

# **Individual vulnerability as core risk factor for gambling disorder**

## **Implications for public health and gambling policies**

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## **Direct (financial) interests: unrestricted funds for gambling research**

- Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)
- European Commission (ALICE-RAP)
- German Federal Ministry of Economics and Technology (regulatory authority for the commercial gaming industry);
- German Federal Ministry of Health
- State Ministry of Finance of Bavaria (regulatory authority for and operator of the State Gambling Monopoly) via the Bavarian State Ministry of the Environment and Public Health
- Public and commercial gambling providers (Association of casinos in Baden-Württemberg, Federal Association of German Casinos, gambling hall providers, State casino providers, State Lotto providers, bwin and tipico).

## **Indirect (scientific, clinical, personal) interests**

Member of the 'Düsseldorfer Kreis', a group of key stakeholders from public and private gambling providers, research and the support system representatives. This initiative develops proposals for the regulation of gambling while strictly observing effective and publicly controlled consumer protection ([www.duesseldorfer-kreis.de](http://www.duesseldorfer-kreis.de))

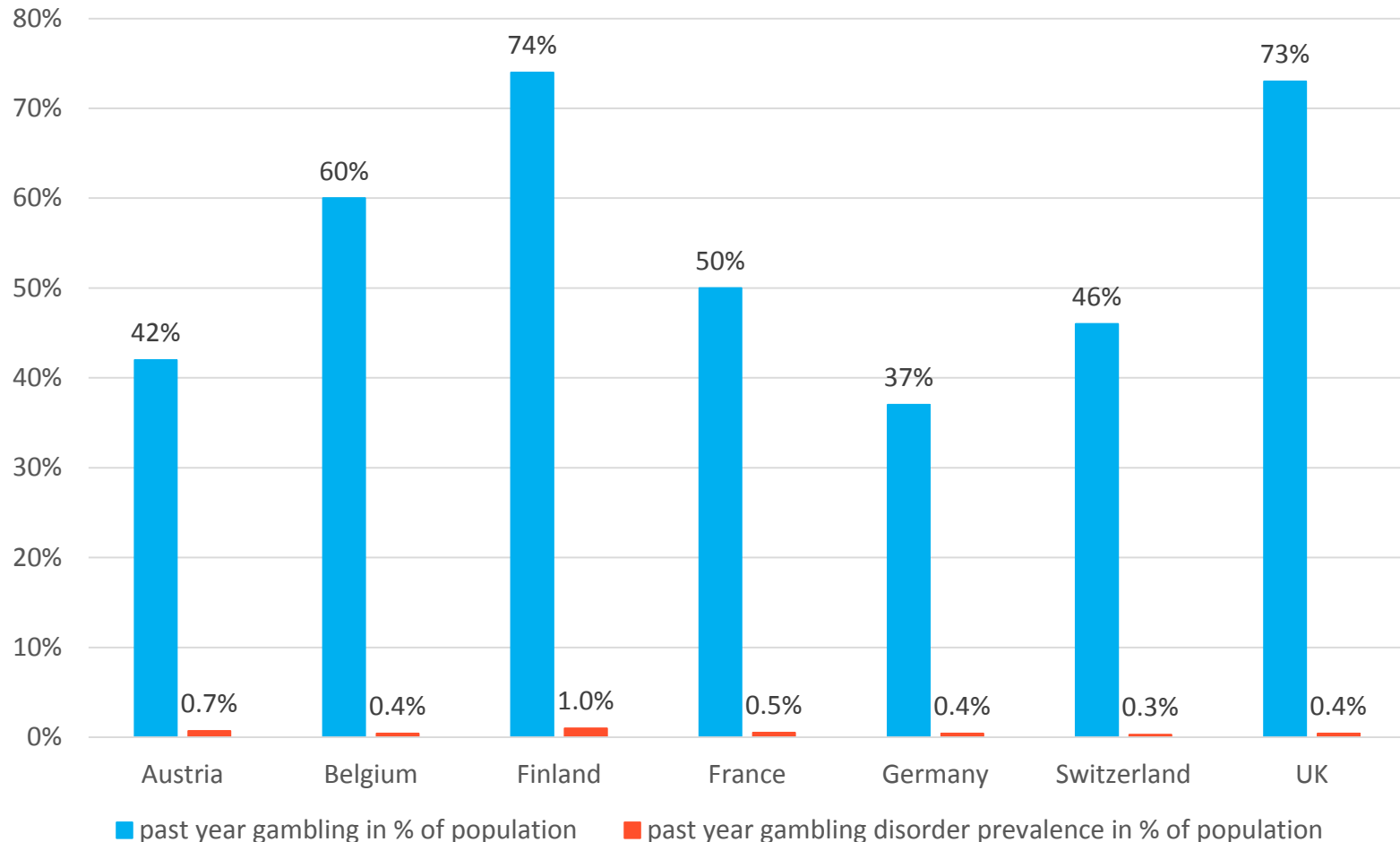
- 1. Background**
- 2. Aetiology of gambling disorder**
- 3. A public health view on responsibility for prevention**
- 4. Preventive measures**
- 5. Conclusions**

