Perceptions, Policy, and Public Messaging in U.S. Sports Betting

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Why Study Perceptions?
The Value (and Limits) of Perception Research

Background

- Perceptions shape attitudes, intentions, and decision-making — central constructs across social science.
- They help explain the gap between objective conditions and human behavior.
- Provide insight into how individuals interpret complex systems, policies, or risks.
- Extensively validated in theories such as the Theory of Reasoned Action and Planned Behavior.

Limitations

- Perceptions are subjective and context-dependent, varying across individuals and groups.
- They may not align with objective reality or actual behaviors.
- Reliance on self-reports introduces potential biases (e.g., social desirability, recall).
- Best understood when paired with behavioral, experimental, or policy outcome data

Perception = Reality

- Expansion of sports betting in U.S. post-PASPA.
- Growth vs. public concerns: economic potential, integrity, addiction.
- The gap: regulations and campaigns succeed/fail depending on perceptions.

Three Studies

- **Study 1:** Aims to understand voter attitudes, perceived impacts, and intentions to support or oppose legal sports betting
- **Study 2:** **How one's perception of legality impacts their sense of control and wagering behaviors**
- **Study 3:** **How effective is a "Bet Responsibly" PSA among sports fans?**

Study 1: Voter attitudes, perceived impacts, and intentions to legalize

What Do Californians Want?

Why the Study?

To understand California voters' attitudes, perceived impacts, and intentions to support or oppose legal sports betting.

Research Objectives

- Identify drivers of support and opposition
- Examine the roles of attitudes, norms, and perceived impacts of sports betting legalization on intentions to support or oppose legal sports betting
-Segment voters into meaningful clusters

Research Questions

RQ1: How do the attitudes and subjective norms of voters in a non legal state influence their decision to support or not support sports betting legalization?

RQ2: How do the perceived impacts of legalizing sports betting influence one's attitude about sports betting?

RQ3: How do differing segments of potential voters vary in their attitudes, perceived impact, social norms and intention to support legalizing sports betting?

Study 1: Voter attitudes, perceived impacts, and intentions to legalize

Methodology

Sample & Recruitment

- N = 529 California Residents (aged 18+)
- Average age: 35.2
- Recruited via Prolific

Table 1. Participant demographics.

Category	*N*	%	Category	*N*	%
Gender			**Marital Status**		
Female	263	49.8%	Divorced/Separated	22	4.2%
Male	246	46.6%	Living with a partner	60	11.4%
Non-binary/third gender	15	2.8%	Married	151	28.6%
Prefer not to say	4	0.8%	Never been married	293	55.5%
			Widowed	1	0.2%
Employment			**Race**		
A homemaker or stay-at-home parent	25	4.7%	American Indian or Alaska Native	8	1.5%
Other	15	2.8%	Asian	153	29%
Retired	11	2.1%	Black or African American	31	5.9%
Student	51	9.7%	Native Hawaiian or Other Pacific Islander	3	0.6%
Unemployed and looking for work	52	9.8%	White	259	49.1%
Working full-time	276	52.3%	Other	59	11.2%
Working part-time	98	18.6%	Prefer not to answer	14	2.7%

Methodology: Measures Used

Part 1: Attitudes toward gambling scale (ATGS-8) (Canale et al., 2016) adopted for sports betting. 5-point Likert scale of Strongly disagree to Strongly Agree

1. People should have the right to bet on sports whenever they want
2. There are too many opportunities for betting on sports nowadays
3. Sports betting should be discouraged
4. Most people who bet on sports do so sensibly
5. Sports betting is dangerous for family life
6. On balance, sports betting is good for society
7. Betting on sports livens up life
8. It would be better if sports betting was banned altogether

Cronbach's alpha = 0.84

Part 2: Subjective Norms (Adapted from Wu et al., 2017)

Regarding your decision to vote yes or no on legalizing sports betting in California…

10. People who influence my decisions would agree with my decision
11. People who are important to me would agree with my decision
12. People whose opinions I value would approve of my decision
13. Friends who are important to me would approve of my decision
14. Co-workers who are important to me would agree with my decision

Cronbach's alpha = 0.89

Methodology: Measures Used

Part 3: Perceived Impact (Back, K. J., & Lee, C. K. 2005).

