

**‘No evidence of harm’ implies no evidence of safety: Framing the lack of causal evidence in gambling advertising research**

Philip Newall <sup>1\*</sup>, Youssef Allami <sup>2</sup>, Maira Andrade <sup>1</sup>, Peter Ayton <sup>3</sup>, Rosalind Baker-Frampton <sup>4</sup>, Daniel Bennett <sup>5</sup>, Matthew Browne <sup>6</sup>, Christopher Bunn <sup>7</sup>, Reece Bush-Evans <sup>8</sup>, Sonia Chen <sup>9</sup>, Sharon Collard <sup>10</sup>, Steffi De Jans <sup>11</sup>, Jeffrey Derevensky <sup>12</sup>, Nicki A. Dowling <sup>13</sup>, Simon Dymond <sup>14,15</sup>, Andree Froude <sup>16</sup>, Elizabeth Goyder <sup>17</sup>, Robert M. Heirene <sup>18</sup>, Nerilee Hing <sup>6</sup>, Liselot Hudders <sup>11</sup>, Kate Hunt <sup>19</sup>, Richard J. E. James <sup>20</sup>, En Li <sup>21</sup>, Elliot A. Ludvig <sup>22</sup>, Virve Marionneau <sup>23</sup>, Ellen McGrane <sup>17</sup>, Stephanie S. Merkouris <sup>13</sup>, Jim Orford <sup>24</sup>, Alberto Parrado-González <sup>25</sup>, Robert Pryce <sup>26</sup>, Matthew Rockloff <sup>6</sup>, Ulla Romild <sup>27</sup>, Raffaello Rossi <sup>28</sup>, Alex M. T. Russell <sup>29</sup>, Henrik Singmann <sup>30</sup>, Trudy Smit Quosai <sup>31</sup>, Sasha Stark <sup>31</sup>, Aino Suomi <sup>32</sup>, Thomas B. Swanton <sup>33</sup>, Niri Talberg <sup>34</sup>, Volker Thoma <sup>35</sup>, Jamie Torrance <sup>14,36</sup>, Catherine Tulloch <sup>6</sup>, Ruth J. van Holst <sup>37</sup>, Lukasz Walasek <sup>22</sup>, Heather Wardle <sup>7</sup>, Jane West <sup>38</sup>, Jamie Wheaton <sup>10</sup>, Leon Y. Xiao <sup>39,40,41,42</sup>, Matthew M. Young <sup>31,43,44</sup>, Maria Bellringer <sup>45</sup>, Steve Sharman <sup>46</sup>, Amanda Roberts <sup>47</sup>

Correspondence: Philip Newall, PhD, [philip.newall@bristol.ac.uk](mailto:philip.newall@bristol.ac.uk)

<sup>1</sup> School of Psychological Science, University of Bristol, 12a Priory Road, Bristol, BS8 1TU, UK

<sup>2</sup> Department of Psychology, University of Calgary, AB, Canada

<sup>3</sup> Centre for Decision Research, University of Leeds, Leeds University Business School, Leeds LS2 9JT, UK

<sup>4</sup> Gordon Moody, Unit 3, 1 Castle Court, Castlegate Way, Dudley, DY1 4RD, UK

<sup>5</sup> School of Psychological Sciences, Monash University, Wellington Road, Clayton VIC 3800, Australia

<sup>6</sup> School of Health, Medical and Applied Sciences, Central Queensland University, University Drive, Bundaberg, QLD, 4671, Australia,

<sup>7</sup> School of Social and Political Sciences, University of Glasgow, Adam Smith Building, Bute Gardens, Glasgow, G12 8QQ, UK

