Understanding persuasive attributes of sports betting advertisements: A conjoint analysis of selected elements

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Background and aims: Despite recent growth in sports betting advertising, minimal research has examined the influence of different advertising message attributes on betting attitudes and behaviors. This study aimed to identify which attributes of sports betting advertisements most engage attention, interest, desire and likelihood of betting among non-problem, low-risk, moderate-risk, and problem gamblers. *Methods:* A novel approach utilizing an experimental design incorporating conjoint analysis examined the effects of: three message formats (commentary, on-screen display, and studio crossover); four appeals (neutral, jovial, ease of placing the bet, and sense of urgency); three types of presenters (match presenter, sports betting operator, and attractive non-expert female presenter); and four bet types (traditional, exotic key event, risk-free, and micro-bet). A professional film company using paid actors produced 20 mock television advertisements simulating typical gambling messages based on the conjoint approach. These were embedded into an online survey of 611 Australian adults. *Results:* The most attention-grabbing attributes were type of presenter and type of bet. The attractive non-expert female presenter gained more attention from all gambler groups than other presenters. The type of bet was most persuasive in converting attention into likely betting among all gambler groups, with the risk-free bet being much more persuasive than other bet types. Problem gamblers were distinct by their greater attraction to in-play micro-bets. *Discussion and conclusion:* Given the potential for incentivized bets offering financial inducements and for in-play micro-bets to undermine harm minimization and consumer protection, regulators and wagering operators should reconsider whether these bet types are consistent with their responsible gambling objectives.

Keywords: wagering, betting inducements, in-play betting, risk-free bets, micro-bets, live action betting

INTRODUCTION

The recent growth of sports betting in many countries has been accompanied by a proliferation of sports betting advertising (Hing, Lamont, Vitartas, & Fink, 2015a; Lopez-Gonzalez, Estévez, & Griffiths, 2017). Several studies have examined how this advertising influences consumers (e.g., Derevensky, Sklar, Gupta, & Messerlian, 2010; Gordon, Gurrieri, & Chapman, 2015; Hing, Cherney, Blaszczynski, Gainsbury, & Lubman, 2014; Hing et al., 2015a; Hing, Lamont, Vitartas, & Fink, 2015b; Hing, Vitartas, Lamont, & Fink, 2014; Sproston, Hanley, Brook, Hing, & Gainsbury, 2015). However, minimal research has examined the influence of different advertising message attributes on betting attitudes and behaviors.

Previous studies have content-analyzed sports betting advertisements to identify various message attributes (e.g., Milner, Hing, Vitartas, & Lamont, 2013; Sproston et al., 2015), but have not examined how different attributes influence betting, or bettors at different levels of problem gambling risk. Self-reported impacts have also been surveyed. In one study, sports bettors with higher problem gambling severity reported feeling more encouraged to bet by all 11 message attributes examined, spanning different message formats, presenters, and content (Hing et al., 2015a). That study also examined how varying message appeals encourage impulse betting. Problem gamblers reported that appeals to ease of placing the bet, the time-limited nature of a bet, or that are humorous, substantially increased their likelihood of placing impulse bets. Thus, message format, presenter, content, and appeal may be particularly salient message attributes for high-risk gamblers.

The range of sports bets offered has enormously expanded in recent years. Extending on traditional win/lose bets, prominent new bet types include: exotic bets (which can be placed before or during the match on in-match contingencies, such as which team will score the first goal) and micro-bets (which can only be placed in-play on short-term

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events, such as the outcome of the next ball in cricket or the next point in a tennis match) (Hing, Sproston, Brading, & Brook, 2015). Lopez-Gonzalez et al. (2017) note that new bet types have potential to increase the onset of problem gambling. Of particular concern is the ability to bet in-play on micro-bets because this enables repetitive, high-frequency betting involving quick decision-making, which may not enable an informed, considered approach to gambling. Previous research has found an association between frequency of in-play betting and problem gambling severity (Hing et al., 2015a; Hing, Russell, Vitartas, & Lamont, 2016; LaPlante, Nelson, & Gray, 2014).

Wagering inducements, such as bonus bets, cash rebates, and special odds, are heavily advertised and alter the structural features of bets. Lopez-Gonzalez et al. (2017) single out risk-free bets as particularly concerning. They typically offer a refund if the bet loses but other conditions are met, e.g., if your team loses but is ahead at half-time. The refund is sometimes given as a bonus bet, requiring further betting to benefit from the inducement; risk-free bets may also encourage a view of betting as a risk-free activity requiring no self-regulation (Lopez-Gonzalez et al., 2017).