**For a subgroup of gambling participants, there is increasing evidence that individual vulnerability (innate or acquired in childhood) has a central role for the development of a gambling disorder**

Consequently:

- responsible gambling activities to improve informed choice will not be sufficient
- specific player protection is needed: early detection, support and gambling restrictions including bans

## 1.1 Prevalence rates of gambling and gambling disorder



## 1.2 Core questions

- (1) Given general availability and mostly easy access to gambling offers: Why is this small percentage of gamblers with GD affected and others not? What is their specificity?
  - (2) Probably dominant role of individual factors for the onset of GD compared to
    - Environmental factors (e.g. social attitudes, advertising, access)
    - Gambling characteristics (e.g. stakes, losses, duration)?
- As most adult participants gamble without problems, individual factors might play a core role: individual vulnerability?
- Possible specific risk factors for minors?

## 2.1 The concept of vulnerability

### Vulnerability factors

Innate or acquired risk factors that heighten the probability that a person reacts to certain events or environments (i.e. stressors) with the development of a mental disorder

## 2.2 Facets of vulnerability

<b>Neuro- biological</b>	<ul style="list-style-type: none"><li>• Genetic und early childhood risk factors (e.g. trauma)</li><li>• Dysregulation of neurotransmitters (dopamine, serotonin, opioids)</li></ul>
<b>Neuro- psychological</b>	<ul style="list-style-type: none"><li>• <b>Hypersensitivity</b> for (immediate) rewards</li><li>• <b>Hyposensitivity</b> for punishment</li><li>• Increased attention and reactivity towards gambling-related cues</li><li>• Impaired cognitive control (e.g. lower inhibitory control)</li><li>• Heightened risk seeking</li></ul>
<b>Psychological</b>	<ul style="list-style-type: none"><li>• Mental disorders (mainly depressive, anxiety, and substance use disorders)</li><li>• Cognitive distortions (e.g. illusion of control)</li><li>• Heightened impulsivity (e.g. spontaneous behavior without foresight)</li><li>• Maladaptive coping (e.g. suppression or escape)</li></ul>

(Kräplin & Goudriaan, 2018)



