). Sixty years of fear appeal research: current state of the evidence. *International Journal of Psychology : Journal International de Psychologie*, 49(2), 63–70.

<https://doi.org/10.1002/ijop.12042>

Russell, A. M. T., Hing, N., Li, E., & Vitartas, P. (2018). Gambling Risk Groups are

Not All the Same: Risk Factors Amongst Sports Bettors. *Journal of Gambling Studies*. <https://doi.org/10.1007/s10899-018-9765-z>

Savage, M. (2018, May 27). Gambling ads must have serious addiction warnings, demand MPs. *The Guardian*.
<https://www.theguardian.com/society/2018/may/27/gambling-adverts-fuelling-british-health-crisis-warn-mps-crackdown>

Shinebourne, P. (2011). The theoretical underpinnings of interpretative phenomenological analysis (IPA). *Journal of the Society for Existential Analysis*, 22(1), 16–32. <https://doi.org/10.1037/13620-005>

Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative Phenomenological Analysis*. Sage Publications.

Smith, M., Chambers, T., Abbott, M., & Signal, L. (2020). High Stakes: Children's Exposure to Gambling and Gambling Marketing Using Wearable Cameras. *International Journal of Mental Health and Addiction*, 18(4), 1025–1047.
<https://doi.org/10.1007/s11469-019-00103-3>

Sohn, J.-H., Kim, H.-E., Sohn, S., Seok, J.-W., Choi, D., & Watanuki, S. (2015). Effect of emotional arousal on inter-temporal decision-making: an fMRI study. *Journal of Physiological Anthropology*, 34(1), 1–8.

Stern, H. (1962). The Significance of Impulse Buying Today. *Journal of Marketing*, 26(2), 59. <https://doi.org/10.2307/1248439>

Stewart, M. J., & Wohl, M. J. A. (2013). Pop-up messages, dissociation, and craving: How monetary limit reminders facilitate adherence in a session of slot machine gambling. *Psychology of Addictive Behaviors*, 27(1), 268–273.
<https://doi.org/10.1037/a0029882>

Svensson, J., & Sundqvist, K. (2019). Gambling among Swedish youth: Predictors

and prevalence among 15- and 17-year-old students. *NAD Nordic Studies on Alcohol and Drugs*, 36(2), 177–189.

<https://doi.org/10.1177/1455072518807788>

Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. *Organizational Identity: A Reader*, 56(65), 9780203505984–16.

Thomas, S., Bestman, A., Pitt, H., Deans, E., Randle, M., Stoneham, M., & Daube, M. (2015). *The marketing of wagering on social media: An analysis of promotional content on YouTube, Twitter and Facebook*.

<http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1694&context=ahsri>

Thomas, S. L., Bestman, A., Pitt, H., Cassidy, R., McCarthy, S., Nyemcsok, C., Cowlshaw, S., & Daube, M. (2018). Young people's awareness of the timing and placement of gambling advertising on traditional and social media platforms: a study of 11–16-year-olds in Australia. *Harm Reduction Journal*, 15(1), 1–13. <https://doi.org/10.1186/s12954-018-0254-6>

Thomas, S. L., Lewis, S., Westberg, K., & Derevensky, J. L. (2013). What Influences the Beliefs, Behaviours and Consumption Patterns of 'Moderate Risk' Gamblers? *International Journal of Mental Health and Addiction*, 11(4), 474–489.

Thomas, S., Lewis, S., Duong, J., & Mcleod, C. (2012). Sports betting marketing during sporting events: A stadium and broadcast census of Australian Football League matches. *Australian and New Zealand Journal of Public Health*, 36(2), 145–152. <https://doi.org/10.1111/j.1753-6405.2012.00856.x>

Thomas, S., Pitt, H., Bestman, A., Randle, M., Daube, M., & Pettigrew, S. (2016). Child and Parent recall of gambling sponsorship in Australia. In *Victorian Responsible Gambling Foundation* (Issue May).

