

Northumbria Research Link

Citation: Houghton, Scott and Moss, Mark (2021) Comparing football bettors' response to social media marketing differing in bet complexity and account type - An experimental study. *Journal of Behavioral Addictions*, 10 (3). pp. 388-395. ISSN 2062-5871

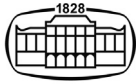
Published by: AK Journals

URL: <https://doi.org/10.1556/2006.2020.00056>
<<https://doi.org/10.1556/2006.2020.00056>>

This version was downloaded from Northumbria Research Link:
<http://nrl.northumbria.ac.uk/id/eprint/45010/>

Northumbria University has developed Northumbria Research Link (NRL) to enable users to access the University's research output. Copyright © and moral rights for items on NRL are retained by the individual author(s) and/or other copyright owners. Single copies of full items can be reproduced, displayed or performed, and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided the authors, title and full bibliographic details are given, as well as a hyperlink and/or URL to the original metadata page. The content must not be changed in any way. Full items must not be sold commercially in any format or medium without formal permission of the copyright holder. The full policy is available online: <http://nrl.northumbria.ac.uk/policies.html>

This document may differ from the final, published version of the research and has been made available online in accordance with publisher policies. To read and/or cite from the published version of the research, please visit the publisher's website (a subscription may be required.)



AKADÉMIAI KIADÓ

Comparing football bettors' response to social media marketing differing in bet complexity and account type – An experimental study

Journal of Behavioral Addictions

SCOTT HOUGHTON^{1*}  and MARK MOSS² 

¹ NB155, Department of Psychology, Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, NE1 8ST, UK

² Department of Psychology, Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, NE1 8ST, UK

DOI:
10.1556/2006.2020.00056
© 2020 The Author(s)

Received: May 19, 2020 • Revised manuscript received: August 4, 2020 • Accepted: August 19, 2020

FULL-LENGTH REPORT



ABSTRACT

Background and 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. *Methods:* Employing a 3×2 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 and conclusions:* This study provides initial evidence that affiliate marketing of sports betting increases bettor's 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.

KEYWORDS

sports betting, marketing, social media

INTRODUCTION

There is a growing awareness of gambling as a public health issue in Great Britain, whereby harms arising from gambling behaviour extend far beyond disordered gamblers (Wardle, Reith, Langham, & Rogers, 2019). Within academic literature, a considerable body of research has focused on personal factors that contribute towards the development of Gambling Disorder (Grant, Odlaug, & Chamberlain, 2016). However, in viewing gambling as a public health issue, it is pivotal for research to investigate environmental factors which are potentially dangerous and could contribute towards harms. One environmental factor that researchers have postulated to be harmful is gambling marketing, which incorporates both direct advertising of specific gambling products and gambling brand promotion (Newall et al., 2019). Whilst the impact of marketing upon gambling behaviour has debated within academic literature (Binde, 2014), industry spend on marketing has risen continuously in recent times, up from £960 million in 2014 to £1.5 billion in 2018 (GambleAware, 2018). This can be explained in part by the vast amounts of money now put into online marketing of gambling, which a recent financial analysis by Regulus Partners found to account for up to 80% of total marketing spend (GambleAware, 2018). Given such a large amount of money is invested into marketing by the industry, it can be assumed that marketing must have some impact on behaviour.

*Corresponding author.
E-mail: scott2.houghton@northumbria.ac.uk



As such, researchers have investigated different aspects of marketing that may have a negative impact upon gambling behaviour. For example, a grounded theory study on television adverts, whereby theories are constructed ground-up from the data collected, discovered that adverts simultaneously aimed to increase the perceived control a gambler has over their betting behaviour whilst also decreasing the perceived risk associated with the behaviour (Lopez-Gonzalez, Estévez, & Griffiths, 2017). This is worrying given the association between disordered gambling and illusion of control (Potenza, 2014), whereby an individual feels they hold a greater ability to control the outcome of events than they can in actuality (Langer, Marcus, Roth, & Hall, 1975). Additionally, research has highlighted the dangers of inducements commonly used in advertising, such as enhanced odds or free bets (Hing, Sproston, Brook, & Brading, 2017). Studies have shown 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; Hing, Russell, Thomas, & Jenkinson, 2019; Rockloff, Browne, Russell, Hing, & Greer, 2019).

A further example of marketing practices which have been argued as dangerous is the 'gambification of sport,' a term coined to represent the high levels of integration of gambling within professional sport (Thomas, Lewis, Duong, & Mcleod, 2012). Lopez-Gonzalez and Griffiths (2017) highlight concerns whereby the gambification of sport may allow key components of sporting competition, which is based around skill and practice, to be applied to gambling behaviour. This would be dangerous 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). Another marketing practice commonly employed by the gambling industry that has been criticised as being potentially dangerous is the advertising of risky, complex bets. A study exploring football bets advertised on television found that over 50% of bets included making a prediction on a specific goalscorer, and that bookmaker profit margins were considerably higher for these bets compared to more simple bets on teams to win (Newall, 2017). A series of follow-up experiments revealed that whilst bettors were able to make sensible probability judgements for simple events, they consistently overestimated 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.