Overall, previous research suggests that several message attributes may be persuasive in engaging the desire to bet on sports. A seminal stimulus-response model, the AIDA model, depicts a four-step process of advertising persuasion entailing: engaging the consumer's attention; gaining their interest in the product; eliciting their desire for the product; and finally an action stage of intending to purchase, and then purchasing, the product (Rawal, 2013). Based on this process, this study aimed to identify which selected attributes of sports betting advertisements most impact on engaging attention, interest, desire, and likelihood of betting (action) among non-problem, low-risk, moderate-risk, and problem gamblers – based on their responses to mock sports betting advertisements.

METHODS

Participants

The sample comprised a panel of respondents recruited via a market research company to yield roughly equal numbers of regular (at least fortnightly) sports bettors ($n = 200$), non-regular (less than fortnightly) sports bettors ($n = 207$), and non-sports bettors ($n = 204$). The stratified sampling approach yielded good numbers of non-problem ($n = 353$), low-risk ($n = 83$), moderate-risk ($n = 70$), and problem gamblers ($n = 105$) to enable the planned analyses. All respondents resided in Queensland Australia and completed an online survey, which included an informed consent preamble. Table 1 shows the demographic profile of the 611 respondents by gambler group.

Procedure

As the study examined a range of message elements in sports betting advertisements identified from the literature, it was not possible to use existing or genuine advertisements. As a result, an experimental design utilizing conjoint analysis examined the persuasive effect of different message attributes in sports betting advertisements specifically developed for the study. Conjoint analysis enables the examination of preferences under a multi-cue situation, and enables weights to be calculated for attributes in the design (Green & Srinivasan, 1990). This approach presents the stimulus resembling real choice situations and has a high degree of realism (Hair, Black, Babin, & Anderson, 2014).

Based on previous studies indicating several salient attributes reported to influence consumer responses to sports betting advertising messages (Hing et al., 2015a, 2015b, 2016; Lamont, Hing, & Vitartas, 2016; Sproston et al., 2015), we selected 14 message elements for testing. These were three message formats (commentary, on-screen display, and studio crossover), four types of appeal (neutral, jovial, ease of placing the bet, and sense of urgency), and three types of presenters (match presenter, sports betting operator, and attractive non-expert presenter). All the presenters were male, with the exception of the attractive non-expert presenter who was female. The design also included four bet types: a traditional bet on which team will win the match; an exotic bet on a key event in the match based on which team will score the first point; a risk-free bet based on receiving a refund if your team loses by 10 points or less; and a micro-bet based on which team will give away the next penalty.

A fractional factorial design was generated by SPSS V21 to provide an orthogonal array, which was used to develop the full-profile messages. Using the default, 16 cases were suggested and a further four included as hold-out cases (to check the validity of the model). The profiles were developed into 20 individual scripts for sports betting advertisements, drawing on examples from Australian sports broadcasts. Each script included the attributes and attribute levels identified for each profile. To reduce the influence of intervening variables, all scripts related to betting on rugby league, as this is the most popular professional sport in Queensland. These written scripts were pilot tested with five regular sports bettors, with minor modifications made based on their feedback. A film production company produced the 12–20 s advertisements using professional actors, adding a themed introduction, background, and sound effects to create an "authentic as possible" representation of real sports betting advertisements in Australia (Figure 1). However, our film production budget was a fraction of that available to sports betting operators; hence our mock advertisements could not completely match the caliber and professionalism of real sports betting advertisements. We used mock advertisements because using real sports betting advertisements would not have allowed us to systematically vary each message element, which is essential to conjoint design. This prevented inclusion of real and well-known sports participants and presenters in the advertisements, as sometimes occurs in these types of advertisements. All advertisements were then linked to the survey via www.youtube.com and displayed in randomized order.

Table 1. Demographic characteristics of participants (N = 611)

