

ALICE RAP Policy Paper Series

Policy Brief 2.

Gambling - two sides of the same coin: recreational activity and public health problem



AR Policy Paper 2

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ALICE RAP (Addictions and Lifestyles in Contemporary Europe – Reframing Addictions Project) is the first major Europe wide project studying addictions as a whole and their influence on wealth, health and stealth. The aim of this five year, €10 million, co-financed EU project is to stimulate and feed scientific evidence into a comprehensive public dialogue and debate on current and alternative approaches to addictions.

The AR Policy Paper series aims to provide succinct evidence briefs for decision-makers and advocates working on key addiction-related issues. This second paper focuses on gambling. Recent technical developments in the interactive gambling sector (such as through the Internet, mobile devices), along with a significant increase of land-based slot machines and lotteries, have led to a rapidly increasing gambling market in Europe. Gambling activity has two facets: whilst for the majority of people it is a pleasurable recreational activity, at the same time, it poses a significant threat to public health in the shape of severe gambling-related problems and mental disorders. Preventive actions as well as protective measures for vulnerable groups are needed. This AR policy paper makes the case for a more comprehensive and coherent national and European policy approach to all gambling settings and gambling providers. The paper also identifies a wide variety of actions which give the necessary emphasis to public health interests related to gambling activity.

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Gambling - two sides of the same coin

Introduction

Playing and gaming are behaviours that are deeply rooted in human child development and in the evolution of human cultures, and children play games without the purpose of material gain across all cultures and societies. But adolescent and adult gambling is clearly different from that behaviour, involving the gain or loss of relevant assets. Such gambling is associated with risk-taking, sensation-seeking and material interests, and can lead to one of two sides of the same coin: harmless recreational fun or mental disorders and social consequences.

This ALICE RAP policy paper provides information on definitions of gambling-related terms, gambling prevalence, gambling-related problems and gambling regulations in the European Union (EU). It discusses risk factors and public health challenges in this field, and derives consumer protection measures for gamblers with a special focus on vulnerable groups. We cover traditional land-based gambling (e.g., in lottery shops, casinos and gaming arcades/ cafes, bars) and new forms of interactive/online gambling (via Internet, mobile devices or interactive TV).

Regulatory legal measures in EU Member States (MS) vary between extremely liberal acceptance of gambling (often to improve public revenues) and strong restrictive constraints. Attempts to completely ban gambling have failed: People either engage in illicit opportunities to gamble, invent new, unregulated forms of gambling or look for gambling opportunities outside their countries. And even in countries with very restrictive gambling regulations gambling-related problems have emerged. Hence, any proposal for regulation is faced with the challenge of balancing opportunities for legal gambling on one side, and effective Public Health measures to prevent gambling-related harm on the other side. There is no fair, scientific or “objective”, universal solution for such a balance and cultural differences, economic conditions and other social factors appear to be relevant in shaping the most successful regulation. The few available data from the EU demonstrate that MS currently have widely differing concepts and views on the optimum balance between gambling opportunities and regulations to protect the gambling population (for interactive/online gambling: see European Commission, 2011). A public debate is needed to strive for any societal consensus on these issues.

The situation is further complicated by potentially competing interests between “improving revenues” and “protecting gamblers”: for example, where public authorities are operators of state gambling opportunities, they are also frequently the regulatory agency for their own products and for private (competing) gambling companies. All operators – public or private – deal with competing interests in their marketing and business activities, between maximising profit and protecting gamblers from harm. Therefore, competent, effective and independent external control – in addition to business self-regulations – is necessary.

Definition of major gambling related terms

Gambling

Wagering of material value on an incident with uncertain outcome:

- two or more parties are involved (one can be an organisation)
- the outcome is solely or predominantly defined by chance rather than skills
- a redistribution of assets (often money) takes place, typically within a short period of time
- the term covers all forms, whether land-based or interactive/online, lotteries, betting or games (roulette, poker etc.)