- <sup>8</sup> School of Psychology, Bournemouth University, Fern Barrow, Poole, BH125BB, UK
- <sup>9</sup> Ministry of Health New Zealand, 133 Molesworth Street, Thorndon, Wellington, New Zealand
- <sup>10</sup> School of Geographical Sciences, University of Bristol, 13 Berkeley Square, Bristol, BS8 1HB, UK
- <sup>11</sup> Department of Communication Sciences, Ghent University, Sint-Pietersnieuwstraat 41, Ghent, Belgium
- <sup>12</sup> Educational & Counselling Psychology, McGill University, 3724 McTavish Street, Montreal, Quebec, Canada
- <sup>13</sup> School of Psychology, Deakin University, 1 Gheringhap Street Geelong, Victoria 3220, Australia
- <sup>14</sup> School of Psychology, Swansea University, Singleton Campus, Swansea SA2 8PP, UK
- <sup>15</sup> Department of Psychology, Reykjavik University, Menntavegur 1, Nauthólsvík, 101 Reykjavík, Iceland
- <sup>16</sup> PGF Group, PO Box 8021 Newmarket Auckland 1149, New Zealand
- <sup>17</sup> Sheffield Centre for Health and Related Research, University of Sheffield, 30 Regent Street, Sheffield, S1 4DA, UK
- <sup>18</sup> School of Psychology, University of Plymouth, A210 Portland Square, University of Plymouth, Drake Circus, Plymouth, England, PL48AA, UK
- <sup>19</sup> Institute for Social Marketing and Health, University of Stirling, Pathfoot Building, FK9 4LA, Scotland, UK
- <sup>20</sup> School of Psychology, University of Nottingham, University Park, Nottingham, NG7 2RD, UK
- <sup>21</sup> School of Business and Law, Central Queensland University, Bruce Highway, Central Queensland University, Rockhampton, QLD, 4701 Australia
- <sup>22</sup> Department of Psychology, University of Warwick, Humanities Building, University of Warwick, CV4 7AL, England, UK
- <sup>23</sup> Faculty of Social Sciences, University of Helsinki, Unioninkatu 33, 00014 Helsinki, Finland
- <sup>24</sup> School of Psychology, University of Birmingham, 9 York Mansions East, Temple Gardens, Brighton BN1 3AS, England, UK
- <sup>25</sup> Department of Social, Developmental and Educational Psychology, University of Huelva. Campus de «El Carmen». Avenida de las Fuerzas Armadas, S/N. 21071, Huelva, Spain.
- <sup>26</sup> School of Medicine and Population Health, University of Sheffield, 30 Regent Street, Sheffield. S1 4DA, UK
- <sup>27</sup> Department of Public Health Sciences, Stockholm University, Campus Albano, Albanovägen 12, House 4, 5th floor, SE-106 91 Stockholm, Sweden
- <sup>28</sup> Business School, University of Bristol, University of Bristol, Howard House, Bristol, BS8 1SD, UK
- <sup>29</sup> Experimental Gambling Research Laboratory, School of Health, Medical and Applied Sciences, CQUniversity, Level 6, 400 Kent St, Sydney, NSW, 2000, Australia
- <sup>30</sup> Department of Experimental Psychology, UCL, 26 Bedford Way, London WC1H 0AP, UK

<sup>31</sup> Greo Evidence Insights, 3-304 Stone Road West, Suite 195 Guelph, Ontario, N1G 4W4, Canada

<sup>32</sup> Centre for Gambling Research, Australian National University, 146 Ellery Crescent, ACT 0200, Acton, Australia

<sup>33</sup> School of Psychology, The University of Sydney, 94 Mallett Street, Camperdown NSW 2050, Australia

<sup>34</sup> Norwegian National Advisory Unit on Concurrent Substance Abuse and Mental Health Disorders, Innlandet Hospital Trust, Brumunddal, Norway

<sup>35</sup> School of Psychology, University of East London, UEL, Water Lane, London, E154LZ, UK

<sup>36</sup> School of Psychology, University of Chester, Parkgate Rd, Chester, CH14BJ, UK

<sup>37</sup> Department of Psychiatry, Amsterdam UMC -University of Amsterdam, Meibergdreef 5, 1100 DD Amsterdam, the Netherlands

<sup>38</sup> Bradford Teaching Hospitals NHS Trust, Bradford, BD9 6RJ, UK

<sup>39</sup> Center for Digital Play, IT University of Copenhagen, Rued Langgaards Vej 7 København, Denmark 2300