	Non-problem gambler, n = 353 (%)	Low-risk gambler, n = 83 (%)	Moderate-risk gambler, n = 70 (%)	Problem gambler, n = 105 (%)	Total percent, n = 611 (%)	Total count (N)
Gender						
Male	53.3	57.8	74.3	63.8	58.1	355
Female	46.7	42.2	25.7	36.2	41.9	256
Age group						
18–24 years old	5.4	9.6	10.0	26.7	10.1	62
25–34 years old	14.7	16.9	21.4	31.4	18.7	114
35–44 years old	14.2	16.9	28.6	23.8	17.8	109
45–54 years old	25.5	24.1	15.7	12.4	21.9	134
55–64 years old	20.1	19.3	15.7	3.8	16.7	102
65–74 years old	17.3	13.3	7.1	1.9	12.9	79
75 years and over	2.8	0.0	1.4	0.0	1.8	11
Marital status						
Married	50.1	49.4	47.1	43.8	48.6	297
Living with partner	15.6	22.9	22.9	21.0	18.3	112
Widowed	2.5	1.2	4.3	1.9	2.5	15
Divorced or separated	13.0	8.4	11.4	4.8	10.8	66
Never married	18.7	18.1	14.3	28.6	19.8	121
Household type						
Single person	19.5	9.6	18.6	23.8	18.8	115
One parent family with children	5.1	6.0	4.3	6.7	5.4	33
Couple with children	34.8	37.3	40.0	43.8	37.3	228
Couple with no children	30.9	31.3	28.6	15.2	28.0	171
Group household	5.7	12.0	7.1	10.5	7.5	46
Other	4.0	3.6	1.4	0.0	2.9	18
Work status						
Full-time (≥35 hr/week)	31.4	38.6	40.0	53.3	37.2	227
Part-time (<35 hr/week)	16.4	14.5	12.9	17.1	15.9	97
Self-employed	5.7	9.6	10.0	4.8	6.5	40
Unemployed	3.7	1.2	2.9	2.9	3.1	19
Full-time student	2.5	4.8	8.6	6.7	4.3	26
Full-time home duties	5.9	6.0	4.3	3.8	5.4	33
Retired	26.1	18.1	12.9	4.8	19.8	121
Disability pension	6.2	4.8	7.1	6.7	6.2	38
Other	2.0	2.4	1.4	0.0	1.6	10
Household income (AUD)						
$0–$19,999	6.5	4.8	4.3	8.6	6.4	39
$20,000–$39,999	20.1	22.9	14.3	12.4	18.5	113
$40,000–$59,999	14.4	18.1	20.0	19.0	16.4	100
$60,000–$79,999	13.9	8.4	12.9	12.4	12.8	78
$80,000–$99,999	8.2	4.8	12.9	8.6	8.3	51
$100,000–$119,999	7.6	7.2	10.0	9.5	8.2	50
$120,000–$139,999	5.9	7.2	2.9	7.6	6.1	37
$140,000–$159,999	4.2	10.8	2.9	3.8	4.9	30
$160,000–$179,999	2.3	1.2	4.3	1.9	2.3	14
$180,000–$199,999	2.8	6.0	2.9	1.0	2.9	18
$200,000 and over	4.0	1.2	1.4	7.6	3.9	24
Don't know	9.9	7.2	11.4	7.6	9.3	57
Sports bettor category						
Regular sports bettor	15.9	34.9	61.4	68.6	32.7	200
Non-regular sports bettor	31.7	51.8	34.3	26.7	33.9	207
Non-sports bettor	52.4	13.3	4.3	4.8	33.4	204

Measures

Problem gambling status was measured using the nine-item Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001), which categorizes respondents into non-problem gamblers, low-risk gamblers, moderate-risk gamblers, and problem gamblers. Its reliability was excellent (Cronbach's α = .966).

Figure 1. Screenshot of mock advertisement featuring commentator and non-expert female presenter

Questions about the mock sports betting advertisements aligned with steps in the AIDA model. Thus, the video of each advertisement was followed by four questions: "How attention grabbing did you find this promotion?;" "How interesting did you find this promotion?;" "How tempting did you find this promotion?" (with "tempting" considered more appropriate terminology than "desirable" as indicated in the AIDA model); and "How likely are you to place a bet if you saw this promotion while watching rugby league?" (representing the action stage in the AIDA model). A 100-point sliding semantic differential scale was used, anchored at each end by appropriate descriptors ("not at all attention grabbing/ extremely attention grabbing;" "not at all interesting/ extremely interesting;" "not at all tempting/extremely tempting;" "not at all likely to place a bet/extremely likely to place a bet").

Sociodemographic data. Gender, age, marital status, household composition, work status, and household income bracket were also collected.

Statistical analysis

For each PGSI group, conjoint analysis (Green & Srinivasan, 1978) was used to assess the importance of the four main attributes in the conjoint design and to estimate the utilities (part-worths) of each level within each attribute. The utility weights are derived by dummy coding (effects coding) the orthogonal design and solving the equation using ordinary least square regression of the ratings to arrive at the utility estimates. Effects coding results in the utilities summing to zero within each attribute, hence the positive and negative values reported in the tables that follow. Higher importance and utility scores indicate greater preference. The importance scores are calculated by first obtaining the attribute utility range and then determining each attribute's utility range as a proportion of the sum of all the utility range values. This is presented as the *Importance %* in the tables that follow.

Ethics

The study procedures were carried out in accordance with the Declaration of Helsinki. The Institutional Review Board of the Southern Cross University Human Research Ethics Committee approved the study. All subjects were informed about the study and all provided informed consent.