- Thorley, C., Stirling, A., & Huynh, E. (2016). *Cards on the Table: The cost to government associated with people who are problem gamblers in Britain* (Issue December).
- Toneatto, T., Blitz-Miller, T., Calderwood, K., Dragonetti, R., & Tsanos, A. (1997). Cognitive Distortions in Heavy Gambling. *Journal of Gambling Studies*, 13(3), 253–266. <https://doi.org/10.1023/A:1024983300428>
- Torrance, J., Roderique-Davies, G., Thomas, S. L., Davies, N., & John, B. (2020). 'It's basically everywhere': young adults' perceptions of gambling advertising in the UK. *Health Promotion International*.
- Tyrawski, J., & De Andrea, D. C. (2015). Pharmaceutical companies and their drugs on social media: A content analysis of drug information on popular social media sites. *Journal of Medical Internet Research*, 17(6), e130. <https://doi.org/10.2196/jmir.4357>
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer Engagement: Exploring Customer Relationships Beyond Purchase. *Journal of Marketing Theory and Practice*, 20(2), 122–146. <https://doi.org/10.2753/mtp1069-6679200201>
- Wang, A.-L., Lowen, S. B., Romer, D., Giorno, M., & Langleben, D. D. (2015). Emotional reaction facilitates the brain and behavioural impact of graphic cigarette warning labels in smokers. *Tobacco Control*, 24(3), 225–232. <https://doi.org/10.1136/tobaccocontrol-2014-051993>
- Wardle, H., Dymond, S., John, A., & Mcmanus, S. (2019). *Problem gambling and suicidal thoughts , suicide attempts and non-suicidal self-harm in England : evidence from the Adult Psychiatric Morbidity Survey 2007* (Issue May). <https://www.gamblingcommission.gov.uk/PDF/Report-1-Problem-gambling-and-suicidal-thoughts-suicide-attempts-and-non-suicidal-self-harm-in-England->

evidence-from-the-Adult-Psychiatric-Morbidity-Survey-2007.pdf

Wardle, H., Fuller, E., Maplethorpe, N., & Jones, H. (2017). Follow-up study of loyalty card customers. Changes in gambling behaviour over time. In *NatCen Social Research* (Issue April).

<https://about.gambleaware.org/media/1432/follow-up-study-of-loyalty-card-customers-report.pdf>

Wardle, H., Reith, G., Best, D., McDaid, D., & Platt, S. (2018). *Measuring gambling-related harms: A Framework For Action*.

<https://www.gamblingcommission.gov.uk/PDF/Measuring-gambling-related-harms.pdf>

Wardle, H., Reith, G., Langham, E., & Rogers, R. D. (2019). Gambling and public health: We need policy action to prevent harm. *BMJ (Online)*, *365*(May), 1–5.

<https://doi.org/10.1136/bmj.l1807>

Welte, J. W., Tidwell, M.-C. O., Barnes, G. M., Hoffman, J. H., & Wieczorek, W. F. (2016). The relationship between the number of types of legal gambling and the rates of gambling behaviors and problems across US states. *Journal of Gambling Studies*, *32*(2), 379–390.

William Hill. (2019). *Commissions*. <https://affiliates.williamhill.com/commissions.html>

Williams, R. J., & Connolly, D. (2006). Does learning about the mathematics of gambling change gambling behavior? *Psychology of Addictive Behaviors*, *20*(1), 62.

Wohl, M. J. A., Gainsbury, S., Stewart, M. J., & Sztainert, T. (2013). Facilitating Responsible Gambling: The Relative Effectiveness of Education-Based Animation and Monetary Limit Setting Pop-up Messages Among Electronic Gaming Machine Players. *Journal of Gambling Studies*, *29*(4), 703–717.

<https://doi.org/10.1007/s10899-012-9340-y>

Wolke, D., Waylen, A., Samara, M., Steer, C., Goodman, R., Ford, T., & Lamberts, K. (2009). Selective drop-out in longitudinal studies and non-biased prediction of behaviour disorders. *The British Journal of Psychiatry*, *195*(3), 249–256.

Wulfert, E., Franco, C., Williams, K., Roland, B., & Maxson, J. H. (2008). The Role of Money in the Excitement of Gambling. *Psychology of Addictive Behaviors*, *22*(3), 380–390. <https://doi.org/10.1037/0893-164X.22.3.380>

Yakovenko, I., Fortgang, R., Prentice, J., Hoff, R. A., & Potenza, M. N. (2018). Correlates of frequent gambling and gambling-related chasing behaviors in individuals with schizophrenia-spectrum disorders. *Journal of Behavioral Addictions*, *7*(2), 375–383. <https://doi.org/10.1556/2006.7.2018.31>

Yücel, M., Carter, A., Harrigan, K., van Holst, R. J., & Livingstone, C. (2018). Hooked on gambling: a problem of human or machine design? *The Lancet Psychiatry*, *5*(1), 20–21.

