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# Risk Factors for the Development of Disorders Related to Children's Gambling in the Light of Desk-research Studies

Czynniki ryzyka wystąpienia zaburzeń  
związanych z hazardem dzieci w świetle badań  
*desk-research*

## ABSTRACT

The issue of addiction to activities has been present in the scientific discourse for years. Gambling disorders constitute a specific, separate disease entity. These disorders can affect people of all ages, and children and adolescents are particularly prone to them. The subject of the research described in the article are risk factors for the development of gambling disorders among children, and its aim is to present the results of research conducted in 2021 by a research

## KEYWORDS

children, gambling disorders, gambling addiction, existing data analysis, behavioral addictions

## SŁOWA KLUCZOWE

dzieci, zaburzenia uprawiania hazardu, uzależnienie od hazardu, analiza danych zastanych, uzależnienia behawioralne

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team at the Jagiellonian University. The research method was a systematic literature review based on PRISMA standards. The research material consisted of selected articles published in English-language high-ranking scientific journals. The conclusions from the research, including the most common risk factors of gambling disorder, allowed for the formulation of recommendations and recommendations in the field of universal and selective prevention addressed to children, their parents and caregivers.

## ABSTRAKT

Problematyka uzależnień od czynności jest obecna w dyskursie naukowym od lat. Zaburzenia uprawiania hazardu stanowią specyficzną, odrębną jednostkę chorobową. Zaburzenia te mogą dotknąć osoby w różnym wieku, szczególnie podatne na nie są dzieci i młodzież. Przedmiotem badań opisanych w artykule są czynniki ryzyka rozwoju zaburzeń związanych z uprawianiem hazardu przez dzieci, a jego celem jest zaprezentowanie wyników badań prowadzonych w 2021 roku przez zespół badawczy w Uniwersytecie Jagiellońskim. Metodą badawczą był przegląd systematyczny literatury oparty o standardy PRISMA. Materiał badawczy stanowiły wyselekcjonowane artykuły publikowane w anglojęzycznych wysokopunktowanych czasopismach naukowych. Wnioski z badań, obejmujące najczęściej występujące czynniki ryzyka uzależnienia od hazardu, pozwoliły na sformułowanie zaleceń i rekomendacji w zakresie profilaktyki uniwersalnej i selektywnej kierowanej do dzieci, ich rodziców i opiekunów.

## Introduction<sup>1</sup>

In view of the rapid growth of risky behaviors in contemporary societies, emphasis is being placed on effective preventive actions.

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<sup>1</sup> The article describes the results of research on risk factors in the group of children, and the research assumptions and results of research covering other age groups can be found in the monograph entitled *Profilaktyka uzależnienia od hazardu oparta na dowodach naukowych* [Prevention of Gambling Disorder Based on the Results of Scientific Research], Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2021, financed by the Fund for Solving Gambling Problems, at the disposal of the Minister of Health as part of a competition conducted by the National Bureau for Counteracting Drug Addiction (currently the National Centre for Counteracting Drug Addiction).

Effective preventive measures targeting risk factors and protective factors should be based on research findings. Public institutions in the field of public health, education and social assistance carry out preventive tasks aimed at all social groups by organizing or financing universal programs, campaigns or preventive actions, or targeted measures at the level of selective or indicated prevention. When making decisions, they should be guided by the proven effectiveness of the strategies used to prevent and combat unfavorable social phenomena and to protect the health and well-being of each citizen.