## 2.3 The vulnerable gambler

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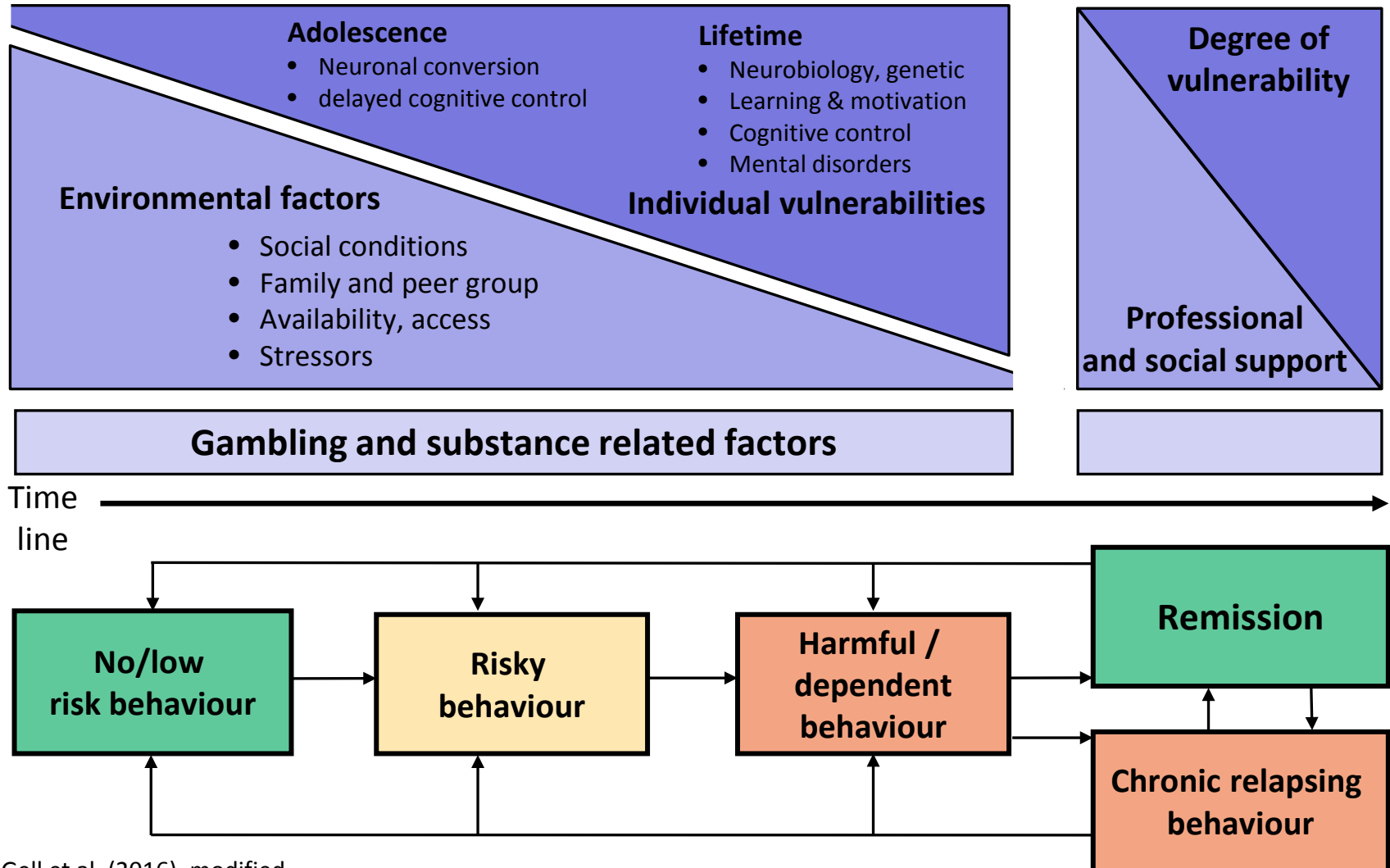
### Neurobiological characteristics

- Changes in reward and punishment sensitivity (frequent and intense rewards needed, decreased impact of negative consequences)
- Increased attentional bias (gambling-related cues)
- Impaired cognitive control and decision-making (behaviour inhibition, delay discounting)

### Psychological characteristics

- Increased impulsivity
- Cognitive distortions (e.g. illusion of control)
- Increased comorbidity (anxiety, depressive disorders)
- Maladaptive emotion regulation and coping

## 2.4 Aetiology of Addiction: Heuristic model for the development of Addiction



## 2.5 Hypotheses with increasing scientific evidence

- (1) Heightened vulnerability as consequence of innate and acquired risk factors in childhood and adolescence
- (2) Risky gambling develops in adolescence and early adulthood (peer group, advertising)
- (3) High vulnerability has a central role in the transition from risky gambling to GD
- (4) Three distinct risk groups : low-risk social gamblers, minors and adult vulnerable gamblers
- (5) Three target groups



## 3.1 Who bears responsibility in open societies for low-risk gambling? (1)

- (1) The individual?
- (2) The provider?
- (3) The regulation authority as societal representative?

## 3.1 Who bears responsibility in open societies? (2)

### (1) John Stuart Mill's (1806-1873) theory of liberty

**Individuals are free in activities that provide “personal satisfaction”**

- Risk for others: public regulation accepted
- Risk for “incapable” people: public regulation accepted (e.g. minors, vulnerable gamblers)
- Risk for oneself: individual responsibility !