Gaming

This term is sometimes used to characterise the playing of low risk games (e.g. specific types of slot machines) with limited stakes, wins and losses. As gaming is neither consistently defined nor frequently used, the term gambling covers all such subtypes of games in this paper.

Betting

Placing a wager on the outcome of an event: in most cases on sports results, but also on other unknown outcomes of interest, e.g. elections.

Lottery

Game of chance in which winners are determined by random drawing of lots (lottery tickets with single numbers or combination of numbers).

Land-based gambling

All gambling opportunities with access through buildings or by mail:

- casinos (e.g., roulette, black jack, poker, slot machines)
- gambling and bingo halls, amusement arcades, bars (e.g., slot machines)
- lottery shops / outlets (e.g., lottery tickets and scratch cards)
- betting shops (e.g., betting on horse and dog racing)

Interactive/online gambling

All gambling opportunities with electronic access via Internet, mobile devices or interactive TV:

- similar gambling opportunities to land-based gambling
- includes opportunities which focus on sports betting (especially live betting)

In this paper the broader and more comprehensive term interactive gambling is used.

1 Gambling in Europe: Major national differences and knowledge gaps

1.1 The gambling market

The gambling market in Europe is a rapidly increasing sector in the EU. In 2012, the annual revenues of the EU gambling market were estimated to be around € 80.3 billion for all types of gambling activities. The fastest growing area is interactive gambling (2012: € 10.6 billion), with an estimated growth rate of about 24% between 2012 and 2015. Within that area and time period, State Lotteries stand out as having a particularly sharp estimated revenue increase, with an estimated growth rate of around 59%. However, betting has the highest share of profits (2012: 34%). The rapid growth of the interactive gambling sector has been supported by technology developments in recent years, including new, easy-to-access channels, such as the Internet and mobile devices.

Gambling market in Europe (gross wins, €bn)¹

Interactive gambling	2003	2006	2009	2012	2015 ²
Betting	0,78	1,59	2,41	3,56	4,39
Casinos	0,18	0,82	1,73	2,20	2,80
Poker	0,03	1,02	1,74	2,10	2,18
Bingo	0,04	0,27	0,69	0,98	1,12
Other/Skill Gaming	0,01	0,14	0,31	0,55	0,73
State Lotteries	0,07	0,42	0,92	1,17	1,86
Total EU 27	1,11	4,25	7,79	10,55	13,08
Landbased gambling	2003	2006	2009	2012	2015
Betting	8,75	9,82	9,33	7,83	7,90
Casinos	8,02	9,03	7,97	7,72	7,83
Machines (Outside Casinos)	10,83	16,72	22,23	22,98	24,23
Bingo	2,68	2,86	2,40	1,80	1,68
Lotteries	24,61	28,21	29,16	29,43	31,02
Total EU 27	54,89	66,63	71,09	69,77	72,65
GRAND TOTAL EU 27	56,00	70,88	78,88	80,32	85,74
<i>% Interactive</i>	<i>2,0%</i>	<i>6,0%</i>	<i>9,9%</i>	<i>13,1%</i>	<i>15,3%</i>

Source: H2 Gambling Capital, 2013

¹ Expenditures minus winnings

² Estimated

The growing gambling market and, in particular, the fast developing technology for interactive gambling are major challenges for effective consumer protection. Interactive gambling sites may be accessed within the EU while the providers may operate externally, without coming under any control from European or national agencies. Furthermore, consumers can access interactive gambling sites from other MS with more lenient restrictions. In addition, it may be difficult for regulatory bodies to detect the correct location of operators, given the possibility that they conceal their identity and residence online. Interactive gambling opportunities, therefore, represent challenging characteristic in terms of uncontrollable access and few possibilities for early recognition and prevention through face-to-face observation of behaviour (which is possible in some land-based settings). However, despite these risks, interactive gambling providers may also be well-positioned to contribute to public health initiatives in protecting gamblers, through their ability to closely monitor individual gambling behaviour and provide additional and unique protective measures.