Disorders related to gambling, although relatively rarely studied in our country (Lelonek-Kuleta, Chuchra, Sak 2017; Moskaiewicz et al. 2019), are described very widely in foreign studies, as is the problematic use of technology. The research report entitled *Estimation of the Prevalence and Identification of Risk Factors and Factors Protecting Gambling and Other Behavioural Disorders* from 2019 (Moskaiewicz et al. 2019: 177) indicates that people over the age of 15 who played for money at least once in the year preceding the study accounted for 37.1% of all Poles. On the other hand, the report entitled *Youth 2018* indicates that 7% of all respondents play at least one game for money regularly (once a week or more), nearly half (49%) do not play this type of game at all, and the rest (44%) play sporadically (Gwiazda 2019: 227). Among the group of young people who play for money, 6% are at high risk of gambling addiction (Gwiazda 2019: 232). On the other hand, the data from the 2019 ESPAD report, conducted among young people, indicate that only about 20% of respondents have had experiences with gambling, while the prevalence of problem gambling is low (Sierosławski 2020: 114). A research report entitled *Teens on the Gambling Network: An In-depth Analysis of the Phenomenon of Online Gambling from the Perspective of Adolescents Who Play as a Group Particularly Vulnerable to Its Consequences* from 2017, regarding adolescents aged 15–18 years, found that symptoms of interest in gambling appear in young people around 13–14 years of age, with the age of initiation to gambling gradually decreasing. The respondents who were 18 years old before the publication of the report first gambled at the age of 14 and 2 months, while in the case of 15-year-olds at the time, this age was around 11 years and 7 months. Every fifth teenage internet player became interested in gambling games around the age of 10 (Gwiazda 2017: 96–97).

Online gambling has a particular potential for addiction, as the availability, playing without leaving home, without time limits, the ease of getting started, access to games on the phone “at hand,” a relatively large selection of games and the possibility of remaining anonymous make gambling attractive (Gwiazda 2017: 138). An important factor that requires special attention of researchers is the phenomenon of the intergenerational transmission of gambling in families. In the aforementioned report entitled *Teenagers in the Gambling Network*, gamblers not only watched their loved ones play for money as children, but also actively participated in the game (by helping to predict numbers, accompanying the purchase of bets, scratching scratch cards, etc.) (Gwiazda 2017: 94–96). The same is also true for seniors, as the report entitled *Gambling in the Life of Seniors 2017* (Lelonek-Kuleta, Chuchra, Sak 2017) shows that gambling is often shared between grandparents and grandchildren who spend time together betting, buying scratch cards, etc. In the Polish literature, research on risk factors or protective factors of gambling disorders among children is virtually absent, and in light of such alarming data on the scale of addiction to gambling or gambling in a harmful way, undertaking such research is justified (Lelonek-Kuleta Chuchra, Sak 2017: 51–53).

For the sake of clarity of the argument, it is necessary to define gambling games understood under the law as games of chance, mutual betting, card games and slot machine games (the Gambling Act of 19 November 2009, Journal of Laws of 2009, No. 201, item 1540, as amended). A gambling disorder, on the other hand, should be understood as a disease entity that is characterized by having impaired control over gambling; prioritizing gambling over other activities and interests; and continuing or escalating gambling despite the occurrence of negative consequences. This model of behavior may lead to significant stress or impairment of functioning in various areas of a person’s life (ICD-11, 2021).

Children are exposed to advertising and information about gambling, to its presence in mass media, at sports and cultural events, as well as in public discourse. From an early age, during preschool and early school education, children encounter lotteries, games of chance, and sports betting, but rarely can one find research findings on the relationship between exposure to gambling and later gambling

behavior and, consequently, disorders related to gambling. In contrast, the relationship between gambling in early childhood and disturbed gambling patterns in adulthood is confirmed by research (Bellringer et al. 2014; Pitt et al. 2017).

## Desk-research analysis in studies of risk factors of gambling disorders among children

The research method used in the present study is referred to as “desk research” and generally consists of content of data and statistical data analysis, as well as cross-sectional or historical comparison, which allows us to juxtapose many different findings in the same or an analogous research area and enrich previous research conclusions (Bednarowska 2015: 19). The sources of data may include any documentation of the functioning of a given project, reports on activities and research, or materials collected by specialists who work at a given site. Moreover, the Internet, libraries, databases, legal acts, public statistics, analysts’ data and the press are important sources of data (Makowska 2013: 83). In research, many techniques-methods are used as part of the analysis of existing data, and a systematic literature review is among the most prominent among them (Petticrew, Roberts 2006; Czakon 2011: 57; Orłowska, Mazur, Łaguna 2017: 350). The literature review in this study was carried out according to the standards referred to as PRISMA and included the necessary stages: elements of a properly documented research process (<https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/2046-4053-4-1> [accessed: 15 August 2021]).