<sup>40</sup> Department of Computer Science, University of York, UK

<sup>41</sup> Transatlantic Technology Law Forum, Stanford Law School, Stanford University, USA

<sup>42</sup> The Honourable Society of Lincoln's Inn, Lincoln's Inn, London, UK

<sup>43</sup> Department of Psychology, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario, K1S 5B7, Canada

<sup>44</sup> Canadian Centre on Substance Use and Addiction, 75 Albert Street, Suite 500, Ottawa, Ontario, K1P 5E7, Canada

<sup>45</sup> Gambling and Addictions Research Centre, Auckland University of Technology, Private Bag 92006, Auckland 1142, Auckland, New Zealand

<sup>46</sup> National Addiction Centre, King's College London, 4 Windsor Walk, London, SE5 8AF, UK

<sup>47</sup> School of Psychology, University of Lincoln, University of Lincoln. Brayford Pool, Lincoln, Lincolnshire. LN6 7TS, UK

### **Declaration of interests:**

None of the authors have any conflicts of interest in relation to this letter. Author disclosures are provided below.

**Philip Newall:** Philip Newall is a member of the Advisory Board for Safer Gambling – an advisory group of the Gambling Commission in Great Britain, and in 2020 was a special advisor to the House of Lords Select Committee Enquiry on the Social and Economic Impact of the Gambling Industry. In the last three years, Philip Newall has contributed to research projects funded by the Academic Forum for the Study of Gambling, Clean Up Gambling, Gambling Research Australia,

NSW Responsible Gambling Fund, and the Victorian Responsible Gambling Foundation. Philip Newall has received travel and accommodation funding from Alberta Gambling Research Institute and received open access fee funding from Gambling Research Exchange Ontario.

**Maira Andrade:** PhD student awarded a University of Bristol Scholarship to investigate online gambling with cryptocurrencies.

**Youssef Allami:** YA has received consulting fees from the social responsibility division of a provincial (Crown Corporation) gambling operator in Canada

**Peter Ayton:** N/A

**Rosalind Baker-Frampton:** Gordon Moody has received funding from gambling operators and GambleAware.

**Daniel Bennett:** Daniel Bennett has received research funding from the Australian National Health and Medical Research Council

**Matthew Browne:** MB has received research funds from the Gambling Research Australia, Victorian Responsible Gambling Foundation, Queensland Government Department of Health, South Australian Government, Australian Department of Social Services, and the New Zealand Ministry of Health. He declares no conflicts of interest in relation to this manuscript.

**Christopher Bunn:** In the last five years, Chris has received funding for research relating to gambling from: ESRC, NIHR and the British Academy

**Reece Bush-Evans:** Reece Bush-Evans has received research funding in the last five years from the Academic Forum for the Study of Gambling (AFSG) and GREO, and GambleAware. He has received conference travel from AFSG and funding from Aspire Global to deliver a presentation on safer gambling in 2021.

**Sonia Chen:** Sonia Chen works as the Principal Research Advisor leading the gambling harm research programme of the New Zealand government's Preventing and Minimising Gambling Harm Strategy

**Sharon Collard:** Sharon Collard has received funding for gambling harms research from GambleAware, abrdn Financial Fairness Trust, ESRC IAA, The Seafarer's Charity and Gambling Commission regulatory settlement funds. She is a member of the Bristol Hub for Gambling Harms Research.

**Steffi De Jans:** N/A

**Jeffrey Derevensky:** Jeffrey Derevensky has received funding from a number of governmental bodies and gambling operators

**Nicki A. Dowling:** In the last three years, she has received research funding from multiple sources, including the Victorian Responsible Gambling Foundation, New South Wales Office of Responsible Gambling, Tasmanian Department of

Treasury and Finance, Gambling Research Australia, Swedish Gambling Research Council, Health Research Council of New Zealand, and New Zealand Ministry of Health. She has been the recipient of a Deakin University Faculty of Health Mid-Career Fellowship. She has not knowingly received research or consultancy funding from the gambling, tobacco, or alcohol industries or any industry-sponsored organisation.