RESULTS

Attention

Table 2 presents results for the four PGSI groups for the attention question. In terms of importance, the presenter attribute was highest for the problem gambler and non-problem gambler groups, and the bet attribute highest for the low- and moderate-risk gambler groups. These results were reversed for the second most attention-grabbing attribute. In terms of the utility estimates, all PGSI groups rated the attractive non-expert female highest among types of presenters, and the risk-free bet highest among bet types.

The two remaining attributes, message format and appeal, had lower importance levels. The message format attribute was more attention-grabbing for the non-problem, low-risk, and moderate-risk gamblers than for the problem gamblers, who found the appeal attribute to be more attention-grabbing. Of the message formats, a commentary format was more attention-grabbing for the non-problem and moderate-risk gamblers, whereas the on-screen display attracted most attention from the low-risk and problem gamblers. Among the different types of appeals, a neutral appeal gained most attention from problem and moderate-risk gamblers, sense of urgency from low-risk gamblers, and ease of placing the bet from non-problem gamblers.

Interest

Table 3 presents results for the interest question. The four PGSI groups all indicated the bet attribute was most

Table 2. Conjoint analysis of appeal of message by PGSI group: attention (N = 611)

	Non-problem gamblers, n = 353		Low-risk gamblers, n = 83		Moderate-risk gamblers, n = 70		Problem gamblers, n = 105	
	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate
Message format	16.22		16.62		17.31		9.01	
Commentary		0.827		−0.302		1.432		0.192
On-screen display		−0.620		1.410		−0.803		0.383
Studio crossover		−0.207		−1.109		−0.629		−0.575
Appeal type	9.16		10.99		7.77		18.61	
Neutral		−0.241		−0.578		0.332		1.013
Jovial		0.188		−0.691		0.321		0.298
Ease of placing bet		0.435		0.296		−0.672		−0.346
Sense of urgency		−0.381		0.973		0.020		−0.965
Bet type	35.50		43.71		49.03		28.37	
Risk-free		1.751		4.229		4.516		1.924
Micro-bet		−0.014		−1.172		−1.498		−0.123
Traditional		−0.322		−0.663		−1.205		−1.091
Exotic key event		−1.415		−2.394		−1.813		−0.710
Presenter type	39.12		28.68		25.89		44.01	
Match presenter		−1.535		−1.823		−1.130		−1.651
Sports betting operator		−0.418		−0.701		−1.082		−1.375
Attractive non-expert		1.953		2.524		2.212		3.026
(Constant)		25.271		43.216		44.292		53.371
Pearson's R (sig.)		0.975		0.987		0.974		0.943
		(<0.001)		(<0.001)		(<0.001)		(<0.001)
Kendall's τ (sig.)		0.783		0.867		0.883		0.717
		(<0.001)		(<0.001)		(<0.001)		(<0.001)

Table 3. Conjoint analysis of appeal of message by PGSI group: interest (N = 611)

	Non-problem gamblers, n = 353		Low-risk gamblers, n = 83		Moderate-risk gamblers, n = 70		Problem gamblers, n = 105	
	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate
Message format	15.37		8.31		10.29		7.05	
Commentary		0.739		0.212		0.755		0.254
On-screen display		−0.633		0.534		−0.631		0.340
Studio crossover		−0.106		−0.792		−0.124		−0.594
Appeal type	10.53		9.13		9.42		15.07	
Neutral		0.293		0.386		0.477		1.199
Jovial		0.178		−0.792		0.032		−0.325
Ease of placing bet		0.176		−0.208		−0.791		−0.078
Sense of urgency		−0.647		0.614		0.282		−0.796
Bet type	49.69		65.12		68.14		41.46	
Risk-free		2.620		6.714		5.709		2.994
Micro-bet		−0.566		−2.305		−1.149		0.479
Traditional		−0.240		−1.101		−1.091		−2.494
Exotic key event		−1.815		−3.308		−3.468		−0.979
Presenter type	24.41		17.44		12.16		36.25	
Match presenter		−1.208		−1.318		−0.653		−2.276
Sports betting operator		0.237		−0.047		−0.331		−0.271
Attractive non-expert		0.971		1.365		0.984		2.546
(Constant)		23.421		40.390		42.360		51.517
Pearson's R (sig.)		0.986		0.979		0.975		0.955
		(<0.001)		(<0.001)		(<0.001)		(<0.001)
Kendall's τ (sig.)		0.900		0.817		0.900		0.733
		(<0.001)		(<0.001)		(<0.001)		(<0.001)

important in gaining their interest, with highest importance ratings made by the low- and moderate-risk gamblers. Among bet types, the risk-free bet had the highest utility score for all four groups, and the problem gambler group also found the micro-bet to be of interest. Among all PGSI groups, the presenter attribute had the second highest importance score, with the attractive non-expert female receiving the highest utility score. Problem and low-risk gamblers had higher importance scores for the appeal attribute, whereas the non-problem and moderate-risk gamblers had higher importance scores for the message format attribute. The sense of urgency and the on-screen display were the appeal and message format, respectively, that gained most interest among low-risk gamblers, whereas the other PGSI groups responded with more interest to the neutral appeal and commentary format.