List of Appendices

Appendix A – List of gambling operators included within audit (study 1)

Appendix B – List of manufactured tweets (study 3)

Appendix C – Demographics questionnaire (studies 3 and 5)

Appendix D – Gambling activities questionnaire (study 3)

Appendix E – Social media questionnaire (studies 3 and 5)

Appendix F – Problem gambling severity index (studies 3, 4 and 5)

Appendix G – Interview schedule (study 4)

Appendix H – Coding example (study 4)

Appendix I – Participant summary example (study 4)

Appendix J – Gambling readiness to change questionnaire (study 5)

Appendix K – Gambling behaviour questionnaire (study 5)

Appendix L – Impact of messages questionnaire (study 5)

Appendix M – Informational safer gambling messages (study 5)

Appendix N – Self-appraisal safer gambling messages (study 5)

Appendix O – Emotional/self-efficacy safer gambling messages (study 5)

Appendix A - List of gambling operators included within audit (study 1)

	Twitter followers	Verified ?		Link
32Red Limited	10,200	Yes		https://twitter.com/32Red
888 UK Limited	43,700	No		https://twitter.com/888sport
Aspers (Stratford City) Limited	2,374	No		https://twitter.com/AspersStratford
Aspinall's Club Limited	N/A	N/A		
Betfair Casino Limited	160,000	Yes		https://twitter.com/Betfair
BetVictor Limited	111,000	Yes		https://twitter.com/BetVictor
Betway Limited	88,700	Yes		https://twitter.com/betway
Broadway Gaming Limited	8,500 (For largest account)	No	No overarching SM - consists of 7 different sites	https://twitter.com/butlersbingo
Cashino Gaming Limited	189	No		https://twitter.com/cashinogaming?lang=en
Casumo Services Limited	6,755	Yes		https://twitter.com/CasumoCasino?lang=en
Coral Interactive (Gibraltar) Limited	347,000	Yes		https://twitter.com/Coral?lang=en
Coral Racing Limited	N/A			
Daub Alderney Limited	N/A			
ElectraWorks Limited	N/A			
Gala Interactive (Gibraltar) Limited	1,467	Yes		https://twitter.com/GalaCasinocom?lang=en

Gala Leisure Limited	29,300	Yes		https://twitter.com/GalaBingo?lang=en
Genting Casinos UK Limited	5,395	No		https://twitter.com/Genting_Casinos?lang=en
Grosvenor Casinos (GC) Limited	294,000	No		https://twitter.com/grosvenorcasino?lang=en
Grosvenor Casinos Limited	294,001	No		https://twitter.com/grosvenorcasino?lang=en
Hillside (Gibraltar) Limited - Bet365	382,000	Yes	Trading as bet365 - Hillside is licensee.	https://twitter.com/bet365?lang=en
Hippodrome Casino Limited	8,499	No		https://twitter.com/HippodromeLDN
In Touch Games Limited	2,144	Yes	mFortune Bingo - Only 1 of 5 with Twitter account	https://twitter.com/mfortune_bingo
Intellectual Property and Software Limited	N/A			
Ladbrokes Betting & Gaming Limited	198,000	Yes		https://twitter.com/Ladbrokes
Les Ambassadeurs Club Limited	N/A	N/A		
London Clubs LSQ Limited	4,039	No		https://twitter.com/EmpireCasino
Mecca Bingo Limited	23,400	Yes		https://twitter.com/MeccaBingo
MyLotto24 Limited	1,598	No		https://twitter.com/myLotto24UK
Petfre (Gibraltar) Limited	10,800	No	Oddsking	https://twitter.com/TheOddsking
Playboy Club London Limited	15,500	No		https://twitter.com/PlayboyClubLDN