One type of marketing which gambling operators are placing increasing importance upon is social media marketing. This type of marketing seems to be particularly appealing to teenagers and young adults, with around 40% of online gamblers under the age of 34 following a gambling operator on social media (Gambling Commission, 2019a). Additionally, just over 10% of children aged between 11 and

16 follow a gambling company on social media, despite the fact regulations are in place which aim to prevent this from happening (Gambling Commission, 2018). The increase in spend on social media marketing (GambleAware, 2018) could therefore be seen as a response from the gambling industry to the marketing preferences of the younger generation, highlighting the need for research which assesses how bettors interact with such marketing.

Previous research on social media marketing of gambling has highlighted the multi-faceted approach of gambling operators on social media (Houghton, McNeil, Hogg, & Moss, 2019). As well as advertising specific bets, gambling operators also post a lot of sports and humorous content in an attempt to build their brand on social media by encouraging the sharing of their posts. Building upon this Killick and Griffiths (2019) highlighted how operators use sport specific hashtags to heighten awareness of betting opportunities amongst those following the discussion on the hashtag used. These studies demonstrate the types of content posted on social media, and how operators can use their social media marketing to reach a wider audience. However, there is little research on how bettors respond to marketing they encounter on social media.

One type of social media marketing which has the potential to be particularly dangerous is affiliate marketing (Houghton, Moss, & Casey, 2020). Affiliate marketers either receive a one-off payment for getting a customer to sign up with an operator, or a percentage of that customer's losses over the time they remain a customer with that bookmaker (Lopez-Gonzalez & Tulloch, 2015). On social media, affiliate accounts 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. Supporting this, research has found that individuals place more trust in experts when making decisions which involve financial risk (Meshi, Biele, Korn, & Hecker, 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.

Aims and hypotheses

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 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 advertisement changes depending upon bet complexity.

- H1** Given the evidence of bettor's poor understanding of bet probabilities for complex bets (Newall, 2017), it's 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.

METHOD

Design

A 3×2 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.

Participants

One hundred and forty-five regular football bettors in Great Britain aged 18 and over were recruited to take part in the study via opportunity sampling through the researcher's Twitter account, football supporter forums and a survey-sharing website (SurveyCircle). Participants who completed the study were invited to enter a prize draw to win one of 3 £50 Amazon vouchers. Regular football betting was defined as betting once a month or more on football. Thirty-eight 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

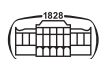
were 83 males and 17 females. Median number of days spent gambling per month was 4.75 (range = 1 to 30) and median spend per gambling day was £10 (range = £0.75 to £1,000). Median PGSI score was 6 (range = 1 to 26). 52% of participants followed at least one gambling operator on social media whilst 35% followed at least one affiliate. Table 1 gives a detailed breakdown of participant demographics.

Materials

Tweets. Thirty 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

Table 1. Participant demographic information including Percentage of participants by PGSI category, age, employment status, ethnicity, education and relationship status

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



is made on both the first goalscorer and the correct final score, with both predictions needing to be correct for a winning bet. Five of each bet type was included within the Tweets and every bet was included twice, once on a gambling operator Twitter account and once on a gambling affiliate Twitter account. A full list of chosen bets can be seen in Table 2.

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. For example, where a bet may be advertised on an operator account with a simple presentation of the 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 Fig. 1.

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. 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. A social media use questionnaire was developed to ask participants how many gambling operator and affiliate accounts they follow on social media.

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).

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.

Ethics

The study procedures were carried out in accordance with the Declaration of Helsinki. The project was given ethical approval by the Northumbria University postgraduate ethics research committee. Prior to commencing the study, participants were provided with an information sheet detailing the study and had to give their informed consent before providing any data to the research.

RESULTS

Statistical analyses

Data was downloaded from Qualtrics into SPSS version 25 for analysis. After removing unusable data, missing data points

Table 2. 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





Fig. 1. Example of the difference in presentation between how bets were presented on an operator and an affiliate account

for 21 of 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 three DVs at each combination of bet complexity and account type. Whilst all three 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 three 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 3.

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-variant 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 [$F(1.848, 177.436) = 34.031$, $P < 0.001$, partial eta squared = 0.262], bet confidence [$F(1.760, 168.915) = 73.060$, $P < 0.01$, partial eta squared = 0.432] and spend [$F(1.980, 155.147) = 24.837$, $P < 0.001$, 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 ($P < 0.001$).

A significant main effect of account type of was found for both bet likelihood [$F(1, 96) = 5.154$, $P = 0.025$, partial eta squared = 0.051] and bet confidence [$F(1, 96) = 5.634$, $P = 0.020$, 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

Table 3. 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
<i>Low</i>			
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
<i>Medium</i>			
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
<i>High</i>			
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
<i>Overall</i>			
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

account. However, there was no significant main effect of account type on bet spend [$F(1, 99) = 1.494, P = 0.225$, partial eta squared = 0.015].

