Bournemouth University

Literature Scope:

Online Responsible Gambling

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Executive Summary

This scoping review aims to examine the range and extent of available research relating to online gambling and responsible gambling, and to identify whether it is necessary to undertake a full systematic review in this area.

Utilising bibliometric data analysis with the software tool VOSviewer (van Eck and Waltman, 2010), this scoping review explores themes associated with online gambling and responsible gambling in two well-established databases: Scopus and Web of Science. Several main fields of research are identified (i.e., *Gambling issues and Studies, Clinical Psychology*) and numerous key terms are extracted (i.e., *gambling behaviour, gambling-related harms, policy and responsible gambling tools*) from the bibliometric analysis.

Based on the findings of this scoping review and the absence of terms relating to *transparency practices in online responsible gambling*, there is a need to conduct a full systematic literature review. This literature review will aim to establish what constitutes best practices in responsible gambling driven transparency in games and promotional material.

Main Report: Literature Scope

Introduction

Internet or 'remote' gambling refers to any kind of gambling conducted online, including playing the lottery, bingo, betting on sports, or casino games (Gambling Commission, 2020). Given its convenience, 24-hour access, and flexibility (Griffiths and Barnes, 2008), the global online betting and gaming market has grown exponentially and amounted to £40bn in 2018 (Edison Investment Research, 2019).

This shift towards online betting and gaming is coupled with the need for safe and responsible gambling. Responsible gambling (RG) refers to a set of social responsibility initiatives to ensure that gambling is kept within affordable limits of money and time, is enjoyable, in balance with other activities and responsibilities, and avoids gambling-related harm (Hing, Russell, and Hronis, 2016).

This document outlines the process and preliminary findings from a scoping review of online gambling and responsible gambling. The aim of the scoping review is to 1) examine the range and extent of available research relating to online gambling and responsible gambling, and 2) identify whether it is necessary to undertake a full systematic review in this area.

Methodology

This literature scope utilises the software tool VOSviewer (Version 1.16.15) to visualise bibliometric networks within the literature. Scopus and Web of Science are used due to their advanced coverage of literature and analysis of citations (Burnham, 2006). A detailed overview of the methodology and search criteria can be found in the Appendix.

All retrieved searches and statistical analyses are based on research articles accessed in April 2020.

Scoping Review of Online Gambling

Results

Web of Science

Using the keywords identified in the search strategy (see Appendix), 490 journal articles were retrieved from Web of Science. A term map was created (see Figure 1) based on this search. Within the term map, larger circles represent more occurrence of the keywords in the literature, and thicker lines represent stronger links between two keywords (i.e., more cooccurrences in the literature). There are four main colours representing four categories clustered from the terms. The explanations of the four categories are as follows:

- **Online gambling**
  Search results seemingly relate to health and psychological characteristics. Keywords include: *addiction, substance use, pathological gambling, internet gaming disorder, impulsivity, personality, cognitive distortions*, and *risk*.

- **Internet gambling**
  Search results seemingly relate to law, public policy, and marketing. Keywords include: *predictors, online gaming, media, marketing, policy, public health, social casino games, exposure,* and *advertising.*

- **Problem gambling**
  Search results seemingly relate to legal requirements, marketing, and responsible gambling. Keywords include: *responsible gambling, social responsibility, markers, pop-up messages, prevention, internet gamblers, screen, sensation-seeking,* and *involvement.*