The purpose of using the systematic review method was to understand the risk factors for childhood gambling disorders. The practical aim of the research was to formulate recommendations for the creation of prevention programs for gambling disorders, while taking into account the most important risk factors of a given age group. Strict inclusion/exclusion criteria were applied and the research problem was formulated according to the PICO standard. 386 records were selected for the key words “risk factor gambling child”, with 197 records remaining after duplicates were removed. At the next stage of selection, the following data were reported under the inclusion/

exclusion criteria: author, year, publication source, title, keywords, abstract, and digital ID of the electronic document. At the abstract analysis step, 88 more records were excluded to qualify 109 records for the analysis of full texts downloaded from the EBSCO database. After the full-text versions were reviewed, only 4 articles from *International Gambling Studies*, *Harm Reduction Journal*, *Australian and New Zealand Journal of Public Health*, *The Canadian Journal of Psychiatry* met the inclusion/exclusion criteria.

## Analysis and synthesis of research on risk factors for gambling disorders in children

The analysis of research reports leads to the obvious conclusion that we cannot talk about risk factors of gambling disorders in children in the same terms as in adolescents or adults, by identifying the factors that cause, sustain or perpetuate a gambling disorder. When analyzing risk factors in children, it should be assumed that behavioral addictions are the result of many interacting factors, both biological and/or genetic, as well as personality and environmental. The latter are related to situational and structural factors, such as the location and number of gambling facilities in a given area, and the use of advertising to encourage people to gamble. Structural factors include, for example, the frequency of payouts or the opportunity to gamble or place bets at all (e.g., football schedule) (Griffiths 1999: 266; Griffiths 2005: 196). The interacting and mutually reinforcing risk factors for childhood gambling disorders can be identified as increasing the likelihood of developing a future addiction.

The studies subjected to thematic analysis and included in the synthesis were based on quantitative and qualitative models, using structured or free questionnaires and interviews. Their subject was the prevalence and the determinants of gambling behavior in children. The study groups include children aged 6 to 9 from several Canadian public schools in areas with low socioeconomic status, as well as groups of children included in longitudinal studies from infancy to age 9 in New Zealand, and children and adolescents aged 8–16 in Australia. Research on the risk factors of gambling disorders in children aimed at establishing the link between behavioral disorders in the first years

of primary school and the initiation of gambling (apart from alcohol and nicotine initiation) (Temcheff et al. 2016: 51–58). The goal was to determine the scale of gambling problems in nine-year-olds and to identify the relationships between childhood gambling and maternal gambling (Bellringer et al. 2014: 457–471). Other research goals included identifying relationships between consumer strategies and attitudes about gambling among children (Pitt et al. 2017) and diagnosing children's awareness of advertising for sports betting, including their knowledge of the technical aspects of betting. In addition, the objective of the study was to establish the relationship between advertising and children's attitudes, as well as their willingness to take part in sports betting (Pitt et al. 2017: 604–610).

Research on the relationship between behavioral disorders in children aged around 9.5 and the initiation of gambling showed that these children were twice as likely to gamble than their peers without any behavioral issues. Behavioral disorders were a direct factor in the initiation of gambling among children who participated in the study (Temcheff et al. 2016: 55). A study in New Zealand found that 9-year-old children under study were involved in gambling, and over a quarter of them played for money with family or friends (Bellringer et al. 2014: 467–468).