1.2 Prevalence of gambling

There is an increasing number of population studies on gambling and on the rate of gambling disorders in the EU, but crucial information is still missing for many MS. At the same time, the available data are hard to compare: existing surveys cover different age groups, use different survey methods and assessment instruments, as well as different definitions of gambling behaviour and gambling disorders. Very few studies cover underage gambling. A recent review concluded that prevalence estimates are incomparable unless studies investigate “countries, regions and cultures with existing differences in gambling policies by using instruments with the same underlying construct, same cut-off scores as well as similar survey description, administration format, and exclusion criteria in well-defined populations” (Sassen et al., 2011; p.e96). Therefore, it is currently impossible to provide comparable gambling figures for all MS. However, available country population studies suggest that the vast majority of adult individuals have engaged in some gambling activity at least once in their life, and that between 40 - 80% have participated in some form of gambling in the last 12 months (Griffith, 2010).

Methodological differences in epidemiological studies: Lack of comparability

- Different forms of sampling and data collection: online/ phone/postal/ face to face
→ impacts on the representativeness and generalizability of the sample
- Different assessment criteria, questionnaires and cut-off scores for gambling
→ impacts on the classification of subjects and prevalence figures

(Source: Sassen et al., 2011)

1.3 Prevalence of gambling-related problems

In some individuals gambling behaviour turns into a problem of clinical relevance. International disease classification systems like the ICD (World Health Organisation) or the DSM (American Psychiatric Association) recognise “pathological gambling” as a mental disorder. There is still some dispute about whether this problem would be most appropriately assigned to the category of impulse control disorder, addiction disorder or compulsive disorder. The recently published version of DSM 5 (American Psychological Association, 2013) reclassifies the new term “gambling disorder” under “Substance-related and Addictive Disorders” (Petry et al., 2013).

“Problem gambling” is a frequently used generic term which covers early signs of gambling-related problems, with increased risk of transition into a gambling disorder. Definitions of problem gambling (also covering binge gambling, Blaszczynski & Nower, 2002) and its cut-off points vary widely and the clinical relevance of this category is disputed.

Based on currently available studies from selected MS it can be estimated that

- $\approx 0,1-0,8\%$ of the general adult population fulfil the criteria of a gambling disorder
- an additional percentage of $\approx 0,1-2,2\%$ demonstrate potentially problematic gambling involvement (Sassen et al., 2011).

It remains unresolved whether or not the wide range in prevalence figures reflects real differences between MS or statistical artefacts.

Gambling Disorder (DSM-5 - previous term: pathological gambling)

Persistent and recurrent problematic gambling behaviour leading to clinically significant impairment or distress with the following symptoms (examples):

- Preoccupation with gambling
- Increasing amounts of money needed to achieve the desired excitement
- Unsuccessful efforts to control gambling
- Repeated gambling after losses (“chasing”)
- Lying to conceal the extent of involvement with gambling

1.4 Governance and regulation of gambling

Available data from MS demonstrate that major differences in gambling regulations exist (Swiss Institute of Comparative Law, 2006; European Commission, 2012). Not all regulations have been developed out of concern for public health, and, as such, not all aim at preventing gambling disorders or protecting people who have already developed problematic gambling behaviour. Some regulations have been implemented with the primary aim of increasing the public share of revenues from the gambling market and in many countries these revenues are an important and regularly scheduled contribution to public budgets. It is noteworthy that, in contrast to addictive substances, gambling is more likely to be regulated by the Ministry of Economy/Finance than by the Ministry of Health (Brotherhood, Atkinson & Sumnall, 2012).