Temptation (desire)

Table 4 presents results by PGSI group for the temptation question, representing "Desire" in the AIDA model. The bet attribute again had the highest importance for all four groups; however, non-problem, low-risk, and moderate-risk gamblers had much higher scores than the problem gambler group, who assigned more weight to type of presenter. Again, the risk-free bet had the highest utility weighting of all bet types among all four groups. The problem gambler group also found the micro-bet to have positive utility.

The second most important attribute was the presenter for the problem gambler and non-problem gambler groups, type of message format for the moderate-risk gambler group, and type of appeal for the low-risk gambler group. For the problem gambler group, the presenter attribute was only slightly less important than the bet attribute. Again, the attractive non-expert female had the highest utility score for presenter type among all PGSI groups.

The message format attribute was third most important for the problem gambler group, presenter type for the low- and moderate-risk gambler groups, and the appeal attribute for the non-problem gambler group. Of the appeal types, the non-problem and problem gamblers were most tempted by ease of placing the bet, whereas the low- and moderate-risk gamblers were most tempted by a sense of urgency. Of the message formats, low-risk gamblers were most tempted when the message was an on-screen display, whereas the other groups responded most to a commentary format.

Likelihood of placing the bet (action)

In line with the interest and temptation questions, results for likelihood of placing the bet indicated that the bet attribute was most important for all PGSI groups, and that the risk-free bet was the most attractive bet type (Table 5). Again the problem gambler group had a relatively high importance score for the presenter attribute, and specifically the attractive non-expert female presenter. The other three PGSI groups also responded most to this type of presenter. Among

Table 4. Conjoint analysis of appeal of message by PGSI group: temptation ($N = 611$)

	Non-problem gamblers, $n = 353$		Low-risk gamblers, $n = 83$		Moderate-risk gamblers, $n = 70$		Problem gamblers, $n = 105$	
	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate
Message format	8.23		10.65		10.34		10.88	
Commentary		0.244		−0.477		0.731		0.594
On-screen display		0.185		1.211		0.271		0.338
Studio crossover		−0.429		−0.734		−1.002		−0.932
Appeal type	11.96		13.97		6.14		7.43	
Neutral		−0.299		−1.361		−0.326		0.194
Jovial		0.377		0.005		−0.360		−0.521
Ease of placing bet		0.450		0.166		−0.017		0.521
Sense of urgency		−0.528		1.190		0.670		−0.194
Bet type	57.86		62.09		75.66		41.33	
Risk-free		3.415		8.248		8.856		3.806
Micro-bet		−1.313		−2.714		−2.185		0.165
Traditional		−1.076		−2.440		−2.845		−1.991
Exotic key event		−1.026		−3.094		−3.826		−1.979
Presenter type	21.95		13.29		7.86		40.37	
Match presenter		−1.028		−0.493		−0.378		−2.323
Sports betting operator		0.263		−0.967		−0.470		−1.015
Attractive non-expert		0.766		1.461		0.848		3.339
(Constant)		20.838		39.710		41.723		52.065
Pearson's *R* (sig.)		0.980		0.966		0.971		0.956
		(<0.001)		(<0.001)		(<0.001)		(<0.001)
Kendall's τ (sig.)		0.817		0.700		0.762		0.783
		(<0.001)		(<0.001)		(<0.001)		(<0.001)

Table 5. Conjoint analysis of appeal of message by PGSI group: likelihood of placing the bet ($N = 611$)