- **Prevalence**
  Search results seemingly relate to health and individual risk-factors. Keywords include: *comorbidity, alcohol, risk factors, patterns, disorders*, and *problem gambling*.
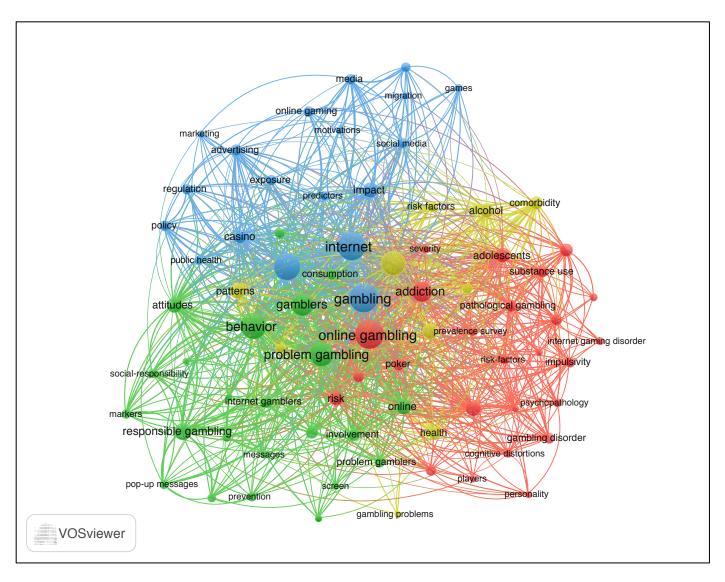
Figure 1. The term map of online/internet gambling in VOSviewer from Web of Science

Scopus

Using the keywords identified in the search strategy (see Appendix), 875 journal articles were retrieved from Scopus. A term map was created (see Figure 2) based on this search.

There are four main colours representing three categories clustered from the terms, explained below:

- **Internet gambling**

  Search results seemingly relate to gambling industry. Keywords include: *online gambling, problem gambling, high-risk behaviour, responsible gambling, public health, sports betting, money, consumer, poker,* and *marketing/advertising.*

- **Behaviour/Addiction**

  Search results seemingly relate to health and individual-risk factors. Keywords include: *compulsion, impulsivity, game addiction, decision-making, personality, addiction, cognition*, and *internet gaming disorder*

- **Pathological gambling**

  Search results seemingly relate to problem gambling. Keywords include: *comorbidity, mental health, gambling disorder, risk factor, severity of illness, anxiety, depression,* and *alcoholism.*

- **Psychological aspect**

  Search results seemingly relate to psychological aspects of gambling. Keywords include: *online system, severity of illness, psychological factors,* and *game psychology.*
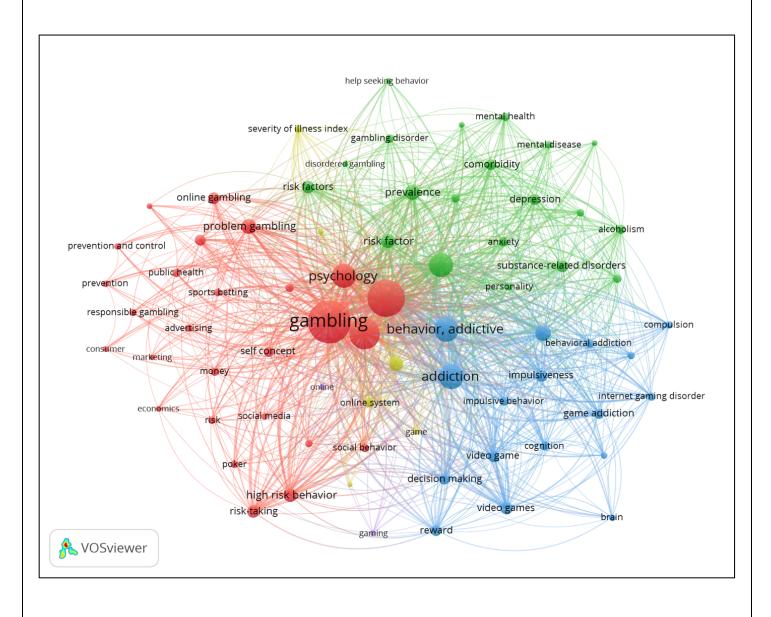
Figure 2. The term map of online/internet gambling in VOSviewer from Scopus