Major differences in national gambling regulations take the form of:

- State monopoly or competitive market
- Share of public and private operators
- Type and amount of taxation and other forms of public revenues
- Access-oriented and/or process-oriented gambling regulations and control
- Age regulations and factual age verification
- Legal access to interactive gambling
- Availability and enforcement of self-exclusion and exclusion by third parties of people who experience gambling problems
- Selection criteria for, and control of content of gambling sites
- Degree and type of advertising permitted
- Regulations on direct financial funding of problem gambling support services and research

Altogether, the gambling market and gambling-related regulations are extremely diverse across Europe. In addition, information from many countries is lacking. From a public health perspective, it is difficult to estimate the impact of different gambling regulations on the prevalence of gambling disorders due to the methodological difficulties described earlier in this paper. Furthermore, publicly held discussions about the aims, measures and limits of public protection, regulation and control vs. the degree of individual responsibility has so far been lacking.

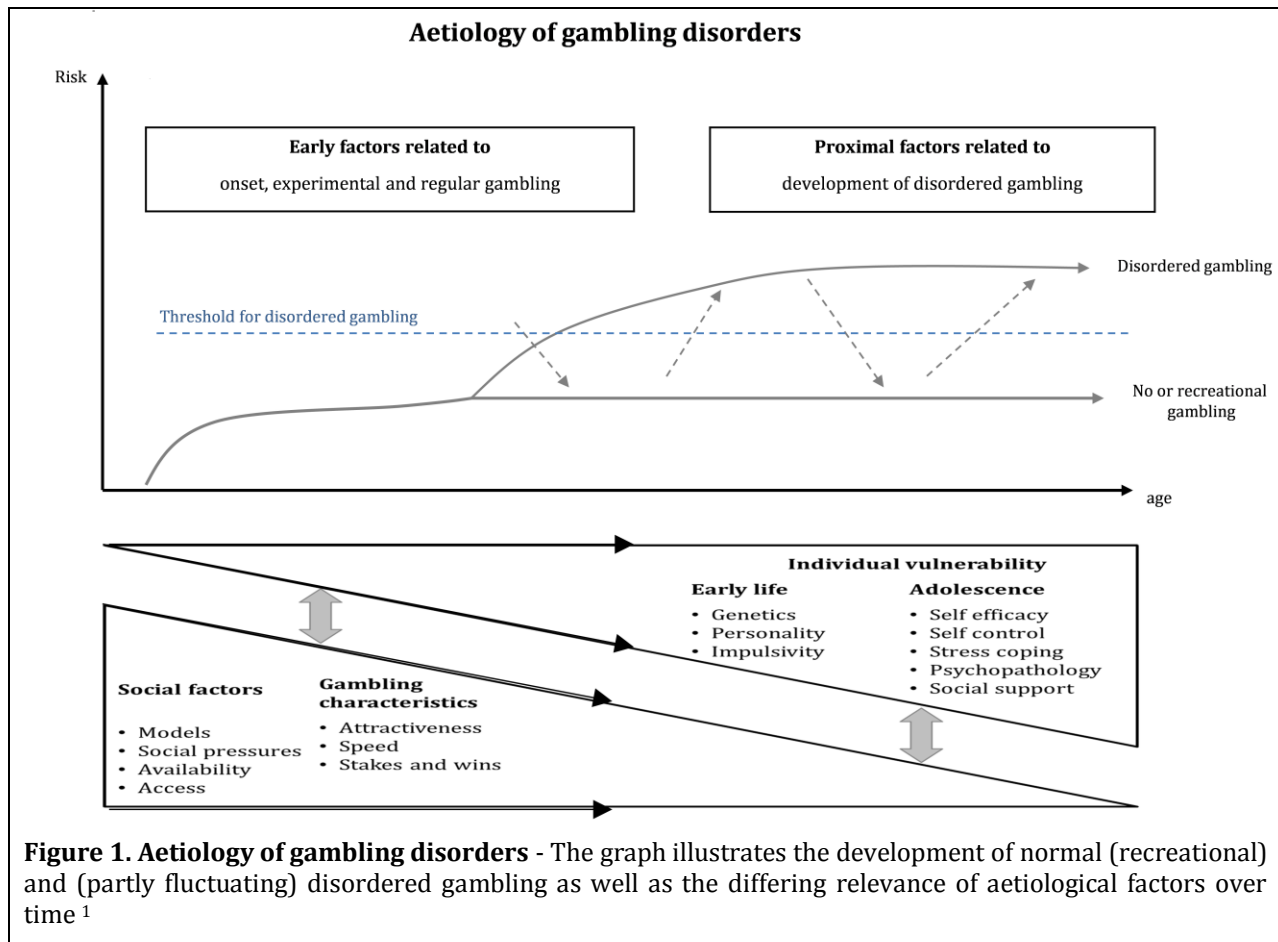
2 Onset and course of gambling disorders