	Non-problem gamblers, $n = 353$		Low-risk gamblers, $n = 83$		Moderate-risk gamblers, $n = 70$		Problem gamblers, $n = 105$	
	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate	Importance %	Utility estimate
Message format	6.81		18.02		5.75		9.89	
Commentary		0.337		−0.228		0.270		0.309
On-screen display		−0.018		1.770		−0.662		0.594
Studio crossover		−0.319		−1.542		0.391		−0.903
Appeal type	19.03		7.19		10.35		12.40	
Neutral		0.012		−0.567		−0.938		0.782
Jovial		0.184		−0.574		0.366		−1.097
Ease of placing bet		0.818		0.392		−0.384		0.628
Sense of urgency		−1.014		0.748		0.956		−0.313
Bet type	57.83		63.05		72.93		42.25	
Risk-free		3.588		7.628		8.979		4.584
Micro-bet		−1.978		−3.961		−4.369		−0.996
Traditional		−0.518		−1.868		−1.013		−1.772
Exotic key event		−1.093		−1.800		−3.597		−1.816
Presenter type	16.33		11.74		10.97		35.47	
Match presenter		−0.674		−0.842		−0.715		−2.467
Sports betting operator		−0.223		−0.473		−0.578		−0.438
Attractive non-expert		0.897		1.315		1.293		2.905
(Constant)		18.882		35.221		39.098		51.554
Pearson's *R* (sig.)		0.987		0.955		0.970		0.961
		(<0.001)		(<0.001)		(<0.001)		(<0.001)
Kendall's τ (sig.)		0.900		0.783		0.767		0.933
		(<0.001)		(<0.001)		(<0.001)		(<0.001)

problem gamblers, type of appeal was third most important, with a neutral appeal most effective in increasing their likelihood of placing the bet. Among the message formats, this group responded most strongly to the on-screen display.

The moderate-risk gamblers responded with similar strength to the presenter and appeal attributes, and less to the message format. Among the types of appeal and message format, this group responded most to a sense of urgency and a studio-crossover format, respectively. After type of bet, the low-risk gamblers assigned more importance to the type of message format, followed by the type of presenter and type of appeal. Among these attributes, they responded most to the on-screen display, attractive non-expert female presenter, and an appeal to a sense of urgency. Finally, the non-problem gamblers rated the appeal type as second most important after bet type, and responded most to an appeal emphasizing ease of placing the bet. Third in importance was type of presenter, with the attractive non-expert female having the highest utility. Among message formats, this group responded most strongly to the commentary.

Summary of results

Table 6 summarizes the relative importance assigned to each attribute, and the most persuasive level within each attribute, for each PGSI group for eliciting attention, interest, temptation, and likelihood of placing the bet.

DISCUSSION

The most attention-grabbing attributes in our mock sports betting advertisements were type of presenter and type of bet. The attractive non-expert female presenter gained more attention from all PGSI groups than did the match commentator or sports betting operator. Research into the use of sexual appeal in advertising in general suggests that its use in marketing is likely to draw attention to promotional messages, with a positive effect on attitudinal and behavioral responses when presented at a mild intensity among both males and females (Wyllie, Carlson, & Rosenberger, 2014). The widespread inclusion of attractive women and sexualized imagery in sports betting marketing has been well documented and clearly targets the young male profile of most sports bettors (Milner et al., 2013; Sproston et al., 2015). The younger male profile in our sample, particularly among the problem and moderate-risk gambler groups, may also explain why the attractive female presenter gained the most attention in our mock advertisements.

Type of bet was the most persuasive message attribute in converting attention into likely action among all PGSI groups. Utility for the risk-free bet was so strong that all alternative bets had little effect in countering that offer. It was the only bet type containing an inducement to bet – an extra-financial incentive (a refund) to purchase an otherwise core product (betting on the outcome of the game). The overwhelming attraction of the incentivized bet is an

Table 6. Summary of most important attribute and level for all PGSI groups for attention, interest, temptation, and likelihood of placing the bet

Attribute	Importance	Non-problem gamblers	Low-risk gamblers	Moderate-risk gamblers	Problem gamblers
Attention	1	Presenter (attractive non-expert)	Bet (risk-free)	Bet (risk-free)	Presenter (attractive non-expert)
	2	Bet (risk-free)	Presenter (attractive non-expert)	Presenter (attractive non-expert)	Bet (risk-free)
	3	Message format (commentary)	Message format (on-screen display)	Message format (commentary)	Appeal (neutral)
	4	Appeal (ease of placing bet)	Appeal (sense of urgency)	Appeal (neutral)	Message format (on-screen display)
Interest	1	Bet (risk-free)	Bet (risk-free)	Bet (risk-free)	Presenter (attractive non-expert)
	2	Presenter (attractive non-expert)	Presenter (attractive non-expert)	Presenter (attractive non-expert)	Appeal (neutral)
	3	Message format (commentary)	Appeal (sense of urgency)	Message format (commentary)	Message format (on-screen display)
	4	Appeal (neutral)	Message format (on-screen display)	Appeal (neutral)	Bet (risk-free)
Temptation	1	Bet (risk-free)	Bet (risk-free)	Bet (risk-free)	Presenter (attractive non-expert)
	2	Presenter (attractive non-expert)	Appeal (sense of urgency)	Message format (commentary)	Presenter (attractive non-expert)
	3	Appeal (ease of placing bet)	Presenter (attractive non-expert)	Presenter (attractive non-expert)	Message format (commentary)
	4	Message format (commentary)	Message format (on-screen display)	Appeal (sense of urgency)	Appeal (ease of placing bet)
Likelihood of placing the bet	1	Bet (risk-free)	Bet (risk-free)	Bet (risk-free)	Bet (risk-free)
	2	Appeal (ease of placing bet)	Message format (on-screen display)	Presenter (attractive non-expert)	Presenter (attractive non-expert)
	3	Presenter (attractive non-expert)	Presenter (attractive non-expert)	Appeal (sense of urgency)	Appeal (neutral)
	4	Message format (commentary)	Appeal (sense of urgency)	Message format (studio crossover)	Message format (on-screen display)