**Simon Dymond:** SD has received funding from GambleAware, Gambling Commission (regulatory settlements), Greo, Academic Forum for the Study of Gambling (AFSG), and International Center for Responsible Gaming. SD is a founding member of the AFSG Executive Committee. He is Director of the Gambling Research, Education and Treatment (GREAT) Network Wales, which is funded by Welsh Government through Health and Care Research Wales (HCRW). The views expressed are those of the author/s and not necessarily those of HCRW or Welsh Government.

**Andree Froude:** N/A

**Elizabeth Goyder:** N/A

**Robert M. Heirene:** Robert Heirene has worked on a project funded by Responsible Wagering Australia (a representative body of Australian online wagering operators; 2019-2021) and as an independent, sub-contracted statistical consultant for PRET Solutions Inc on a commissioned project (funded by an Australian Casino operator; 2023)

**Nerilee Hing:** In the last five years, Nerilee Hing has received funding from has received funding from the Victorian Responsible Gambling Foundation; New South Wales Office of Responsible Gambling; South Australian Government; Gambling Research Australia; Australia's National Research Organisation for Women's Safety; New Zealand Ministry of Health; Australian Communications and Media Authority and the Alberta Gambling Research Institute.

**Liselot Hudders:** N/A

**Kate Hunt:** N/A

**Richard J. E. James:** Richard James has been principal investigator on grants funded by Gambling Research Exchange Ontario (GREO) and the Academic Forum for the Study of Gambling (AFSG), and co-investigator on a grant funded by the International Center for Responsible Gaming. The funds for the grants from GREO and AFSG were sourced from regulatory settlements levied by the UK Gambling Commission. The ICRG is funded by charitable donations sourced from the American gaming industry, and administered by an independent scientific panel

**En Li:** In the last five years, En Li has received funding from the Victorian Responsible Gambling Foundation.

**Elliot A. Ludvig:** N/A

**Virve Marionneau:** In the last five years, VM has received funding from the Academy of Finland, Finnish Ministry of Health and Welfare, and Finnish Foundation for Alcohol Studies.

**Ellen McGrane:** N/A

**Stephanie S. Merkouris:** Stephanie Merkouris has no conflicts of interest to declare in relation to this article. In the last three years, Stephanie Merkouris has received research funding from the Victorian Responsible Gambling Foundation, New South Wales Office of Responsible Gambling, Gambling Research Australia, Health Research Council of New Zealand and New Zealand Ministry of Health. She is currently the recipient of a New South Wales Office of Responsible Gambling Postdoctoral Fellowship. She has not knowingly received research or consultancy funding from the gambling, tobacco, or alcohol industries or any industry-sponsored organisation.

**Jim Orford:** N/A

**Alberto Parrado-González:** N/A

**Robert Pryce:** N/A

**Matthew Rockloff:** In the last five years, Matthew Rockloff has received funding from has received funding from the Victorian Responsible Gambling Foundation; New South Wales Office of Responsible Gambling; South Australian Government; Gambling Research Australia; New Zealand Ministry of Health; Australian Communications and Media Authority, and the Alberta Gambling Research Institute.

**Ulla Romild:** Ulla Romild is a member of the Advisory Board for Safer Gambling, an advisory group of the Gambling Commission in Great Britain, and a member of the Svenska Spel Research Board, an independent group in charge of distributing research funds from Svenska Spel

**Raffaello Rossi:** Raffaello Rossi has received funding from ESRC, GambleAware, UK Gambling Commission and Action Against Gambling Harms. He is member of the Bristol Hub for Gambling Harms Research

**Alex M. T. Russell:** In the last five years, Alex M T Russell has received funding from Victorian Responsible Gambling Foundation; New South Wales Office of Responsible Gambling; South Australian Government; Gambling Research Australia; New Zealand Ministry of Health; Australian Communications and Media Authority and the Alberta Gambling Research Institute. He has had travel expenses paid to present research by the Victorian Responsible Gambling Foundation, PsychMed and the Hawthorn Hawks Football Club Players Association. He has received an honorarium from Movember for assessing applications for funding and consulting fees from the Victorian Responsible Gambling Foundation. He declares no conflicts of interest in relation to this manuscript.