There is a common scientific agreement that gambling disorders are not caused by one single factor. It is understood that three major areas of risk factors are involved: (1) Characteristics of the gambling activity (e.g., the speed of games, size of the stakes, wins and losses); (2) social factors (e.g., availability and access to gambling and/or alternative recreational activities); and (3) individual factors (e.g., specific psychological characteristics, either innate or acquired, such as high impulsivity or impaired individual control). Based on the existing data, individual vulnerabilities play an important role in the development of gambling disorders. Certain forms of gambling (e.g., very fast feedback games, like slot machines) are associated with higher risk than others (e.g., weekly or monthly lotteries), but the evidence for the causal link between specific gambling characteristics and gambling disorders is scarce.

The onset of experimental and regular gambling in the life course of *adolescents and young adults* is, similarly, mainly determined by (1) gambling characteristics, e.g. gambling speed and attractiveness, as well as (2) social factors such as social acceptance of gambling, social pressure, socioeconomic status, exposure to advertisement and availability of gambling opportunities and alternatives. Furthermore, already at this early stage in life, the development of gambling disorders is determined by (3) personal vulnerabilities like high impulsivity, impaired learning and other mental disorders, including substance use disorders. All these factors interact to determine the long-term risk for the onset of gambling disorders, with an increased relevance of individual vulnerability as a risk factor for the further development and chronicity of disorders.

From the few existing longitudinal studies, it is known that the development of gambling disorders does not progress constantly and at a regular pace; the severity of an individual's problems might fluctuate over time, and subjects may address their problems themselves, without formal help and with variable success. However, only a minority of persons with gambling disorders (less than 10%) consult professional services (Meyer et al., 2011; Suurvali et al., 2008; Cunningham, 2005). Treatment service statistics emphasize that this share of the total gambling population is characterised by high comorbidity of mental disorders (up to 70%) and severe family and economic problems (for further determinants of disordered gambling see, among others, Bühringer et al., 2008, 2012; Meerkerk & van de Mheen, 2013; von Holst et al., 2010; Zwaluw et al., 2012).

Current scientific knowledge does not allow the precise definition of patterns of risk factors and their interaction. It is therefore necessary to systematically cover all three areas of risk factors in any public health concept aiming to reduce gambling-related harms.



3 The Public Health challenge and policy options

As mentioned earlier, a complete ban of gambling is neither realistic nor justified, given that the majority of consumers gambles without any problems. However, it is also a fact that every gambling opportunity is associated with the potential for some kind of gambling-related problems. Hence, the challenge for policy is to provide legal and safe gambling opportunities and, at the same time, minimise gambling-related problems. Overall aims for any regulation are related to the balance between individual freedom on one hand and social support and control on the other hand.

Major policy options are: information provision (objective and reliable information about gambling features and risks), gambling access regulations, control and correction of critical gambling characteristics and – as a recent and innovative development – early recognition

¹ modified version of Bühringer et al. (2013), available at [http://www.alicerap.eu/images/3rd Plenary Meeting - BCN/Presentations/What determines addictions - Buhringer.pdf](http://www.alicerap.eu/images/3rd%20Plenary%20Meeting%20-%20BCN/Presentations/What%20determines%20addictions%20-%20Buhringer.pdf)

of potential problem gamblers based on monitoring and analyses of individual gambling behaviour (Adami et al., 2013; Auer & Griffith, 2013; Gainsbury, 2011; Gray et al., 2012).

