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EDITORIAL



## Introduction to the Special Issue “20 years of the Pathways Model: understanding disordered gambling and other behavioural addictions”

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### ABSTRACT

The Pathways Model of problem gambling has become a highly influential framework in the field of gambling studies. This special issue commemorates 20 years since the publication of the original paper, highlighting the sustained impact of the Pathways Model across the broader and emergent field of behavioral addictions. As a framework, the Pathways Model set out two distinct objectives: first, to synthesize an array of risk factors and psychological processes that have been implicated in the etiology of gambling problems, and second, to characterize heterogeneity among people with gambling problems. As the articles included in this collection confirm, the three subtypes proposed by Blaszczynski & Nower continue to be an especially powerful stimulus for research.

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Gambling disorder continues to be a major public health concern, and the etiology and maintenance of gambling disorder has been a focus of research for several decades. A common theme to emerge from the literature is that individuals with gambling disorder constitute a heterogeneous group in terms of demographics, gambling patterns, types and motivations, psychosocial characteristics, as well as co-occurring mental health and other problems (Jacobs, 1986; Milosevic & Ledgerwood, 2010; Stewart & Zack, 2008). These findings have necessitated efforts to better characterize different subtypes of individuals with gambling problems with the ultimate goal of providing more effective policies and interventions to address this problem.

The landmark paper outlining ‘A Pathways Model of Problem and Pathological Gambling’ by Blaszczynski and Nower was published in the journal *Addiction* in 2002 (Blaszczynski & Nower, 2002), and its most recent revision has been published only a few months ago (Nower et al., 2022). According to its authors, the Pathways Model was developed in response to the need to integrate the various biological, psychological, ecological, and developmental factors involved in gambling disorder into a single

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comprehensive and integrative framework, to ultimately promote individualized treatment approaches. Since its publication, the Pathways Model has been cited well over 2,000 times, and we suspect most readers encountering this editorial within a journal in the field of gambling studies will already be familiar with its main tenets. That said, gambling research is a highly interdisciplinary field, and it should be noted the Pathways Model has been particularly influential within clinical psychology and psychiatry, and among healthcare professionals who work with people experiencing gambling problems. It is best known as a framework for understanding *heterogeneity* among people with gambling problems; clinicians find the Pathways Model attractive in helping them move beyond the ‘one size fits all’ approach to treatment, with tailored therapies – and intensities of therapy – aligned with the three etiological subtypes. For other researchers, from cognitive or behavioral psychology, or public health, the Pathways Model also acts as a useful organizing system for the many constructs and risk factors that have been implicated in the development of gambling problems. Moreover, in the last years, similar ‘pathways’ approaches have been used to account for the heterogeneity of other excessive or addictive behaviors (e.g. problematic smartphone use, see Billieux et al., 2015; and problematic video gaming, see Marchica et al., this issue).

How did this Special Issue come about? Empirical papers examining the Pathways Model have continued to be published at pace in recent years, partly as a result of new research tools for systematically capturing the individual difference components of the original paper (Nower & Blaszczynski, 2017), and partly as a result of increasing uptake in the research community of the relatively advanced statistical procedures capable of evaluating the latent subtypes at the heart of the framework (Black & Allen, 2022; Nower et al., 2022). In late 2020, Dr Clark was engaged in separate conversations with Dr Billieux and Dr Ledgerwood anticipating the 20-year anniversary of the original Blaszczynski and Nower (2002) paper, and we approached *International Gambling Studies* as a possible host outlet for a special issue commemorating this event. Notably, beyond some initial words of encouragement, Dr Blaszczynski (Editor-in-Chief at IGS) recused himself from any role in preparing the Special Issue.

During the window of submissions for the Special Issue (from July 2021 until June 2022) other manuscripts have been published elsewhere that have also advanced this field. Nower et al. (2022) used the Gambling Pathways Questionnaire in a data set of 1168 treatment-seeking gamblers. Using a Latent Class analytic approach, their results broadly supported the three pathways but also prompted some revisions to the original 2002 model. In particular, Pathway 3 (the antisocial-impulsivist pathway) is now conceptualized as independent (rather than additive upon) the characteristics of Pathway 2 (the emotionally vulnerable pathway). Commentaries upon this recent paper have also reflected on some ongoing ambiguities. The premise that the Pathways Model only applies to clinically relevant gambling patterns has been questioned, and described as a neo-Kraepelinian perspective. This is at odds with contemporary evidence suggesting no qualitative difference between the normal and the pathological and calls for assuming a continuum of harm (Billieux et al., 2022). Goudriaan and de Waal (2022) noted how attention deficit hyperactivity disorder (ADHD) – a key comorbidity with gambling disorder – does not seem to differ across subtypes in the Pathways Model, and may instead be associated with overall gambling severity (see also Blaszczynski & Nower, 2022).

The articles in this Special Issue eloquently capture the breadth of the impact arising from the original publication. Two papers synthesize the current strength of evidence for the Pathways Model, one from a systematic perspective that compares the evidence against alternative frameworks for heterogeneity (Excell et al.), and the other from a more critical perspective seeking to highlight knowledge gaps and ambiguities (Delfabbro & King). In their paper, Bonnaire and Billieux provide in-depth process-based formulations for each of the three pathways. Through demonstration using case descriptions, these authors deliver a rich and comprehensive depiction of how each specific pathway may manifest among clients seeking treatment. Another study in a treatment-seeking sample with Gambling Disorder considers the Pathways constructs from a dimensional (regression-based) perspective (Mestre-Bach et al.). Highlighting the importance of applying validated psychological models to other cultures and languages, Primi et al. validated the use of the Pathways Questionnaire for use in an Italian sample. Two further empirical studies consider the application of the Pathways Model to other addictive behaviors; notably problematic video gaming in adolescents (Marchica et al.) and patients undergoing methadone maintenance therapy for opioid use disorder (Lister et al.), highlighting how components of the model have translational utility in describing the many routes to excessive consumption. Lastly, a more subtle contribution of the Pathways Model has been to organize the diverse psychological constructs that are implicated in the escalation of gambling behavior. Ferrari et al. focus on habit formation as one of the more neglected components of the original model, providing a thorough behavioral analysis of slot machine gambling over repeated sessions.

The work included in this special issue highlights the continuing importance and validity of the Pathways Model. Nevertheless, more work needs to be done. For example, few studies have directly used the Pathways Model to inform treatments in those with gambling disorder, and such personalization has not been evaluated. As noted in recent publications, there is also a need for further discussion about whether and how we may apply the Pathways Model to other groups of individuals who gamble, such as those without gambling problems. The field has progressed significantly since the original publication of Blaszczynski & Nower's work, but there remains plenty of room for advancement of the Pathways Model.

## Disclosure statement

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