**Henrik Singmann:** N/A

**Trudy Smit Quosai:** Greo has received funds in the last three years from the Ontario Ministry of Health and Long-Term Care (Canada), social responsibility arms of Canadian state monopolies with responsibility to conduct and manage gambling (Canada), non-profits, charities, and post-secondary institutions (Canada), regulatory settlement funds (Great Britain), third-sector charities (Great Britain), and other international regulators. In the last two years in her previous role

at the Responsible Gambling Council, SS worked on projects funded by the Alcohol and Gaming Commission of Ontario (Canada), Carleton University (Canada), iGaming Ontario (Canada), Greo (Canada/Great Britain), the International Center for Responsible Gaming (US), MGM Resorts International (US), GambleAware (Great Britain), and Playtech (Great Britain).

**Sasha Stark:** Greo has received funds in the last three years from the Ontario Ministry of Health and Long-Term Care (Canada), social responsibility arms of Canadian state monopolies with responsibility to conduct and manage gambling (Canada), non-profits, charities, and post-secondary institutions (Canada), regulatory settlement funds (Great Britain), third-sector charities (Great Britain), and other international regulators. In the last two years in her previous role at the Responsible Gambling Council, SS worked on projects funded by the Alcohol and Gaming Commission of Ontario (Canada), Carleton University (Canada), iGaming Ontario (Canada), Greo (Canada/Great Britain), the International Center for Responsible Gaming (US), MGM Resorts International (US), GambleAware (Great Britain), and Playtech (Great Britain).

**Aino Suomi:** Aino Suomi has received funding from multiple sources, including Australian Federal and State/Territory government departments including the Victorian Responsible Gambling Foundation and the ACT Gambling and Racing Commission (through hypothecated taxes from gambling revenue). She has not received direct funding from the gambling industry.

**Thomas B. Swanton:** In the last three years, Thomas Swanton has received a PhD scholarship through the NSW Government's Gambling Research Capacity Grants program, funded by the NSW Responsible Gambling Fund, and supported by the NSW Office of Responsible Gambling. He has received student travel grants from the National Association for Gambling Studies.

**Niri Talberg:** Niri Talberg is a board member of The Nordic Society Foundation For Information About Problem Gambling (SNSUS) and Norwegian Association On Gambling And Gaming Problems (NFSP)

**Volker Thoma:** Volker Thoma is a former member of the Advisory Board for Safer Gambling (ABSG) - one of his PhD students has received a PhD stipend from GambleAware

**Jamie Torrance:** In the last three years, Jamie Torrance has received; 1) PhD funding from GambleAware, 2) Open access publication funding from GREO, 3) Paid consultancy fees from Channel 4, 4) Conference travel and accommodation funding from the Academic Forum for the Study of Gambling (AFSG), 5) A minor exploratory research grant from the ASFG and GREO.

**Catherine Tulloch:** In the last five years, Catherine Tulloch has received funding from the New South Wales Office of Responsible Gambling, the Victorian Responsible Gambling Foundation and has contributed to research projects funded by Gambling Research Australia.

**Ruth J. van Holst:** N/A

**Lukasz Walasek:** Lukasz Walasek received funding from the Greo and the Academic Forum for the Study Gambling (AFSG).

**Heather Wardle:** In the past 36 months, HW has been funded for gambling studies by the Economic and Social Research Council, National Institute for Health Research, Wellcome Trust, the Gambling Commission (including their regulatory settlement fund), Office of Health Disparities and Improvements; Greater London Authority; Greater Manchester Combined Authority and the Department of Digital Culture Media and Sport. HW has been paid fees for consulting from the Institute of Public Health, Ireland and the National Institute for Economic and Social Research HW has received payment for the delivery of a seminar from McGill University. HW has been paid as an expert witness by Middlesborough and Lambeth Borough Councils. She has provided unpaid advice on research to GamCare. She has received funding for travel from the Gambling Regulator European Forum. HW runs a research consultancy for public and third sector bodies. She has not, and does not, provide services to the gambling industry.