Suggestions for a common gambling policy in the EU ²

- (1) To provide legal and safe gambling opportunities and regulate the more high-risk types of gambling
- (2) To inform gamblers about potential risks: odds, stakes, losses, economic and mental health risks
- (3) To implement common regulations for all gambling forms in order to prevent potential gambling-related problems
- (4) To particularly protect groups at risk
- (5) To enhance early identification of gambling disorders and to reduce gambling-related mental, social and economic problems

3.1 What to do?

To conclude, there is an essential need for effective action to prevent gambling-related problems and to protect subjects with gambling disorders in Europe. However, formulating guidelines that are effective in preventing harm and protecting gamblers also addresses a central problem in current gambling research: On one hand, high quality systematic analyses on the effectiveness of interventions in achieving the desired aims are scarce (Brotherhood, Atkinson & Sumnall, 2012). On the other hand, it would be unethical to remain inactive and wait until more evidence exists. Therefore decisions under uncertainty are required, combined with a careful monitoring of the outcomes and corresponding modifications in guidelines according to an adaptive learning process.

The following information box proposes activities that are currently under discussion in academic spheres, integrating inferences from the field of substance use research, consensus-building in scientific groups and the scarce scientific evidence available at this point in time.

24 public health activities to protect active gamblers and to prevent harm

A. To protect consumers: implementation of common, legally binding gambler protection concepts for all gambling operators, covering:

- (1) Clear and transparent information about games: duration, stakes, wins, losses, maximum loss per hour, chances to win
- (2) Information about potential risks: economic, social, mental problems and disorders
- (3) Prevention curricula in schools (e.g. e-safety)
- (4) Information about sources for independent advice and support

² See also European Commission (2012 a, b)

- (5) Tools to (self-)assess the individual risk
- (6) Mandatory 'deposit limit setting' by customers for regular gambling (e.g. roulette, gambling machines, online services)
- (7) Minimum waiting times for increasing deposit limits
- (8) Cooling off (waiting) periods, self-exclusion and operator-based exclusion procedures
- (9) No credits or negative balances
- (10) Regulations for and monitoring of all forms of promotion including print, media and online advertising, sponsorship and social media
- (11) Distance/Density regulations for land-based gambling operators (e.g. minimum distance from schools, youth centres, other centres etc.)
- (12) Implementation of statistical models for early recognition of problems, based on the analysis of individual gambling processes especially in interactive gambling).

B. To prevent underage gambling

- (13) To define age restrictions
- (14) To implement age verification procedures and legal sanctions for operators who breach the age laws

C. To establish independent regulatory agencies

- (15) Independent organisations, not linked to private or public gambling operators
- (16) Regulatory Agency members independent from public authorities or private companies
- (17) Direct access to designated senior management employees of gambling operators, including the right of access, information and verification
- (18) Authority to give approval for:
 - Regulations for gambling/betting offers, stakes, wins and losses
 - Regulations for marketing and advertising
 - Gambler protection concepts

D. To guarantee responsible business behaviour of gambling operators

- (19) Code of Conduct signed by all employees
- (20) Senior management employee directly linked and accountable to the Regulatory Agency
- (21) Education of all employees on gambling disorders to enhance early recognition of gambling-related problems in their customers, and to address and support them

E. To provide access to services for treatment

- (22) Public information about gambling-related risks and problem gambling
- (23) Training of staff on early recognition of gambling disorders
- (24) Provision of easily accessible counselling and treatment opportunities

4 Correcting the knowledge gap

Gambling regulations should strive to be based on scientific evidence. While there is an increasing body of research on member state level, the lack of EU policy-relevant and informative studies is a major obstacle and further research in this field is essential. The most urgently required topics for further research are comparable epidemiological studies, as well as effectiveness trials for prevention and treatment options.