→ **One exception: “asymmetric information”**: Consumer information to balance market power of participants and to reduce market inequality

### (2) Post World War II development of modern consumer protection to increase social protection of people

- To protect the individual from exploitation by strengthening industry and public responsibility and protection in relation to individual responsibility

→ **Overall aims:**

1. Strengthening individual responsibility via informed choice
2. Protecting vulnerable people (e.g. minors; “incapable” people)

## 3.2 Shared responsibility for low-risk gambling (1)

### (1) Individual

- To be informed about gambling procedures, wins, stakes and losses
- To be informed about possible risks and support options
  - Informed choice and individual responsibility
  - Entertainment within economic, time and social limits

### (2) Society (regulation authority)

- Regulation of responsible gambling
- Control
- Sanctions
- Protection of minors and vulnerable gamblers
  - To enforce public good
  - To ensure equal conditions for providers

## 3.2 Shared responsibility for low-risk gambling (2)

### (3) Provider

- Staff training, management regulations
- Implementation of rules of the regulation authority
- Transparency
- Ban of minors
- Support of responsible gambling measures
- Protection of vulnerable gamblers
- Cooperation with the support system (and vice versa)
- Cooperation with the regulation authority
- Regular evaluation and improvement

## 4.1 Minors: Education and forced exclusion

- (1) Parental education
- (2) School education
- (3) Gambling exclusion (age verification)
- (4) Regulation of advertising



## 4.2 Low risk social gamblers: Responsible gambling activities

- (1) **To support informed choice:** information for the gambler to make rational decisions
  - (2) **Original RG concept: Information** (Blaszczynski et al., 2004)
    - Basis of RG
      1. Decision to gamble is individual choice and responsibility
      2. Make decisions, industry has to provide accurate information
    - RG minimal essentials
      1. Staff training
      2. Advertising and marketing
      3. Cooperation with support services
      4. Player information
  - (3) **Refinements of key RG components** (Blaszczynski et al., 2011)
    - Extension of RG minimal essentials to general education, prevention, advertising, risky gambling-related features, self-exclusion
- **Future topic:** information on risky motives for and functionality of gambling<sub>7</sub>

## 4.3 Vulnerable gamblers: early detection and support

### (1) Early detection

- Analysis of critical characteristics of gambling behaviour
- Active tracking of online gambling
- Systematic observation of land-based gambling

### (2) Warning messages, advice and voluntary limits

- Personalised feedback
- Warning messages
- Recommended voluntary limits: e.g. money, time, time-out

### (3) Obligatory limit agreements

- Limits still chosen by customer including self-exclusion

### (4) Provider-defined limits

- Including forced exclusion (ultima ratio)

→ Need for research on processes and outcomes

## 4.4 Implications for other addictions – e.g. alcohol?

- (1) Different to gambling: Two distinct types of risk - somatic health risks and risk for addiction
- (2) Clear dose-response relationship for somatic health risks, for addiction less evident – motives for and functionality of drinking probably more relevant
- (3) However, most preventive measures address somatic health risks: daily drinking limits and abstinence in critical situations (30% above limits)
- (4) Need for education in *responsible drinking*: to support low-risk motives for/ functionality of drinking: e.g. avoid drinking in situations of stress, loneliness, conflicts, sleep problems, need for consumption
- (5) However, vulnerable users will not benefit from this type of rational education to improve informed choice
- (6) Implications for prevention: Same as for gambling?
- (7) No chance for implementation!

- (1) Heightened vulnerability as consequence of innate and acquired risk factors in childhood and adolescence
- (2) Risky gambling develops in adolescence and early adulthood (peer group, advertising)
- (3) High vulnerability has a central role in the transition from risky gambling to GD
- (4) Three risk groups with different preventive needs: (1) low-risk adult social gamblers, (2) minors and (3) adult gamblers
- (5) **Minors:** education, exclusion from gambling
- (6) **Social, non-vulnerable adult gamblers:** information and gambling feedback to support informed choice; need for improvement
- (7) **Vulnerable adults:** player protection (early identification, support, graded restrictions: gambling limits, breaks, exclusion)
- (8) Research needs: vulnerability factors, early identification, interventions