**Jane West:** JW is a ABSG member

**Jamie Wheaton:** Jamie Wheaton has received funding from GambleAware, and is a member of the Bristol Hub for Gambling Harms Research. He has also received seedcorn funding from the British Academy for conference travel.

**Leon Y. Xiao:** L.Y.X. is supported by a PhD Fellowship funded by the IT University of Copenhagen (IT-Universitetet i København), which is publicly funded by the Kingdom of Denmark (Kongeriget Danmark). L.Y.X. was employed by LiveMe, then a subsidiary of Cheetah Mobile (NYSE:CMCM), as an in-house counsel intern from July to August 2019 in Beijing, People's Republic of China. L.Y.X. was not involved with the monetisation of video games by Cheetah Mobile or its subsidiaries. L.Y.X. undertook a brief period of voluntary work experience at Wiggin LLP (Solicitors Regulation Authority (SRA) number: 420659) in London, England in August 2022. L.Y.X. has contributed and continues to contribute to research projects that were enabled by data access provided by the video game industry, specifically Unity Technologies (NYSE:U) (October 2022 – Present). L.Y.X. has met and discussed policy, regulation, and enforcement with the Belgian Gaming Commission [Belgische Kansspelcommissie] (June 2022 & February 2023), the Danish Competition and Consumer Authority [Konkurrence- og Forbrugerstyrelsen] (August 2022), the Department for Digital, Culture, Media and Sport (DCMS) and its successor of the UK Government (August 2022 & August 2023), PEGI (Pan-European Game Information) (January & March 2023), a member of the European Parliament (February 2023), the US Federal Trade

Commission (February 2023), the Finnish Gambling Administration at the National Police Board [Poliisihallituksen arpajaishallinto / Polistyrelsens lotteriförvaltning] (March 2023), the Danish Gambling Authority [Spillemyndigheden] (April 2023), the Netherlands Authority for Consumers and Markets [Autoriteit Consument & Markt] (May & June 2023), and the Swedish Gambling Authority [Spelinspektionen] (June 2023). L.Y.X. has been invited to provide advice to the DCMS on the technical working group for loot boxes and the Video Games Research Framework. L.Y.X. was the recipient of two AFSG (Academic Forum for the Study of Gambling) Postgraduate Research Support Grants that were derived from 'regulatory settlements applied for socially responsible purposes' received by the UK Gambling Commission and administered by Gambling Research Exchange Ontario (GREO) (March 2022 & January 2023). L.Y.X. has accepted funding to publish academic papers open access from GREO that was received by the UK Gambling Commission as above (October, November, & December 2022). L.Y.X. has accepted conference travel and attendance grants from the Socio-Legal Studies Association (February 2022 & February 2023); the Current Advances in Gambling Research Conference Organising Committee with support from GREO (February 2022); the International Relations Office of The Jagiellonian University (Uniwersytet Jagielloński), the Polish National Agency for Academic Exchange (NAWA; Narodowa Agencja Wymiany Akademickiej), and the Republic of Poland (Rzeczpospolita Polska) with co-financing from the European Social Fund of the European Commission of the European Union under the Knowledge Education Development Operational Programme (May 2022); the Society for the Study of Addiction (November 2022 & March 2023); and the organisers of the 13th Nordic SNSUS (Stiftelsen Nordiska Sällskapet för Upplysning om Spelberoende; the Nordic Society Foundation for Information about Problem Gambling) Conference, which received gambling industry sponsorship (January 2023). L.Y.X. has received an honorarium from the Center for Ludomani for contributing a parent guide about a mobile game for Tjekspillet.dk, which is funded by the Danish Ministry of Health's gambling addiction pool (Sundhedsministeriets Ludomanipulje) (March 2023). The up-to-date version of L.Y.X.'s conflict of interest statement is available via: <https://sites.google.com/view/leon-xiao/about/conflict-of-interest>.