Research needs

- (1) Epidemiological studies according to common standards
- (2) Studies aimed at understanding the impact and effectiveness of different policies, covering also behavioural change indicators
- (3) Longitudinal studies on the onset and course of gambling disorders, including commonalities and differences between substance use disorders and gambling disorders
- (4) Assessing the risks of specific types of gambling and provision features
- (5) Development of statistics-based models for early recognition of problem gamblers
- (6) Investigation of the efficacy of prevention and treatment of gambling disorders
- (7) Qualitative studies aimed at understanding possibly different gambling styles and related behavioural consequences
- (8) Monitoring of marketing and its effects on potential users and current users

The contribution of ALICE RAP

ALICE RAP³ is a five year European research project:

- co-financed by the European Commission
- Bringing together around 200 scientists from
- more than 25 countries and
- 29 different disciplines.

It aims to strengthen scientific evidence to inform the public and political dialogue and to stimulate a broad and productive debate on current and alternative approaches to addictions. Cross-substance synergies among research that addresses substance use and addictive behaviours and trans-disciplinary research are core principles of the project work. The project started in April 2011, and is divided into seven Work Areas (WA), each with three Work Packages (WP – 21 in total).

³ Addiction and Lifestyles in Contemporary Europe - Reframing Addictions Project www.alicerap.eu

Not every WP covers all psychotropic substances and gambling. Some WPs use a generic understanding of addictive behaviours without analysing single substances or behaviours individually. As a result gambling is not always studied to the same extent or intensity in all WPs.

The following Work Areas (and some of the related WP) are undertaking research which is especially relevant for regulation topics in the field of gambling:

- WA1: Ownership of addiction
- WA2: Counting and classifying addiction
- WA3: Determinants of addiction
- WA4: Business of addiction: expenditures, marketing
- WA5: Governance of addiction: concepts, trends and influential factors
- WA6: Addicting the young

The aims and progress of the work being carried out on gambling in ALICE RAP has been documented in a separate project document (see the *Interim Report on gambling-related activities in ALICE RAP* in Further information, below). Several of the WPs from the Work Areas above have already provided first documents on their gambling-related research but the majority of these are currently still in progress at the stage of data collection and data analysis, at the time of writing, with results expected to be available from Winter 2013/14 onwards.

Further information on gambling – a selection of sources in Europe

- Journal of Behavioural Addictions: www.akkrt.hu/journals/jba
- Homepage of the European Association for the Study of Gambling: www.easg.org
- Interim report on gambling-related research activities in ALICE RAP: http://www.alicerap.eu/resources/documents/doc_download/127-interim-report-on-gambling-related-research-in-alice-rap.html
- Homepage of ALICE RAP: www.alicerap.eu

5 References⁴

- Adami, N. , Benini, S. , Boschetti, A. , Canini L. , Maione, F. & Matteo Temporin (2013): Markers of unsustainable gambling for early detection of at-risk online gamblers, *International Gambling Studies*, DOI:10.1080/14459795.2012.754919
- Auer, M & Griffith, M. D. (2013). An Empirical Investigation of Theoretical Loss and Gambling Intensity. *Journal on Gambling Studies*, doi: 10.1007/s10899-013-9376-7
- American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.
- Blaszczynski, A. & Nower, L.(2002). A pathways model of problem and pathological gambling. *Addiction*, 97, 487-499.
- Brotherhood A, Atkinson AM, Sumnall HR (2012) ALICE RAP Work Package 16: Adolescents as customers of addiction. Unpublished draft report. Liverpool: Centre for Public Health. [available on request from authors]
- Bühringer, G., Kräplin, A. & Behrendt, S. (2012). Universal characteristics and consequences of the addiction syndrome. In H. J. Shaffer (Eds.), *APA Addiction syndrome handbook: Vol. 1. Foundations, influences, and expressions of addiction* (pp. 291-316). Washington, D.C.: American Psychological Association.
- Bühringer, G., Wittchen, H.-U., Gottlebe, K., Kufeld, C. & Goschke, T. (2008). Why people change? The role of cognitive-control processes in the onset and cessation of substance abuse disorders. *International Journal of Methods in Psychiatric Research*, 17 (S1), S4-S15.
- Cunningham, J. A. (2005). Little use of treatment among problem gamblers. *Psychiatric Services*, 56, 1024-1025.
- European Commission (2011). *Green Paper on on-line gambling in the Internal Market. COM (2011) 128 final*. Retrieved from http://ec.europa.eu/internal_market/services/gambling_en.htm
- European Commission (2012a). Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. Towards a comprehensive European framework for online gambling. Strasbourg, COM(2012) 596 final.
- European Commission (2012b). Commission staff working document. Online Gambling in the Internal Market. *SWD (2012) 345 final*.