If sports betting were to become legal in California, I think it would lead to an increase of… (5-point Likert scale from strongly disagree – strongly agree)

Social Cost
15. Gambling addicts
16. Bankruptcy
17. Destruction of family
18. Prostitution
19. Divorce
20. Alcoholism
21. Crime

Cronbach's alpha = 0.77

Social Benefit
22. Quality of life
23. Community spirit
24. Educational environment
25. Pride of local residents
26. Conservation of local culture

Economic Cost
27. Cost of living
28. Tax burden
29. Mismanagement of sports betting revenue

Economic Benefit
30. Investments and local business
31. Tourist spending
32. Standard of living
33. State tax revenue
34. Employment opportunities
35. Personal income

Part 4: Intention to support legalized sports betting in future referenda (Wu et al., 2017)

If there was a vote to legalize sports betting in California… (5-point Likert scale strongly disagree to strongly agree).

36. I intend to support
37. I plan to support
38. I intend to encourage others to support
39. I would vote "yes" if a referendum were held today

Cronbach's alpha = 0.96

Results

RQ1: How do the attitudes and subjective norms of voters in a non legal state influence their decision to support or not support sports betting legalization?

- Correlation between attitudes towards sports betting and voting intentions was strong and positive ($r = 0.768$, $p < 0.01$)
- The relationship between subjective norms and voting intentions was weaker but still significant ($r = 0.123$, $p < 0.01$).

Table 2. Correlation matrix.

Variable	1	2	3	4	5	6	7
1. Attitudes	1	0.768**	−0.556**	0.588**	−0.357**	0.562**	0.107*
2. Voting Intention	0.768**	1	−0.508**	0.518**	−0.307**	0.537**	0.123**
3. Social Cost	−0.556**	−0.508**	1	−0.370**	0.506**	−0.266**	−0.103*
4. Social Benefit	0.588**	0.518**	−0.370**	1	−0.113**	0.622**	0.114**
5. Economic Cost	−0.357**	−0.307**	0.506**	−0.113**	1	−0.066	−0.008
6. Economic Benefit	0.562**	0.537**	−0.266**	0.622**	−0.066	1	0.113**
7. Subjective Norms	0.107*	0.123**	−0.103*	0.114**	−0.008	0.113**	1

Note: *$p < 0.05$; **$p < 0.01$.

Results

RQ2: How do the perceived impacts of legalizing sports betting influence one's attitude about sports betting?

- Perceived social and economic impacts collectively explain approximately 55.3% of the variance in attitudes towards sports betting.
- The strongest positive predictor was the perceived economic benefits (Beta = 0.300, $p < 0.001$), while the strongest predictor of negative attitudes was social costs (Beta = −0.286, $p < 0.001$).

Table 3. Multiple regression analysis predicting attitudes toward sports betting.

Variable	*B*	SE B	*β*	*t*	*p*
Constant	2.905	0.143		20.326	< 0.001
Social Cost	−0.242	0.031	−0.286	−7.699	< 0.001
Social Benefit	0.232	0.032	0.284	7.179	< 0.001
Economic Cost	−0.142	0.03	−0.165	−4.765	< 0.001
Economic Benefit	0.266	0.034	0.3	7.873	< 0.001

Note: $R^2 = 0.553$, Adjusted $R^2 = 0.550$, $F(4, 502) = 157.606$, $p < 0.001$.

Results

RQ3: How do differing segments of potential voters vary in their attitudes, perceived impact, social norms and intention to support legalizing sports betting?

- Hierarchical cluster analysis using Ward's method with squared Euclidean distanced indicated a 3-5 cluster solution
- These were tested using K-means clustering and 3 clusters were decided on
- ANOVA testing shows significant results for differences among clusters across the board

Table 4. K-means clustering results: mean scores of the identified clusters.