**Matthew M. Young:** Greo has received funds in the last five years from the Ontario Ministry of Health and Long-Term Care (Canada), non-profits, charities, and post-secondary institutions (Canada). Greo has also received funds from social responsibility arms of Canadian crown corporations (i.e., state monopolies) that conduct and manage provincial/territorial gambling, regulatory settlement funds (Great Britain), third-sector charities (Great Britain), and international regulators. MMY was employed for 12 years by the Canadian Centre on Substance Use and Addiction which received funding from the Government of Canada.

**Maria Bellringer:** Maria Bellringer has received research funding in the last five years from the New Zealand Ministry of Health, Health Research Council of New Zealand and Homecare Medical (NZ) Ltd Partnership. She has received

consultancy funding from Health New Zealand and Victorian Responsible Gambling Foundation, and travel and related expenses from the Japan Academy of Integrated Resorts and Gambling Studies. She is a member of the Lotto NZ Responsible Gaming and Corporate Social Responsibility Voluntary Stakeholder Panel - she does not receive financial reimbursement for this role.

**Steve Sharman:** Steve Sharman is a member of the Advisory Board for Safer Gambling (ABSG) - an advisory group of the Gambling Commission in Great Britain, and is a member of the Executive Committee for the Academic Forum for the Study of Gambling (AFSG). He is also co-chair of the AFSG Outreach committee, and a founder member of the Current Advances in Gambling Research (CAGR) conference committee. Funding for the AFSG, and CAGR is derived from regulatory settlements for socially responsible purposes that are approved by the Gambling Commission, and is administered by Greo. His research is currently funded by a UKRI Future Leaders Fellowship, and in the last three years, has received research funding from the Circle U Seed Funding, the UEL Research Internship Scheme, SSA Academic Fellowship, and the King's Prize Fellowship. He has also received honoraria from Taylor Francis Publishing, and RANGES Early Career Network.

**Amanda Roberts:** Amanda Roberts is Co-Chair of the Executive Committee of the Academic Forum for the Study of Gambling (AFSG). Funding for the AFSG is derived from regulatory settlements for socially responsible purposes that are approved by the Gambling Commission, and is administered by Greo. Amanda Roberts has received funding from the Society for the Study of Addiction (SSA), Greo, National Institute of Health Research (NIHR), Lincolnshire County Council, Ashfield District Council, Health and Care Research Wales, Public Health Lincoln and Santander. She does not have any potential conflicts of interest in relation to gambling or the gambling industry.

Gambling advertising is a common feature in international jurisdictions that have liberalised gambling. In the Anglosphere, countries like Australia, New Zealand, and the UK have experienced extensive gambling advertising over the past decade. This advertising is particularly prominent in relation to professional sports and lottery products. More recently, some Canadian provinces and US states have also witnessed a similar rise in gambling advertising. Several European governments including Belgium, Italy, Netherlands, and Spain have more recently restricted gambling advertising and sponsorship in professional sports. But the UK government did not announce any action on gambling advertising and sponsorship in its 2023 white paper. In September 2023, the UK's Minister for Sport, Gambling, and Civil Society addressed a governmental select committee, stating: 'We have very much gone on the evidence, and *there's little evidence that exposure to advertising alone causes people to enter into gambling harm*' (1). This is consistent with the position of the main UK gambling industry trade body, which frequently states in the media that there is 'no evidence' linking gambling advertising to harm (2).

We are a group of stakeholders writing to say that this is a misleading framing of the underlying evidence base. It would be equally true to say that there is no evidence demonstrating gambling advertising's safety. This supposed lack of causal evidence (a point contested by some academics (3)) is simply an absence of evidence due to methodological difficulties inherent to gambling advertising research. Importantly, there is also no evidence of an absence of an effect. People are exposed to gambling advertising in their daily lives, and yet a majority of the research community lacks access to the gambling operator data which could be used to investigate longitudinal relationships (4). Causality is often best tested for via well-controlled laboratory experiments, and yet no contrived experiment can recreate the experience of being exposed to -- and potentially influenced by -- gambling advertising during one's daily life.

