

Commentary on Nower *et al*: Patterns in pathways: underlying comorbidities and the importance of assessment

Comorbidity in disordered gambling likely plays a substantial role in the second and third pathways of the revised pathways model of problem gambling. Therefore, screening for and treatment of post-traumatic stress disorder (PTSD) and attention deficit hyperactivity disorder (ADHD) in disordered gambling has high relevance for clinical practice and research.

Nower *et al.* [1] investigate a revision of their pathways model of problem gambling, based on a large sample of problem gamblers recruited from treatment centres, using latent class analysis to investigate the number and typology of classes.

The Gambling Pathways Questionnaire (GPQ) used to classify subgroups of problem gamblers includes comorbid problems like depression, anxiety, childhood trauma, impulsivity and related factors. The differences in comorbidity reported in Table 2 and 5 of Nower *et al.*'s [1] study have important clinical and research implications. Higher prevalence of childhood trauma is mentioned in two of three pathways (pathway 2 and pathway 3); with an even higher prevalence of childhood trauma in pathway 2 compared to pathway 3 problem gamblers.

This has important diagnostic and treatment implications for disordered gambling because higher childhood maltreatment implies a higher chance for PTSD and other comorbid psychopathology, like anxiety, depression or personality disorders. Specifically, in addiction treatment centres, the prevalence of PTSD is high, with an estimated 25% prevalence of current PTSD in persons with a substance use disorder (SUD) [2]. The scarce prevalence studies in disordered gamblers also indicate higher prevalence of PTSD in problem gamblers [3]. In the very recent review by Moore and Grubbs [4], a broad overlap is found in risk for traumatic life events and/or PTSD and comorbid gambling disorder, with a stronger effect of PTSD on severity of gambling disorder compared to traumatic events alone. In addition, both childhood trauma and PTSD are associated with higher psychopathological comorbidity and less favourable treatment outcomes in both gambling disorder and SUDs [4, 5]. Unfortunately, the diagnosis and treatment of PTSD in addictive disorders is understudied, as persons with SUDs are frequently excluded from trials [6] and left

underdiagnosed. Although evidence of treatment of PTSD in SUDs is building [7, 8], research on PTSD in gambling disorder is still very limited. Because pathway 2 and 3 subgroups in the model concern problematic gamblers with a higher severity of gambling problems, it is likely that they have a smaller chance for positive response to treatment, and when PTSD is present, chances for a positive treatment response will be even lower. Importantly, pathways 2 and 3 comprise 56% of the sample, and it therefore, considers a more than substantial subgroup of problem gamblers.

Because PTSD and trauma may lead to gambling as a way of coping with intrusive memories and/or negative feelings, screening for trauma and PTSD in gambling disorder is highly relevant. Reliable and short screening measures for PTSD in addictive disorders are available [9] and can be implemented to optimize treatment for disordered gamblers with PTSD and diminish chances for relapse.

With regard to higher impulsivity, as reported in the third class within the pathway model of problem gambling, the connection with ADHD as a comorbid disorder to gambling disorder has relevance. The authors report that ADHD items were removed from the third pathway based on a prior study, in which an ADHD subscale of questions on ADHD was dropped from the factor model [10]. However, because the GPQ is a self-report questionnaire and impulsivity and risk taking are the highest subscales in the third pathway model, it may well be that the ADHD subscale was dropped because it did not discern in items from the impulsivity and risk taking subscales. Like PTSD, ADHD is a highly frequent comorbidity in SUDs [11] and disordered gambling [12] and it is likely that when assessed, prevalence of ADHD in this third pathway will be higher. As ADHD in disordered gambling has been related to higher chances of persistence [13], it is equally important to screen and assess for ADHD and to address this frequent comorbid disorder in disordered gambling. Additionally, in other SUDs, ADHD has also been associated with higher PTSD prevalence [14]. In short, the findings reported by Nower *et al.* [1] demonstrate the need for the implementation of screening for PTSD and ADHD and subsequent diagnostic assessment and treatment for these comorbidities to optimize treatment prospects for problematic gamblers with these comorbidities.

KEYWORDS

ADHD, comorbidity, gambling disorder, impulsivity, PTSD, trauma

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DECLARATION OF INTERESTS

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AUTHOR CONTRIBUTIONS

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