Cluster	Vote support intentions	Attitudes	Social cost	Social benefit	Economic cost	Economic benefit	Subjective norms
Supporters (n = 125)	4.26	3.73	2.14	2.97	2.23	3.41	3.76
Neutrals (n = 224)	3.18	3.19	3.36	2.67	3.32	3.36	3.4
Opponents (n = 157)	1.45	2.37	3.69	1.48	3.20	2.21	3.50

Table 5. ANOVA results: differences among clusters on voting intentions, attitudes, perceived impacts, and subjective norms.

Dependent Variable	F	df	p-value	Eta-squared	Post-hoc Comparisons
Voting Intentions	179.037	2, 502	<0.001	0.416	Supporters > Neutrals > Opponents
Attitudes	257.145	2, 503	<0.001	0.506	Supporters > Neutrals > Opponents
Social Cost	242.98	2, 505	<0.001	0.491	Opponents > Neutrals > Supporters
Social Benefit	225.323	2, 505	<0.001	0.473	Supporters > Neutrals > Opponents
Economic Cost	101.783	2, 505	<0.001	0.288	Opponents, Neutrals > Supporters
Economic Benefit	197.682	2, 505	<0.001	0.44	Supporters > Neutrals > Opponents
Subjective Norms	11.061	2, 505	<0.001	0.042	Supporters > Neutrals, Opponents

Note: Post-hoc Comparisons were based on Tukey's HSD tests. '>' indicates a statistically significant difference between groups. The Eta-squared value indicates the proportion of variance in the dependent variable explained by the cluster membership.

Implications for Policy & Practice

- Supporters already acknowledge the potential economic benefits, but it is potential social cost hurting support for legalization in other segments. Instead of policy and ads that focus on those benefits, make a shift to how resources and policy will focus on concerns around addiction and other social costs if sports betting is legalized

- Have streamlined and clear advertising. Have all key stakeholders on board together.

Study 2:
How one's perception of legality impacts their sense of control and wagering behaviors

Consumer Perceptions of Legality

- The varying state laws could lead to confusion among consumers regarding what forms of online sports betting are legal.
- Even experienced sports bettors are often confused about the laws and regulations around sports betting (Dwyer et al., 2023)
- Could this confusion influence how consumers engage with online betting platforms?

Research Questions

RQ1: How does perceived legality of online sports betting influence perceptions of consumer protection and trust in betting platforms?

RQ2: What is the relationship between perceived legality of online sports betting and perceived behavioral control in sports betting activities?

RQ3: How does the perception of legality of online sports betting impact future betting intentions?

RQ4: How do perceptions of legality influence consumer perceptions and behavioral outcomes between bettors and non-bettors?

Methodology

- Online survey (n=403) of California Residents
- Data collected through the Prolific survey platform, administered on Qualtrics
- Two conditions: 1) Read about DFS or 2) Read about Pick'em betting, then were asked the following measures

Measures

Perceived Legality: Participants answered "Yes" or "No" to whether they believed the betting activity was legal.
Perceived Consumer Protection: 3-item scale measuring trust in platform fairness and security (Gainsbury et al., 2018).
Perceived Behavioral Control: 3-item scale assessing confidence in ability to gamble (Hing et al., 2015).
Future Betting Intentions: 3-item scale evaluating likelihood of future betting (Kape et al., 2024).
Betting Experience: Participants classified as "Bettors" if they had placed a bet on sports in the last 12 months; otherwise, "Non-Bettors".

Data Analysis

Reliability Tests: Ensured internal consistency of scales (Cronbach's alpha).
Descriptive Statistics: Calculated means and standard deviations.
ANCOVA and MANCOVA: Analyzed the impact of perceived legality on dependent variables, controlling for betting activity type.