Scoping Review of Responsible Gambling

Results

Web of Science

Using the keywords identified in the search strategy (see Appendix), 399 journal articles were retrieved from Web of Science. A term map was created (see Figure 3) based on this search. Within the term map, larger circles represent more occurrence of the keywords in the literature, and thicker lines represent stronger links between two keywords (i.e., more cooccurrences in the literature). There are four main colours representing four categories clustered from the terms. The explanations of the four categories are as follows:

- **Gambling Industry Policy**
  Search results seemingly relate to current issues and potential harms. Keywords include: *current practices of corporate responsibility, policy* and *regulation.*

- **Message and Response**
  Search results seemingly relate to messages and effectiveness. Keywords include: *gamblers' choices* and *responses in gambling process.*

- **Gambling Behaviour and Responsible Gambling Strategies**
  Search results seemingly relate to gambling behaviour. Keywords include: *addiction, prevention, responsible gambling strategies* and *treatment.*

- **Gambling Operator and Player**
  Search results seemingly relate to relations between players and operators. Keywords include: *expenditure, player, money, limit, loss, help,* and *self-exclusion.*
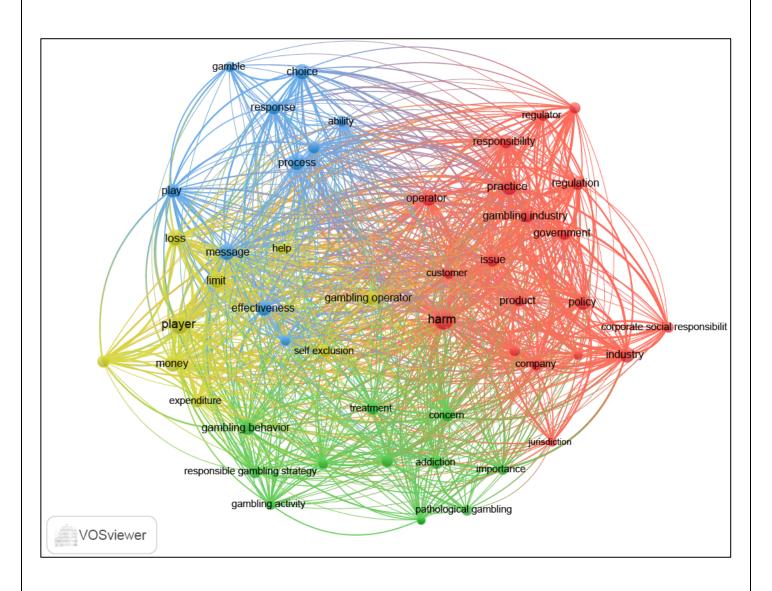
Figure 3. The term map of responsible gambling in VOSviewer from Web of Science

Scopus

Using the keywords identified in the search strategy (see Appendix), 507 journal articles were retrieved from Scopus. A term map was created (see Figure 4) based on this search.

There are three main colours representing three categories clustered from the terms, explained below:

- **Gambling Industry Policy**

    Search results seemingly relate to corporate social responsibility. Keywords include: *current policy and practice of gambling industry, government regulation,* and *consumer protection*

- **Responsible Gambling Tools and Messages**

    Search results seemingly relate to empirical studies about responsible gambling messages. Keywords include: *online gambling, limit setting, players' behaviour such as loss of money* and *feedback.*