A significant interaction effect was found between account type and bet complexity upon both likelihood to bet [$F(2, 192) = 3.781, P = 0.025$, partial eta squared = 0.038] and confidence in bet [$F(2, 192) = 5.243, P = 0.006$, 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. The interaction between account type and bet complexity upon bet spend was found to be non-significant [$F(2, 192) = 2.695, P = 0.070$, partial eta squared = 0.027].

DISCUSSION

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 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 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 appropriate 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.

Evaluation

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, Gri-sham, 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, 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.

Building upon the current study, future research should investigate factors which make an individual more likely to adapt their betting behaviour in response to affiliate marketing. 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. Additionally, future research should aim to replicate the current study with a lower educated sample given the high levels of education within the current study sample. 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.

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. 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 research looking at what types of bets and offers are most frequently advertised by affiliates.

Funding sources: This study was carried out as a part of the lead authors' PhD studies. The PhD is funded by GambleAware. GambleAware approved the overall focus of the PhD, however had no involvement in the research design, methodology, conduct, analysis or write-up. MM is the lead supervisor on the main author's PhD program.

Authors' contribution: As lead author, SH was involved with study concept and design, analysis and interpretation of data, statistical analysis and writing up the research. Both authors had full access to all data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. MM held the following roles within the research: study concept and design, analysis and interpretation of data, study supervision, providing feedback on drafted work.

Conflict of interests: I am reporting that I receive funding from GambleAware to carry out my PhD studies, a British grant-making charity who receives donations from the Gambling Industry. As previously stated, GambleAware did not have any involvement in designing or implementing the current study.

REFERENCES

- Binde, P. (2014). Gambling advertising: A critical research review. London. Retrieved from <https://about.gambleaware.org/media/>



1165/binde_rgt_report_gambling_advertising_2014_final_color_115p.pdf.

- 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>.
- Delaney, H. D., & Maxwell, S. E. (1981). On using analysis of covariance in repeated measures designs. *Multivariate Behavioral Research*, *16*(1), 105–123.
- Ferris, J., & Wynne, H. (2001). The Canadian problem gambling index. Ottawa, ON: Canadian Centre on Substance Abuse.
- GambleAware. (2018). Gambling companies spend £1.2 billion marketing online, five times more than on television ads. Retrieved July 31, 2019, from <https://about.gambleaware.org/media/1857/2018-11-24-gambling-marketing-online-five-times-tv-ad-spend.pdf>.
- Gambling Commission. (2018). Young people & gambling 2018. Retrieved from <https://www.gamblingcommission.gov.uk/pdf/survey-data/young-people-and-gambling-2018-report.pdf>.
- Gambling Commission. (2019a). Gambling participation in 2018: Behaviour, awareness and attitudes. Retrieved from <https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-participation-in-2018-behaviour-awareness-and-attitudes.pdf>.
- Gambling Commission. (2019b). Industry statistics. Retrieved from <https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-industry-statistics.pdf>.
- Grant, J. E., Odlaug, B. L., & Chamberlain, S. R. (2016). Neural and psychological underpinnings of gambling disorder: A review. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *65*, 188–193. <https://doi.org/10.1016/j.pnpbp.2015.10.007>.
- 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., Russell, A. M. T., Thomas, A., & Jenkinson, R. (2019). Wagering advertisements and inducements: Exposure and perceived influence on betting behaviour. *Journal of Gambling Studies*, (123456789). <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>.
- Holtgraves, T. (2009). Evaluating the problem gambling severity index. *Journal of Gambling Studies*, *25*(1), 105–120.
- 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*, 1–6. <https://doi.org/10.1080/14459795.2020.1718737>.
- 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>.
- Langer, E. J., Marcus, C., Roth, J., & Hall, R. (1975). The illusion of control. *Journal of Personality and Social Psychology*, *32*(2), 311–328. Retrieved from papers: //a84de486-d264-4d83-b3ef-2ff79b02a814/Paper/p149.
- Lopez-Gonzalez, H., 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, H., & 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, H., & 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>.
- 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>.
- Newall, P. W. S. (2017). Behavioral complexity of British gambling advertising. *Addiction Research and 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., et al. (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>.
- 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>.
- 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>.
- 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 & New Zealand Journal of Public Health*, *36*(2), 145–152. <https://doi.org/10.1111/j.1753-6405.2012.00856.x>.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, *5*(2), 207–232. [https://doi.org/10.1016/0010-0285\(73\)90033-9](https://doi.org/10.1016/0010-0285(73)90033-9).
- 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>.
- Williams, A. D., Grisham, J. R., Erskine, A., & Cassidy, E. (2012). Deficits in emotion regulation associated with pathological gambling. *British Journal of Clinical Psychology*, *51*(2), 223–238. <https://doi.org/10.1111/j.2044-8260.2011.02022.x>.

Open Access. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium for non-commercial purposes, provided the original author and source are credited, a link to the CC License is provided, and changes – if any – are indicated.