About the Participants

Category	N	%	Category	N	%
Age			**Marital Status**		
18-24 years old	58	14.4%	Divorced/Separated	17	4.2%
25-34 years old	164	40.7%	Living with a partner	65	16.1%
35-44 years old	96	23.8%	Married	107	26.6%
45-54 years old	56	13.9%	Never been married	213	52.9%
55-64 years old	22	5.5%	Widowed	2	.5%
65+ years old	7	1.7%			
Gender			**Race**		
Female	186	46.2%	American Indian or Alaska Native	4	1%
Male	202	50.1%	Asian	112	27.8%
Non-binary/third gender	12	3%	Black or African American	23	5.7%
Prefer not to say	2	.5%	Native Hawaiian or Other Pacific Islander	4	1%
Employment			White	207	51.4%
A homemaker or stay-at-home parent	18	4.5%	Other	43	10.7%
Other	14	3.5%	Prefer not to answer	9	2.2%
Retired	7	1.7%			
Student	23	5.7%			
Unemployed and looking for work	55	13.6%			
Working full-time	226	56.1%			
Working part-time	60	14.9%			

Results

Group	Perceived Consumer Protection	Perceived Behavioral Control	Future Betting Intentions
Perceived Legality			
Not Legal (n=251)	3.23	2.94	2.16
Legal (n=152)	3.73	3.46	2.90
Total	3.42	3.14	2.44
Betting Experience			
Non-Bettor (n=195)	3.15	2.58	1.51
Bettor (n=208)	3.66	3.66	3.31
Total	3.42	3.14	2.44
Betting Game			
Pick'em (n=201)	3.31	3.11	2.36
DFS (n=202)	3.52	3.07	2.52

Results
Reliability & Descriptive Statistics

Reliability of Scales:

- Perceived Consumer Protection: $\alpha = 0.87$
- Perceived Behavioral Control: $\alpha = 0.78$
- Future Betting Intentions: $\alpha = 0.95$

Perceived Legality:

Those who perceived betting as legal reported higher means in:

- Consumer Protection (M = 3.73)
- Behavioral Control (M = 3.46)
- Future Betting Intentions (M = 2.90)

Betting Experience: Bettors scored higher than non-bettors in all measures.

Results
ANCOVA Testing

RQ1: Influence on Perceived Consumer Protection

•Perceived Legality Effect:

- Significant positive impact ($F = 32.27$, $p < .001$).
- Participants perceiving legality felt more protected.

RQ2: Relationship with Perceived Behavioral Control

•Perceived Legality Effect:

- Significant positive relationship ($F = 27.076$, $p < .001$).
- Legal perceptions enhanced confidence in ability to bet.

RQ3: Impact on Future Betting Intentions

•Perceived Legality Effect:

- Significant impact ($F = 30.71$, $p < .001$).
- Legality perception increased intention to bet in the future.

RQ4: Bettors vs. Non-Bettors

•Bettors Reported Higher:

- Perceived Consumer Protection
- Perceived Behavioral Control
- Future Betting Intentions

Significant Differences:

- After controlling for betting activity type.

Results

Bettors vs Non Bettors Tests of Between-Subject Effects

Dependent Variable	Source	F	Sig.	Partial Eta Squared
Perceived Consumer Protection	Betting Game	5.733	0.017	0.014
	Betting Experience	37.001	<.001	0.085
Perceived Behavioral Control	Betting Game	3.368	0.067	0.008
	Betting Experience	116.541	<.001	0.226
Future Betting Intentions	Betting Game	0.949	0.33	0.002
	Betting Experience	350.964	<.001	0.467

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Bettor vs Non-Bettor Pairwise Comparisons

Dependent Variable	Group Comparison	Mean Difference	Std. Error	Sig.	95% Confidence Interval for Difference
Perceived Consumer Protection	Non-Bettors - Bettors	-0.5	0.083	<.001	[-0.67, -0.34]
Perceived Behavioral Control	Non-Bettors - Bettors	-1.09	0.101	<.001	[-1.29, -0.89]
Future Betting Intentions	Non-Bettors - Bettors	-1.8	0.096	<.001	[-1.99, -1.62]

Discussion

For Operators and Marketers:

Emphasize Legal Compliance:

- Highlight legal status in marketing materials.
- Provide transparent information about regulations.