important finding, given concerns raised about the potential for wagering inducements to undermine harm minimization and consumer protection measures (Hing, Cherney, et al., 2014; Hing et al., 2015a, 2015b; Hing, Sproston, Brook, & Brading, 2017; Joint Select Committee on Gambling Reform, 2011, 2013). Research on the effects of wagering inducements has been restricted to a review of their structure (Hing et al., 2015, 2017), focus groups (Sproston et al., 2015), and interviews (Hing, Cherney, et al., 2014). This study is the first, to the best of our knowledge, to use a more sophisticated methodology to reveal the attraction of bets incentivized with a financial inducement.

Risk-free bets are frequently offered in the marketplace. An audit of 223 wagering inducements found they were the most prevalent inducement of the 15 types identified (Hing et al., 2015, 2017). In that audit, over two thirds of these offers refunded with bonus bets, rather than cash. Use of bonus bets requires further betting, and sometimes requires multiple additional bets where play-through conditions apply; these require bettors to turn over the bonus bet amount, and/or winnings from the bonus bet, several times before being able to withdraw funds from their betting account. This increased betting heightens the likelihood of experiencing harm from gambling, given that greater sports betting consumption is a risk factor for gambling problems (Hing et al., 2016).

While reducing the perceived risk of losing money, risk-free bets can also lower the actual price of betting, likely increasing product usage, given that alcohol and tobacco research have demonstrated an inverse relationship between price and consumption (Brennan, O'Reilly, Purshouse, & Taylor, 2008; Gallus, Schiaffino, La Vecchia, Townsend, & Fernandez, 2006; Scollo, Younie, Wakefield, Freeman, & Icasiano, 2003). Offering inducements also encourages bettors to open accounts with multiple operators to gain the best deals, increasing their exposure to a plethora of wagering marketing (Hing, Cherney, et al., 2014; Hing et al., 2017). Bets with combined contingencies, such as the risk-free bet in this study (your team loses, and by less than 10 points), have comparatively high expected loss rates and odds that are very difficult to calculate (Gainsbury & Russell, 2015; Newall, 2015). They can therefore increase betting-related harm through undermining informed decision-making (Hing et al., 2017), a key principle underpinning responsible gambling (Blaszczynski, Ladouceur, & Shaffer, 2004; Parke, Harris, Parke, Rigbye, & Blaszczynski, 2014). Thus, even though bets offering reduced risk might appear to benefit consumers, their subsequent effects may increase gambling harm.

Also of note was the relative attractiveness of micro-bets to problem gamblers. In the absence of the risk-free bet, the problem gamblers surveyed would be most responsive to micro-bets, whereas the other PGSI groups would be more likely to place the traditional and exotic bets. Micro-bets have high frequency, a restricted number of potential outcomes and small timeframes (under 5 min) between bets being accepted and the outcome being realized. Forrest, McHale, and McAuley (2008) explain that traditional bets have limited appeal to bettors with high-risk preferences, since matches are typically played between reasonably

well-matched competitors. Offering in-play bets on match contingencies through micro-bets enables a wider range of odds to be offered, increasing their appeal to high-risk bettors. The particular appeal of micro-bets to problem gamblers aligns with evidence that they pose the greatest problem gambling risk of all bet types because they enable repetitive high-frequency betting on short-term outcomes (Braverman, LaPlante, Nelson, & Shaffer, 2013; Gray, LaPlante, & Shaffer, 2012; Hing et al., 2016; LaPlante, Schumann, LaBrie, & Shaffer, 2008; LaPlante et al., 2014; Nelson et al., 2008).