Playtech Plc	N/A	N/A		
Power Leisure Bookmakers Limited	651,000	Yes	PaddyPower	https://twitter.com/paddypower?lang=en
PPB Entertainment Limited			Trades as BetFair and PaddyPower - Already covered	
Rank Digital Gaming (Alderney) Limited	N/A	N/A		
Stars Interactive Limited	273,000	Yes	Number is for pokerstars - they also trade as betstars	https://twitter.com/PokerStars?lang=en
Tombola (International) Plc	8,463	No		https://twitter.com/tombola?lang=en
Tote (Successor Company) Limited	11,900	Yes		https://twitter.com/totesport?lang=en
TSE Malta LP	N/A	N/A	Trades as BetFair - Already Covered	
WHG (International) Limited	203,000		Trades as WilliamHill	https://twitter.com/WilliamHill?lang=en
William Hill Organization Limited	203,000		Trades as WilliamHill	https://twitter.com/WilliamHill?lang=en

Appendix B – List of manufactured tweets

Big game later today. Will Liverpool continue their push towards the Premier League title?

Liverpool – 8/13

Draw - 3/1

Spurs – 17/4

Bet here: <https://m.skybet.com/football/premier-league/event/123456>

#FSTPREDICTION (18+)

Liverpool vs Spurs - Liverpool have won 8 out of their 9 home games this season and have won their last 3 league matches against Spurs.

Liverpool to win – 8/13

Just under an hour to kick off at Vicarage Road.

Watford – 4/6

Draw – 3/1

Fulham – 19/5

Bet: coral.me/wf5g34f

Yesterday's NAP landed at 1/1

Today's NAP – Watford to win at home to Fulham @ 4/6

Link here >>> footy.ac/NAPspecial20394

18+

Burnley vs Wolves

How does this one finish?

Burnley – 21/10

Draw – 21/10

Wolves – 7/5

Fancy Wolves to win away at Burnley this afternoon!

7/5 link here > > > footy.ac/BurWol2019

18+

Latest betting ahead of Everton vs Arsenal this evening.

Everton (23/10)

Draw (13/5)

Arsenal (11/10)

Full markets: pdy.pr/ADj9876

RUNNING OUT OF TIME TO GET INVOLVED

Won 5 in-a-row!

Tonight's NAP – Arsenal to win away at Everton @ 11/10

18+

Big game in the battle to beat the drop today.

Can either team grab a vital win and move 3 points close to safety?

Brighton - 6/4

Draw - 21/10

Southampton - 2/1

Bet: lbrk.es/923r7fef27

Brighton vs Southampton

No team has drawn more games this season than Southampton and the last 3 meetings between the teams has ended in a draw.

YOU CAN BACK BRIGHTON TO DRAW AT HOME TO SOUTHAMPTON @ A GREAT PRICE OF 21/10

CLAIM BELOW

changer.bet/2345jddd

Fulham vs Manchester City kicks off in just under 30 minutes - 1st goalscorer market below:

Fulham: Mitrovic 10/1, Schurrle 12/1, Babel 16/1

Man City: Aguero 13/5, Sterling 16/5, Sane 5/1

Bet on site here: <https://m.skybet.com/football/premier-league/event/123456>

#FSTPREDICTION (18+)

Fulham vs Man City – Raheem Sterling has been on fire for Manchester City this season, with 25 goals in all competitions.

Raheem Sterling to score first – 16/5

Direct link: fst.bet/43gerg564

2 inform English strikers starting up front in the midday kickoff at the King Power Stadium, will either be man to break the deadlock? First goalscorer market below

Leicester: Vardy 13/5, Iheanacho 9/2, Maddison 6/1

Bournemouth: Wilson 11/2, King 13/2, Solanke 15/2

Bet: coral.me/wf5g34f

Gone for Jamie Vardy to score 1st at home to struggling Bournemouth today!

13/5 link here > > > footy.ac/VARleibour201

18 +

Latest first goalscorer markets ahead of the 5:30pm kick off at Old Trafford

Man Utd: Lukaku 3/1, Martial 4/1, Rashford 4/1

Watford: Gray 8/1, Deulofeu 17/2, Deeney 9/1

Full markets: pdy.pr/ADj9854

YESTERDAYS NAP LANDED AT 6/1

Today's NAP – Manchester United vs Watford: Andre Gray first goalscorer @ 8/1

Link here > > > footy.ac/NAPspecial20456

18+

Huge game at the top of the Premier League later today.

Who is going to break the deadlock? First goalscorer odds below.

Liverpool: Salah 7/2, Mane 7/2, Firmino 5/1

Spurs: Kane 5/1, Son 7/1, Llorente 8/1

Liverpool vs Spurs

Harry Kane has scored the 1st goal in 3 of the last 4 meetings between the two sides.