Enhance Trust and Engagement:

- Promote fairness and security features.
- Educate consumers about responsible gambling tools.

For Regulators and Policymakers:

Need for Clear Regulations:

- Address fragmented legal landscape.
- Ensure consumers understand what is legal.
- Aligning legal frameworks with consumer perceptions to enhance trust and responsible participation.

Educate Consumers:

- Increase awareness of legal rights and protections.
- Develop a verification system for operators to display

Combat Illegal Platforms:

- Prevent offshore operators from misleading consumers.

Study 3: How effective is a ”Bet Responsibly” PSA among sports fans?

Elaboration Likelihood Model (ELM)

Two Routes of Persuasion:

Central Route → Careful, thoughtful processing of arguments.

Works best when audiences are motivated and able to engage.

Leads to stronger, longer-lasting attitude change.

Peripheral Route → Reliance on cues like celebrity, branding, or visuals.

Requires less cognitive effort.

Effects are often weaker and short-lived.

Application to PSAs:

Central PSA → Focused on facts, clarity, and informativeness.

Peripheral PSA → Relied on celebrity (Kurt Warner) + NFL branding.

Study 3: How effective is a ”Bet Responsibly” PSA among sports fans?

RQ1: How do central route factors influence perceived PSA effectiveness?

RQ2: How do peripheral route factors influence perceived PSA effectiveness?

RQ3: To what extent does sports fandom moderate the relationship between message processing and PSA effectiveness?

RQ4: To what extent does betting involvement moderate the relationship between message processing and PSA effectiveness?

RQ5: What impact does perceived PSA effectiveness have on positive play outcomes?

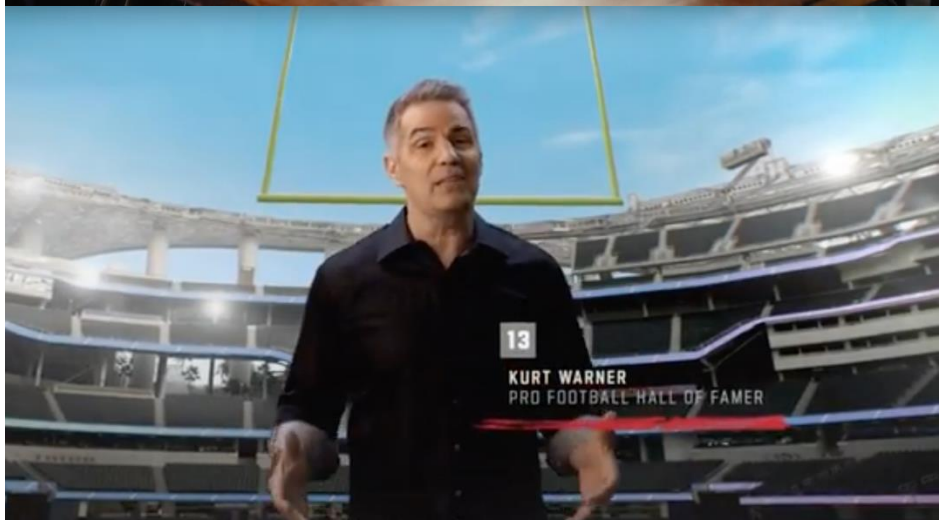
Study 3: How effective is a “Bet Responsibly” PSA among sports fans?

Study Design

- Participants: 734 NFL fans, online experiment
- Video of responsible sports betting PSA and follow up survey

Conditions:

- Central PSA (informational, referee character).
- Peripheral PSA (NFL-branded, Kurt Warner).



Study 3: How effective is a "Bet Responsibly" PSA among sports fans?