- **Gambling Addiction or Disorder**

    Search results seemingly relate to symptoms of gambling addiction. Keywords include: *effect of treatment, factors and models of gamblers' behaviour and choices,* and *decision making process.*
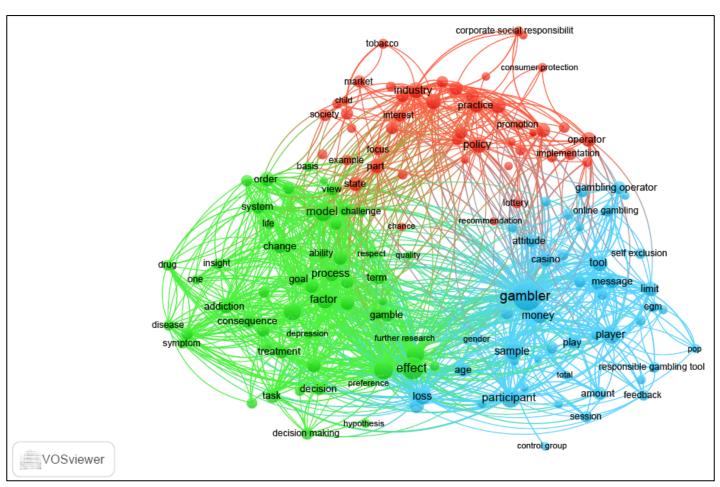
Figure 4. The term map of responsible gambling in VOSviewer from Scopus

Bibliometric Scope

Using the keywords identified in the search strategy (see Appendix), the categorisation of bibliometric information corresponding to cited publications was also analysed. A term map was created (see Figure 5) based on this search. Within the term map, larger nodes correspond to citation frequency (i.e., the larger the node, the more times it is cited), and proximity of journals correspond to citation relatedness (i.e., the closer two journals are located to each other, the stronger their relatedness).

There are four main colours representing four categories of the journals where they were published, explained below:

- **Clinical Psychology, Neuroscience and Social Psychology**
  e.g., Psychology Bulletin, Clinical Psychology Review, Journal of Neuroscience

- **Addictive Behaviour and Public Health.**
  e.g., Journal of Addiction, Addictive Behaviours, BMC Public Health

- **Gambling Issues and Studies; related to gambling policy and law, and gambling behaviour**
  e.g., Journal of Gambling Studies, Journal of Gambling Issues, Gaming Law Review, Computers in Human Behaviour

- **Marketing, Consumer, Business and Management**
  e.g., Journal of Business Ethics, Journal of Marketing Research, Journal of Consumer Research
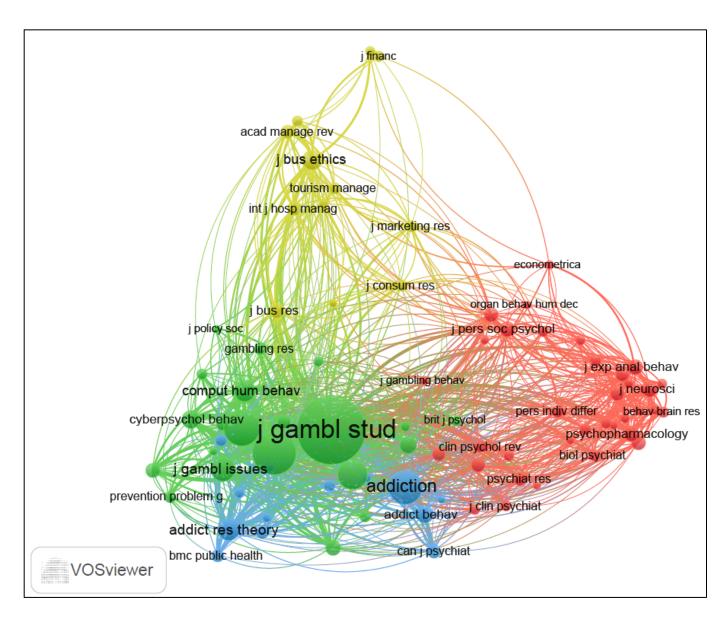
Figure 5. The co-citation map of responsible gambling in VOSviewer from Scopus

Conclusions

This document outlined the preliminary findings from a scoping review of online gambling and responsible gambling. The scoping review was conducted utilising two well-established online databases (Web of Science, Scopus) and identified various themes and overarching areas of interest within published journals.

The bibliometric analysis identified main fields of research including areas of *Clinical Psychology, Neuroscience* and *Social Psychology, Addictive Behaviour* and *Public Health, Gambling Issues and Studies*, and *Consumer and Business Management*. From these areas, a number of key terms were extracted including those relating to *gambling-related harms*, *gambling behaviour*, *policy and responsible gambling tools*, and *corporate social responsibility*. There was an absence of terms relating to transparency practices in online responsible gambling.