YOU CAN BACK HARRY KANE TO SCORE FIRST @ AN AMAZING PRICE OF 5/1

CLAIM BELOW

changer.bet/23546gdg

Can Cardiff pull off a shock against Sarri's men?

Cardiff vs Chelsea – First goalscorer market below

Cardiff: Reid 17/2, Zohore 9/1, Niasse 9/1

Chelsea: Hazard 16/5, Higuain 10/3, Giroud 7/2

Bet: lbrk.es/45g4egrh

RUNNING OUT OF TIME TO GET INVOLVED

3 winning NAPS in-a-row!

Tonight's NAP – Higuain first goalscorer away to Cardiff @ 10/3

18+

Just under 2 hours to kick off at the Emirates:

Arsenal vs Newcastle – Aubameyang to score 1st and Arsenal to win 3-1 @ 22/1

Bet on site here: <https://m.skybet.com/football/premier-league/event/123456>

Arsenal vs Newcastle

22/1 Aubameyang to score 1st and Arsenal to win 3-1

BET HERE bit.ly/22to1ArseNewFST

(18+)

West Ham vs Everton

How do we all see this one going?

Sigurdsson to score 1st and 1-1 draw @ 30/1

Bet: coral.me/wf5g34f

West Ham vs Everton

Gylfi Sigurdsson has scored 3 in his last 5 games and 3 of the last 4 meetings between the two teams have ended in a draw.

Sigurdsson to score 1st and 1-1 draw @ 30/1

30/1 link here > > > footy.ac/BurWol2019

18+

Crystal Palace vs Huddersfield

Zaha to score 1st and Palace to win 4-0 @ 60/1

Full markets: pdy.pr/ADj9854

2 OF OUR LAST 3 SCORECASTS HAVE COME IN AT 14/1 AND 22/1

Zaha to score first and Crystal Palace to win 4-0 at home to Huddersfield – 60/1

Link here > > > footy.ac/SCORECASTspecial20456

18+

A routine victory incoming for Man City at Fulham this afternoon?

Aguero to score first and City to win 3-0 – 16/1

Fulham vs Man City

Sergio Aguero scored a hatrick when the 2 sides met earlier in the season.

YOU CAN BACK SERGIO AGUERO TO SCORE FIRST AND CITY TO WIN 3-0 @ AN AMAZING PRICE OF 5/1

CLAIM BELOW

changer.bet/23546gdg

Burnley vs Wolves

Will Raul Jimenez continue his hot streak in front of goal?

17-1 - Raul Jimenez to score first and Wolves to win 1-0

Bet: lbrk.es/23bhdbh

RUNNING OUT OF TIME TO GET INVOLVED

Won 5 in-a-row!

Tonight's NAP – Raul Jimenez to score first and Wolves to win at Burnley 1-0 - 17/1

18+

Appendix C – Demographics questionnaire

Participant Number:

1) How old are you?

2) What is your gender?

3) What is your current employment status?

4) What is the highest level of education you have received?

5) What is your ethnicity?

6) What is your current relationship status?

Appendix D – Gambling activities questionnaire

- 1) On average, how many days in a month do you gamble on football? Please write answer as a number?
-

- 2) On a typical day where you gamble on football, how much money (in pounds) do you stake on football bets?
-

Appendix E – Social media questionnaire

- 1) Do you follow any gambling operators on Twitter? Gambling operators are the companies you gamble with - for example PaddyPower, SkyBet, Coral etc.
- 2) How many gambling operators do you follow on Twitter? Please write answer as a number.
- 3) Do you follow any gambling affiliates on social media? Gambling affiliates are companies who post links to advertise gambling on behalf of the gambling companies. Examples of gambling affiliates are FootyAccumulators, FootySuperTips and TheWinnersEnclosure.
- 4) How many gambling affiliates do you follow on social media? Please write answer as a number.

Appendix F - Problem gambling severity index

Thinking about the last 12 months, consider the following 9 statements and judge how often each statement relates to your own gambling behaviour...

1) Have you bet more than you could really afford to lose?

Never Sometimes Most of the time Almost always

2) Still thinking about the last 12 month, have you needed to gamble with larger amounts of money to get the same feeling of excitement?