Despite these methodological challenges regarding causality, gambling researchers have assembled a wealth of evidence on other aspects of gambling advertising. Gambling advertising can be highly prevalent, especially around live sport (5,6); features certain distinct types of content, which use a variety of psychological hooks (5,6); and is often perceived poorly by its recipients (5,6). Research has also linked self-reported advertising exposure and gambling (7–9), especially amongst disordered gamblers, and linked the use of wagering inducements to gambling behaviour using data from an online gambling operator (10). Evidence also suggests that the safer gambling messages found in many gambling adverts are unlikely to counteract any potential harms from advertising (11,12). In time, econometric analyses might be run to test for causal reductions in gambling harm from various governmental restrictions on gambling advertising.

Policy decisions regarding gambling advertising should not necessitate evidence of a direct causal link to change the status quo, as those who argue that gambling advertising is safe have not been held to the same evidential standard.

## References

1. Andrew S. Gambling regulation - Oral evidence [Internet]. 2023 [cited 2023 Sep 10]. Available from: <https://committees.parliament.uk/event/18945>
2. Clarke J. MPs told ‘no evidence’ of link between sports advertising and problem gambling. The Independent [Internet]. 2023 Jul 11; Available from: <https://www.independent.co.uk/business/mps-told-no-evidence-of-link-between-sports-advertising-and-problem-gambling-b2373197.html>
3. McGrane E, Wardle H, Clowes M, Blank L, Pryce R, Field M, et al. What is the evidence that advertising policies could have an impact on gambling-related harms? A systematic umbrella review of the literature. *Public Health*. 2023 Jan 26;
4. Cassidy R, Loussouarn C, Pisac A. Fair Game: Producing gambling research - The Goldsmiths report. Fair game: Producing gambling research. London: Goldsmiths, University of London; 2013.
5. Newall PWS, Moodie C, Reith G, Stead M, Critchlow N, Morgan A, et al. Gambling marketing from 2014 to 2018: A literature review. *Current Addiction Reports*. 2019;6(2):49–56.
6. Torrance J, John B, Greville J, O’Hanrahan M, Davies N, Roderique-Davies G. Emergent gambling advertising; a rapid review of marketing content, delivery and structural features. *BMC Public Health*. 2021;21(1):1–13.
7. Browne M, Hing N, Russell AM, Thomas A, Jenkinson R. The impact of exposure to wagering advertisements and inducements on intended and actual betting expenditure: An ecological momentary assessment study. *Journal of Behavioral Addictions*. 2019;8(1):146–56.
8. Hing N, Russell AM, Thomas A, Jenkinson R. Wagering advertisements and inducements: Exposure and perceived influence on betting behaviour. *Journal of Gambling Studies*. 2019;35(3):793–811.
9. Wardle H, Critchlow N, Brown A, Donnachie C, Kolesnikov A, Hunt K. The association between gambling marketing and unplanned gambling spend: Synthesised findings from two online cross-sectional surveys. 2022 [cited 2022 Sep 11]; Available from: <https://reader.elsevier.com/reader/sd/pii/S0306460322002064?token=783ACA4264023ECB8118812CC5D9A239EBEC906B63D961D23F50DE966F001E1EF4508DE970C4D1679680A5515EFA3103&originRegion=eu-west-1&originCreation=20220911122402>
10. Balem M, Perrot B, Hardouin JB, Thiabaud E, Saillard A, Grall-Bronnec M, et al. Impact of wagering inducements on the gambling behaviors of on-line gamblers: A longitudinal study based on gambling tracking data. *Addiction*. 2021;
11. De Jans S, Cauberghe V, Hudders L, Rys F. An experimental study to examine whether and how Flemish and Dutch harm prevention messages on gambling advertising affect consumers’ gambling-related beliefs and intentions. *Psychology of Addictive Behaviors*. 2023;37(6):771–84.
12. Newall PWS, Hayes T, Singmann H, Weiss-Cohen L, Ludvig E, Walasek L. Evaluation of the “take time to think” safer gambling message: a randomised, online experimental study. *Behavioural Public Policy*. 2023;