Measures

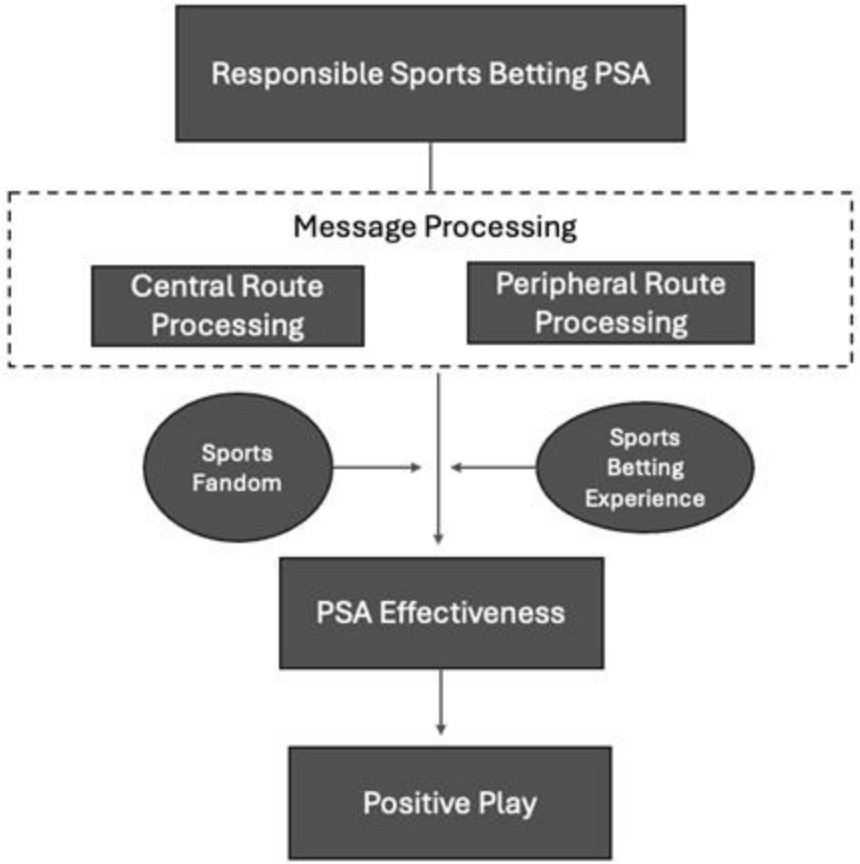
- **NFL Fandom** (James et al., 2019)

- **Sports Betting Experience/Frequency** (Marchica et al., 2017)

- **Message Processing Routes** (Reynolds, 1997)
  - *Central route*: perceived argument strength (e.g., "The message gave strong reasons for betting responsibly"), perceived informativeness, and message clarity.
  - *Peripheral route*: source credibility (e.g., "The spokesperson seemed trustworthy"), emotional appeal, and visual appeal.

- **PSA Effectiveness** (Gilbert & Stafford, 2024)
  - Emotional Engagement, Social Support & Education, Behavioral Intentions

- **Positive Play** (Wood et al., 2017)
  - Honesty & Control, Pre-commitment, Personal Responsibility, Gambling Literacy



About the Participants

Category	N	%		Category	N	%
Gender				Sports Betting Experience		
Female	328	44.7%		None at all	198	27.0%
Male	399	54.4%		Less than once a month	196	26.7%
Non-binary/third gender	5	0.7%		About once a month	163	22.2%
Prefer not to say	2	0.3%		About once a week	144	19.6%
				Daily	33	4.5%
Race						
American Indian or Alaska Native	4	0.5%		Age Range	18-79	
Asian	28	3.8%		Average Age	41.7	
Black or African American	130	17.7%				
Native Hawaiian or Other Pacific Islander	4	0.5%				
White	532	72.5%				
Other	7	1.0%				
Prefer not to say	29	4.0%				

Results

Descriptive Statistics by Condition

Measure	Generic PSA (n = 370)		NFL PSA (n = 364)	
	M	SD	M	SD
Central Processing	5.10	1.29	5.10	1.78
Peripheral Processing	2.50	1.27	2.49	1.16
PSA Effectiveness – Total	5.27	0.99	4.91	1.08
└ Social Support & Education	6.60	1.20	5.70	1.64
└ Emotional Engagement	5.29	1.25	5.39	1.15
└Behavioral Intentions	4.32	1.64	4.21	1.69