Never Sometimes Most of the time Almost always

3) When you gambled, did you go back another day to try to win back the money you lost?

Never Sometimes Most of the time Almost always

4) Have you borrowed money or sold anything to get money to gamble?

Never Sometimes Most of the time Almost always

5) Have you felt that you might have a problem with gambling?

Never Sometimes Most of the time Almost always

6) Has gambling caused you any health problems, including stress or anxiety?

Never Sometimes Most of the time Almost always

7) Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

Never Sometimes Most of the time Almost always

8) Has your gambling caused any financial problems for you or your household?

Never Sometimes Most of the time Almost always

9) Have you felt guilty about the way you gamble or what happens when you gamble?

Never Sometimes Most of the time Almost always

Appendix G - Interview schedule

Ethics Statement: I would just like to start the study by reminding you that this study has received full ethical approval from the Faculty of Health and Life Sciences

Ethics Committee at Northumbria University. You do not have to answer any questions which you do not want to answer or do not feel comfortable in answering. I would also like to remind you that you are free to leave the interview at any point if you do not wish to continue.

Introductory Statement: The reason why I am carrying out these interviews is to help us develop a deeper understanding on how individual gamblers perceive gambling marketing and the impact which this may or may not have upon gambling behaviours and attitudes. Topics within gambling marketing which we will discuss include; television advertising, social media marketing, gambling affiliation and the relationship between gambling and sport. In terms of the structure of the interview, I am interested in what you have to say on these topics so I will take more of a back seat within the interview and will encourage you to fully expand on the answers you give to questions. I have a set list of questions and prompt questions which you are free to look at before we start. However, I will also ask follow-up questions to some of the answers you provide where I am interested in hearing more on a certain point you have made. You will also be asked to take a look at example gambling adverts at certain points within the interview. Do you have any questions before we begin the interview?

- 1) Can you tell me about your gambling history? (*Why did you start gambling, how long have you been gambling for, what sort of stuff do you gamble on?*)
- 2) Can you tell me about a recent time you gambled? (*Prompts: What happened? How did you feel? How would you feel in the opposite scenario (lose/win)?*)
- 3) How do you feel when you see gambling advertisements on TV? (*Prompts: Attitudes towards operators, attitudes towards gambling*)
- 4) Can you describe how you feel about the advertising of gambling within Great Britain? (*Prompts: Volume of advertising, content of advertising, balance between advertising and promoting 'safe' gambling*)

Here, participants will be shown some examples of television gambling advertisements relevant to the gambling activity they primarily gamble on.

- 5) How did you feel when watching those adverts? (*Prompts: How does it make you feel about the operator? Would it be likely to encourage you to gamble? Why or why not?*)
- 6) To what extent do you feel that advertisements influence your decision to gamble? (*Prompts: Have there been times when you've resisted the urge to gamble after seeing an advert – and what made you resist it? How can you be encouraged to gamble?*)
- 7) Has your response to gambling advertisements changed over time? (*Prompts: In what ways? What brought about this change? Could this change again in the future [and why]?*)

Here, participants are invited to scroll through the social media accounts of some bookmakers to get an idea of the type of content posted on social media by operators.

- 8) How do you feel when you see gambling companies posting on Social Media? (*Prompts: Attitudes towards operators, attitudes towards gambling*)

Here, participants are invited to scroll through the social media accounts of some gambling affiliates to get an idea of the type of content posted on social media by operators. They will be given a short explanation on how gambling affiliation works.

- 9) How do you feel about the process of gambling affiliation on social media? (*Prompts: Do you follow such accounts? How trustworthy are these accounts? How transparent are these accounts about their affiliation with bookmakers?*)
- 10) How do you feel about the relationship between gambling and sport? (*Prompts: Shirt sponsorship, stadium sponsorship, exposure to vulnerable groups*)
- 11) How do you think other people view gambling marketing? (*Prompts: Operators, family, friends, non-gamblers*)
- 12) How gambling advertising/marketing could become safer? (*Prompts: How would this help? Would this help your gambling behaviour? Could this help others?*)