Based on these findings, it is recommended that the researchers conduct a systematic literature review. The systematic literature review will investigate: What constitutes best practices in responsible gambling driven transparency in games and promotional material?

Appendix

Methodology Overview

The technique used in this literature scope is rooted in bibliometrics, which is a statistical method to identify the intellectual structure and development of a scientific field (Culnan, 1986; White and Griffith, 1981). This technique can be applied to provide information on the most cited journals and publications in online gambling and responsible gambling, as well as the most cited authors and co-citations (i.e., the frequency with which any two publications are cited together in the literature) in this area.

To construct and visualise bibliometric networks within the literature, the software tool VOSviewer was used. The VOSviewer software offers easy access to bibliometric mapping using data from Dimensions, PubMed, Scopus and Web of Science. VOSviewer colours clusters of citations/journals/publications using a set of colours based on commonality and bibliometric structure.

Search Strategy Overview

As this scoping review focuses on literature that falls in the topics of online gambling or responsible gambling, two separate scoping activities were conducted using the keywords "online gambl*" (or "internet gambl*") and "responsible gambl*, respectively. Scopus and Web of Science databases were used.

Web of Science is a multidisciplinary scholarly database covering mostly peer-reviewed literature in all scientific areas, selected for inclusion based on scholarly criteria by literature review committees (Cornell University Library, 2020). The Scopus database provides access to STM journal articles and the references included in those articles. Neither database is inclusive but complements each other (Burnham, 2006).

Given the need to identify research topics currently addressed in the literature, there is little benefit to screen full texts in this review. Thus, it is possible that overlapping results may arise from the two scoping activities, as well as journal coverage overlap from the two databases. This scoping review is for preparation of a full systematic

literature review where duplicated results will be removed in line with a stringent inclusion and exclusion criteria.

Reference List

Burnham, J. F., 2006. 'Scopus database: a review', Biomed Digit Libr, 3(1). doi: 10.1186/1742-5581-3-1.

Cornell University Library (2020) BEE 3299: Sustainable Development: Google vs. Web of Science (and other library databases), what's the difference? Available at: https://guides.library.cornell.edu/c.php?g=519668&p=3553730 [Accessed 12 August 2020].

Culnan, M., 1986. The Intellectual Development of Management Information Systems, 1972–1982: A Co-Citation Analysis. *Management Science*, 32(3).

Edison Investment Research, 2019. Online gaming sector Diversification and scale for online success. [online] Available at: https://www.edisongroup.com/wp-content/uploads/2019/07/GamingSectorReport2019.pdf [Accessed 10 September 2020].

Gambling Commission, 2020. *Gambling Business Data On Gambling During Covid-19 [Updated August 2020]*. [online] Available at: https://www.gamblingcommission.gov.uk/news-action-and-statistics/Statistics-and-research/Covid-19-research/Covid-19-updated-August-2020/Gambling-business-data-on-gambling-during-Covid-19-updated-August-2020.aspx [Accessed 3 September 2020].

Griffiths, M. and Barnes, A., 2008. Internet Gambling: An Online Empirical Study Among Student Gamblers. *International Journal of Mental Health and Addiction,* 6, pp. 194-204.

Hing, N., Russell, A. and Hronis, A., 2016. Behavioural indicators of responsible gambling consumption, Victorian Responsible Gambling Foundation. Available at: https://responsiblegambling.vic.gov.au/resources/publications/behavioural-indicators-of-responsible-gambling-consumption-64/.

van Eck, N. and Waltman, L., 2010. *Vosviewer: Visualizing Scientific Landscapes*. https://www.vosviewer.com.

White, H. and Griffith, B., 1981. Author Cocitation: A Literature Measure of Intellectual Structure. *Journal of the American Society for Information Science (pre-1986)*, 32(3), pp.163-171.

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