Results

PSA Effectiveness

PSA Effectiveness Subdimension	Predictor	F	p	Partial Eta Squared (η^2)
Emotional Engagement	Central Processing	272.56	< .001**	0.276
	Peripheral Processing	20.14	< .001**	0.027
	PSA Condition	2.66	.103	0.004
Social Support & Education	Central Processing	73.52	< .001**	0.093
	Peripheral Processing	0.90	.344	0.001
	PSA Condition	82.47	< .001**	0.104
Behavioral Intentions	Central Processing	10.05	.002*	0.014
	Peripheral Processing	4.04	.045*	0.006
	PSA Condition	0.71	.401	0.001

Note. * indicates $p < 0.05$. ** indicates $p < 0.01$.

Results

Positive Play

Positive Play Outcome	Predictor	F	p	Partial Eta Squared (η^2)
Honesty & Control	Social Support & Education	5.05	.025*	.007
	Emotional Engagement	.01	.934	.000
	Behavioral Intention	7.32	.007**	.010
Personal Responsibility	Social Support & Education	14.87	<.001**	.020
	Emotional Engagement	0.50	.481	.001
	Behavioral Intention	21.15	<.001**	.028
Gambling Literacy	Social Support & Education	6.61	.010*	.009
	Emotional Engagement	3.91	.048*	.005
	Behavioral Intention	6.58	.011*	.009
Pre-commitment	Social Support & Education	0.38	.539	.001
	Emotional Engagement	8.86	.003*	.012
	Behavioral Intention	21.27	<.001**	.028

Note. * indicates $p < 0.05$. ** indicates $p < 0.01$.

Study 3: Key Findings

Central (informational) PSA was most effective

- Rated higher in clarity, credibility, and informativeness
- Stronger predictor of positive play attitudes.

NFL-branded PSA underperformed

- Heavy branding may have diluted credibility.
- Celebrity appeal (Kurt Warner) did not enhance effectiveness.

Audience differences did not matter

- Sports fandom and betting involvement did **not** moderate PSA impact.
- Message design > audience traits in shaping perceptions.

Takeaway: *Clear, credible content outperforms flashy, branded appeals.*

Study 3: Implications

For policymakers & regulators

- Invest in public campaigns that emphasize *clarity and credibility* over branding.

For operators & leagues

- Design PSAs that provide *practical, informative guidance* (e.g., setting limits, recognizing risks).
- Avoid over-reliance on league or operator logos, which may undermine trust.

For researchers & advocates

- Evidence suggests message *content* matters more than celebrity or design polish.
- Future studies should test how perceptions of credibility shape long-term behavior change.

Core takeaway: *PSAs succeed when the audience perceives them as useful and trustworthy.*

Perception = Reality

Across Policy and Messaging – Perceptions Drive Outcomes

Study 1: Impact of Sports Betting

Perceptions of *economic & social impacts* divided voters into supporters, neutrals, and opponents.

Study 2 – Perceptions of Legality

Perceptions of *legality* shaped trust, control, and betting intentions more than actual law.

Study 3 – PSA Effectiveness

Perceptions of *credibility and informativeness* determined whether responsible gambling messages worked.

Unifying Lesson:

In sports betting, *facts alone are not enough* — outcomes depend on how people **perceive** them.

Perception = Reality

Turning Insights into Action

Policy: Shape legalization campaigns around *public concerns and voter perceptions*, not just economic arguments.

Consumer Trust: Build frameworks that make legality and protections *clear and visible* to bettors.

Messaging: Prioritize *clarity, credibility, and usefulness* in responsible gambling PSAs over branding or celebrity.

Final Thought: *Perceptions don't just reflect reality — in sports betting policy and messaging, they **create** it.*

Thank You

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