Appendix H - Coding example

<p>Marketing and Major sporting events</p>	<p>week, you can bet, you can stake up to 20 quid on a horse and if it loses you get it back as cash anyways, so your first bet, the first race of every day next week is with Sky but you actually can't lose. <u>They've</u> advertised that heavily.</p>	<p>Money back offer for start for major racing festival.</p>
<p>Reducing risk</p>	<p>Interviewer: So what about that would make you want to gamble with them?</p> <p>Participant: Oh yeah definitely <u>it's</u>, it's very, very good offer. You <u>can't</u>, you literally can't lose money.</p> <p>Interviewer: Yeah so in a situation like that where you get your money back, do you set yourself any limits in terms of you spend the money and it loses, it comes back into your account, would you withdraw that or would you go again with that?</p>	<p><i>'It's a very good offer. You can't, you literally can't lose money' – further presentation of being a 'smart' gambler – using the offers to their advantage to secure a risk free bet.</i></p>
<p>Controlled gambling</p>	<p>Participant: I bet, I bet with SkyBet anyways so I'll probably, that money will probably stay in my account and I'll probably use it whereas a lot of people that maybe don't bet with SkyBet, have something against SkyBet they'll</p>	<p>Would use 'returned' money from cash back offer on further gambling.</p>

<p>Gambling is safe activity</p> <p>Individual responsibility to control gambling</p>	<p>they shouldn't sort of be hated for other people's problems it should be a safe thing to do like.</p> <p>Interviewer: So how do you think, how do you think they could be made a safe thing to <u>do</u> or do you think that gambling itself is a safe activity and it's the way people interact with it?</p> <p>Participant: Well in itself it's a safe activity it's just that people abuse <u>it</u> or people go way past the sort of logical line of it.</p> <p>Interviewer: Ok so I'm just going to show you a couple of adverts which are pertinent to things that you gamble on, so a few sports betting adverts [ADVERTS PLAY] Ok, so when you watch these sorts of adverts what do you think about the company in these different examples?</p> <p>Participant: Ahh I think, I think PaddyPower makes, they're advertising a lot of their</p>	<p><i>'in itself it's a safe activity it's just that people abuse it or people go way part the logical line of it' – this stands to protect the reputation of gambling as a 'hobby' by externalising the blame away from the activity and putting it onto the individuals who have a gambling problem.</i></p>
<p>Bookmakers as personalities</p>	<p>content is trying to seem like sort of one of the lads sort of like your friend if you know</p>	<p><i>'a lot of their content is trying to seem like sort of one of the lads sort of like your friend if you know what I mean, I think that's what they do best, I think that's there, I think they are sort of the more relatable bookmaker' – companies are able</i></p>

Appendix I – Participant summary example

Participant 5 – Summary

Demographics: 21 year old, male, full-time student, part-time employed, white-British, in a relationship, highest level of education = undergraduate degree

PGSI score: 6 (Moderate Risk)

Participant 5 is a 21 year old student who began gambling before the age of 18. He gambles both offline and online, with a preference for gambling at the casino when gambling offline and gambling upon sports (mainly football) online. He states that he gambles mainly to relax and for enjoyment, often comparing it to other 'risky' activities which he considers to be more socially accepted such as drinking alcohol. He emphasises that he is comfortable with the amounts that he spends on gambling and that he believes that it is an individual's responsibility to control their gambling spend. He thinks that advertising is a potential concern for peoples with certain 'addictive' personality traits whilst having limited impact upon his own behaviour as he has control over his behaviour. He does however repeat numerous times that marketing acts a reminder for him to gamble, either by keeping it at 'the forefront of his mind' or through instigating discussions about gambling within social groups. He also has opened accounts with numerous operators due to attractive sign-up offers, however he has now been desensitised to sign-up offers since he doesn't qualify for them any more. He has doubts over how memorable safer gambling adverts are and how successful they would be, viewing them as being intended for those with 'problems'. There's also evidence of the gamblification of sport, whereby gambling is presented as a normalised part of being a young male and increasing enjoyment of sport.

Developing Themes:

- Control over gambling influencing response to marketing
- Gamblification of Sport (Young male identity/increasing enjoyment)
- Safer Gambling Lacking Relevance/Effectiveness
- Marketing as a Reminder to Gamble

Appendix J - Gambling readiness to change questionnaire

The following questionnaire is designed to identify how you personally feel about your gambling right now. Please read each of the questions below carefully, and then decide whether you agree or disagree with the statements. Please mark the answer of your choice to each question according to the following scale. Each question will be rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree)

- 1)** I enjoy my gambling, but sometimes I gamble too much.
- 2)** Sometimes I think I should cut down on my gambling.
- 3)** It's a waste of time thinking about my gambling.
- 4)** I have just recently changed my gambling habits.
- 5)** Anyone can talk about wanting to do something about gambling, but I am actually doing something about it.
- 6)** My gambling is a problem sometimes.
- 7)** There is no need for me to think about changing my gambling.
- 8)** I am actually changing my gambling habits right now.
- 9)** Gambling less would be pointless for me.