Research on the impact of advertising on the awareness and attitudes towards gambling (including the willingness to take part in sports betting) among children aged 8–16 has far-reaching conclusions. Children are familiar with gambling advertising, gambling, and gambling behavior due to the fact that these gambling products—both viewed and used—appeared in the family home and in the media (i.e., in everyday life of the family, on television and in public social behaviors of prominent people). Moreover, children's gambling behavior is initiated and modelled by the behavior of family members as well as cultural and culture-forming events in the family. Interestingly, the children who were surveyed showed consumption intentions for sports betting. The reasons for this are the association of gambling behavior with activities of cultural value, children's knowledge about sports (subjective, not necessarily actual knowledge), exposure to marketing and advertising of sports betting, as well as the influence of friends and family members who gamble (Pitt et al. 2017: 1). The children declared a good knowledge of sports

betting advertisements and showed high familiarity with products and names related to sports betting (Pitt et al. 2017: 604). When remembering sports betting ads, the children identified humor, intense voices, the presence of celebrities, and attractive promotions. This study demonstrates the significant impact of sports betting advertising on children's understanding of sports behavior, the way they read meanings and interpret sports language. All this significantly affects future consumer behavior: the child is familiar with, or even well-versed in sports gambling and is a potential customer of gambling services (Pitt et al. 2017: 604).

The collected, sparse results of a systematic review, which included a significant number of sources in the initial stages, demonstrate the importance and relevance of research on gambling-related behavior among children. Much more research has been conducted on groups of adults or adolescents who recall childhood experiences in retrospective narratives (Poole et al. 2017: 1187–1200; Carbonneau et al. 2015: 1985–1993; Dowling et al. 2016: 11–17). Knowledge of risk factors emerging in early childhood can be the basis for creating tools to predict gambling behavior in adulthood. There is a clear need to conduct research on the prevalence and scale of gambling-related behaviors in schools and educational institutions (e.g., family picnics with raffle lotteries), on the participation of young sports fans (often with parents or grandparents) in sports betting, buying scratch cards while shopping with parents or friends, playing card games (for matches or for money), collecting food packaging or any other, where codes or boxes are sent to the manufacturer in order to win a product, as well as participation in all kinds of TV, radio and Internet competitions during sports broadcasts or sports events.

Such studies are not carried out in our country, while foreign studies clearly indicate the participation of the youngest in incidents related to gambling. Conducting research is a necessary condition for designing and planning preventive measures to reduce the risk of gambling-related disorders and their familial, social and personal effects in the life of an individual and his family. Foreign studies show that positive attitudes towards gambling behaviors are formed in the early years of primary school. The same is true about behaviors related to the use of psychoactive substances, and especially these attitudes are related to the behavioral disorders of children (aggression, withdrawn



behavior, relationship difficulties) (Temcheff et al. 2016: 56). As part of the strategy of legislative change, it is worth considering whether the current Act of 19 November, 2009 on gambling (Journal of Laws 2009 No. 201 item 1540 as amended) actually protects children and adolescents against risk factors for gambling-related disorders. Contemporary analyses and interpretations of statutory provisions indicate that it is not an effective protection tool (Kamuda, Trybus 2017: 156–171).

In conclusion, the narrative synthesis research clearly indicates many risk factors influencing children's attitudes towards gambling products. Preventive practice based on scientific evidence (Barczykowska, Dzierżyńska-Breś 2013: 131–152) is precisely the use of research findings in planning preventive strategies, including universal educational activities and the necessary reorientation of public policies, as well as mapping gambling behavior and controlling the market and the supply of gambling products. Research on effective strategies for health protection and social prevention demonstrates the need for multi-track actions, based on the cooperation of many public entities and social organizations. Recommendations for preventive practice that can be formulated based on the findings of studies obtained through a systematic review are as follows:

- It is recommended to carry out preventive actions at the early stages of the development of children and adolescents, in the early years of primary school.
- It is especially recommended to undertake preventive actions aimed at adults—parents and caregivers—in order to raise awareness of upbringing and care, because modelling behavior related to gambling, positive attitudes towards gambling and generation transmission are risk factors for gambling disorders in children who grow up in such families.
- It is recommended to carry out selective or even indicated prevention measures for individuals with behavioral disorders, as there is a strong relationship with the occurrence of early behavioral disorders and early gambling behaviors.
- It is recommended to undertake comprehensive actions, covering various areas, such as health care, education, legislation, sport and recreation, social assistance to prevent gambling disorders among children and adolescents.

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