The type of appeal was less important in gaining attention, creating interest and temptation, and increasing the likelihood of placing the bet. The problem gamblers generally responded most to a neutral appeal, as did the moderate-risk gamblers, although the latter were also tempted by an appeal to the urgency of placing the bet. The low-risk gamblers responded most to this sense of urgency, whereas the non-problem gamblers found ease of placing the bet to be most persuasive. It may be that problem gamblers are more interested in factual information such as the nature of the bet and its odds; at-risk gamblers may be more tempted when an offer is presented as time-limited requiring hasty action; whereas the likely relative betting inexperience of non-problem gamblers may explain why they responded most to ease of placing the bet. By presenting a range of appeals, sports betting operators appear to be targeting a wide range of bettors. Message format was also less important than bet type and presenter type. Problem and low-risk gamblers tended to respond most to the on-screen display, and moderate-risk and non-problem gamblers to the commentary format.

The above findings should be interpreted with several caveats. The sample was not representative of sports bettors, so whether the results are generalizable is unknown. Ethical reasons prevented us from asking participants to actually place bets, so our assessment involved only attention, interest, temptation (desire), and likelihood of placing the bet (action). The message elements assessed were also constrained to only a selection of attributes and a limited number of variations of those attributes. The sports betting advertisements were embedded within an online survey, so the usual contextual factors present when respondents view sports betting advertisements were absent. While the advertisements were as real-to-life as possible, having been produced by a professional production house with paid actors, they were unable to include real match presenters and sports betting operator representatives who may have celebrity status and be known to bettors, possibly detracting from an authentic or "real" TV presentation and therefore may have a different influence on betting.

The analysis was also limited to examining differences in the PGSI groups and did not extend to reporting on differences between gender groups, particularly in response to the importance of an attractive non-expert female presenter. Given recent calls to increase the use of female presenters as sports broadcasters in Australia (Mathieson, 2016), future research could explore gender responses to different sports presenters in sports advertising. This study was also limited to adults. Although gambling by minors is illegal, they are exposed to sports

betting advertisements during televised sport. Replicating the study with a sample of minors would identify message attributes of most appeal to young people, which may inform effective regulatory responses. The number of advertisements we could ask respondents to assess was constrained by the project budget relative to the cost of filming, and potential respondent fatigue in assessing more than 20 advertisements. Thus, each type of presenter was portrayed by only one actor each, so we could not assess any differences that may have been associated with different genders and ages of each type of presenter. Finally, the study presented advertisements for only one type of sport (rugby league) and different results may be obtained for other sports given that their advertising and viewing audiences may differ.

CONCLUSIONS

There has been a growing body of literature examining the extent and impact of the advertising and promotion on gambling across the world, including for sports betting (e.g., Binde, 2014; Derevensky et al., 2010; Friend & Ladd, 2009; Gordon et al., 2015; Hing, Cherney, et al., 2014; Lopez-Gonzalez et al., 2017; Sproston et al., 2015). This has raised concerns about the use, extent and impact on the harm associated with gambling and impact on the community more generally, with calls for more effective regulatory control. This study provides new insights into the influence of four different message attributes in sports betting advertisements on eliciting attention, interest, desire, and likelihood of placing the promoted bet. It also informs an understanding of which types of presenters, bets, appeals, and message formats are most salient to bettors at different levels of problem gambling severity.

In relation to the presenter type, the attractive non-expert female presenter was found to have a high impact in terms of gaining attention. The value of having non-experts commentating on topics outside their expertise is questioned in relation to messages that can sway vulnerable groups in the community to partake in harmful activity; and it is believed advertisers should at least be selecting presenters who have relevant expertise in areas where professional advice and commentary is being provided.

The most important finding was the overwhelming attraction of the risk-free bet over other bet types, and to all PGSI groups. Wagering inducements have received substantial criticism for their potential to undermine harm minimization and consumer protection, and their advertising is pervasive across a range of media, including within televised sporting events during general viewing times. Thus, their attractiveness to bettors, potential for harm, and frequent advertising present a potent mix that can be expected to contribute to sports betting problems and addiction. The study also found that problem gamblers are particularly attracted to in-play micro-bets, in accordance with previous research. A prudent approach would be for regulators to tighten restrictions on, or even outlaw, wagering inducements and in-play betting to advance their harm minimization policy objectives. However, doing so may also risk driving bettors to the numerous unregulated betting

websites that are easily accessible, and which provide even less consumer protection. It would also be prudent for operators to stop or at least reduce the offering and advertising of these inducements and micro-bets in line with their responsible gambling objectives; and to cease practices that are likely to induce problem gamblers to increase their gambling. Consumer education to relay the potential dangers associated with in-play betting and wagering inducements may also be useful, particularly if provided by non-industry organizations such as support groups, help services, and public health websites that provide information to gamblers and the public. Further research into the effects of other types of wagering inducements on betting behavior is also warranted.

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