Appendix K – Gambling behaviour questionnaire

On a separate browser or device, please log into all of your gambling accounts in order to accurately answer the next 3 questions:

- 1) How many bets have you placed over the previous 14 days (not including today)?
- 2) How much money have you staked on bets (in total) over the previous 14 days (not including today)?
- 3) On how many of the previous 14 days (not including today) did you place at least 1 bet?

Appendix L – Impact of messages questionnaire

- 1) Do you recall seeing messages from the Twitter account you were asked to follow during the past 14 days? Yes/No as answer options
- 2) On how many of the 14 days would you say you saw messages from the account?
- 3) How many messages do you recall seeing, on average, per day?
- 4) Did you make any changes to your gambling behaviour after reading any of these messages? Yes/No
- 5) Why was this? (Open answer)
- 6) OPTIONAL – Do you have any thoughts about the messages on the accounts you would like to share? Was there anything you thought was good or bad about the messages?

Appendix M – Informational safer gambling messages

- Remember to only bet with money you can afford to lose #SaferGambling
- Remember to set a money limit in advance when gambling online
#SaferGambling
- Remember to set a time limit in advance when gambling online
#SaferGambling
- Remember to never chase your losses when gambling online
#SaferGambling
- Don't gamble when you are depressed or upset #SaferGambling
- Don't gamble when under the influence of alcohol or drugs #SaferGambling
- Remember to take frequent breaks when gambling #SaferGambling
- Remember that gambling should not be relied upon as a method of steady income #SaferGambling

Appendix N – Self-appraisal safer gambling messages

- Do you know how much money you have spent gambling in the past 24 hours? #SaferGambling
- Do you know how long you have spent gambling in the past 24 hours? #SaferGambling
- Do you have deposit limits set on all of your online gambling accounts? #SaferGambling
- Do you need to take a break from gambling today? #SaferGambling
- Have you been chasing your losses at any point in the past 24 hours? #SaferGambling
- Have you spent more money than you intended to gambling in the past 24 hours? #SaferGambling
- Have you avoided other activities today in order to gamble? #SaferGambling
- Have you been gambling with increasing stakes in the past 24 hours? #SaferGambling
- Has gambling affected your mood at any point in the past 24 hours? #SaferGambling

Appendix O – Emotional/self-efficacy safer gambling messages

- https://www.youtube.com/watch?v=h8_fKK3wWng
- <https://www.youtube.com/watch?v=48tdz9oR-IY>
- <https://www.youtube.com/watch?v=AT0IICwXMPs>
- <https://www.youtube.com/watch?v=e-XmEVp9Q64>
- <https://www.youtube.com/watch?v=uqOODjrUnQY>

A combination of these 5 videos posted along with messages such as:

- One way in which you can make your gambling safer is to go now and place deposit limits on all of your gambling accounts #SaferGambling
- One way in which you can make your gambling safer is to never increase the deposit limits you set on your accounts #SaferGambling
- One way in which you can make your gambling safer is to avoid betting on sports in play #SaferGambling
- One way in which you can make your gambling safer is to start tracking how much money you are spending on gambling and comparing it to your spending on other activities #SaferGambling
- One way in which you can make your gambling safer is to never use the 'reverse withdrawal' feature on a betting website #SaferGambling
- One way in which you can make your gambling safer is to visit <https://www.gamcare.org.uk/> if you are having worries about your gambling #SaferGambling
- One way in which you can make your gambling safer is to set yourself a cooling off period on your gambling accounts after a bet you place loses to avoid chasing your losses #SaferGambling
- One way in which you can make your gambling safer is to unsubscribe from texts or emails from betting companies and turn off app notifications #SaferGambling
- One way in which you can make your betting safer is to set cooling off periods before you start to drink alcohol in order to avoid gambling when drunk #SaferGambling