⁴ Note: This is not a comprehensive list of relevant publications but a selection to support major statements of the paper.

- Gray, H. M., LaPlante, D. A., & Shaffer, H. J. (2012, June 11). Behavioral Characteristics of Internet Gamblers Who Trigger Corporate Responsible Gambling Interventions. *Psychology of Addictive Behaviors*. Advance online publication. doi: 10.1037/a0028545
- Griffiths, M.D. (2010). Problem gambling in Europe: What do we know? *Casino and Gaming International*, 6(2), 81-84.
- Gainsbury, S. (2011): Player account-based gambling: potentials for behaviour-based research methodologies, *International Gambling Studies*, DOI:10.1080/14459795.2011.571217
- H2 Gambling Capital (2013). Gambling market in Europe. Personal communication.
- Meerkerk, G.-J., van de Mheen, D. (2013). A summarizing review in table form on risk factors / determinants of harmful gambling, Alice RAP, unpublished manuscript.
- Meyer, C., Rumpf, H.-J., Kreuzer, A., de Brito, S., Glorius, S., Jeske, C. et al. (2011). *Pathologisches Glücksspielen und Epidemiologie (PAGE): Entstehung, Komorbidität, Remission und Behandlung Greifswald*, Lübeck: Universitätsmedizin Greifswald, Institut für Epidemiologie und Sozialmedizin; Universität zu Lübeck, Forschungsgruppe S:TEP, Klinik für Psychiatrie und Psychotherapie.
- Petry, N. M., Blanco, C., Auriacombe, M., Borges, G., Bucholz, K., Crowley, T. J., Grant, B. F., Hasin, D. S. & O'Brien, C. (2013). An Overview of and Rationale for Changes Proposed for Pathological Gambling in DSM-5. *J Gambl Stud*, published online, DOI 10.1007/s10899-013-9370-0.
- Sassen, M., Kraus, L. & Bühringer, G. (2011). Differences in pathological gambling prevalence estimates: Facts or artefacts? *International Journal of Methods in Psychiatric Research*, published online. DOI: 10.1002/mpr.354. 20 (4), e83-e99.
- Suurvali, H., Hodgins, D. C., Toneatto, T. & Cunningham, J. A. (2008). Treatment Seeking Among Ontario Problem Gamblers: Results of a Population Survey. *Psychiatric Services*, 59, 1343-1346.
- Swiss Institute of Comparative Law (2006). *Study of Gambling Services in the Internal Market of the European Union*. Swiss Institute of Comparative Law. Lausanne.
- van Holst, R. J., van den Brink, W., Veltman, D. J., & Goudriaan, A. E. (2010). Why gamblers fail to win: A review of cognitive and neuroimaging findings in pathological gambling. *Neuroscience & Biobehavioral Reviews*, 34, 87–107. doi: 10.1016/j.neubiorev.2009.07.007
- Zwaluw, C. S. van der, Schrijvers, C., Meerkerk, G.-J., & Mheen, D. van de. (2013). Determinants of the initiation of problem gambling: a systematic review. Unpublished manuscript.