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Letter

Systematic error in gaming disorder measures

Veli-Matti Karhulahti and Tiina Auranen

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Addictions; systematic review; survey statistics; gaming disorder; gambling disorder.

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The inclusion of gaming disorder in ICD-11 as a new addictive behaviour was supported by epidemiological estimates, which have implied such psychiatric problems to be globally prevalent.[1] After nosological criteria for diagnosing gaming disorder were proposed in DSM-5 and ICD-11, studies have collected further epidemiological evidence by using more diagnostically consistent self-report measures across countries and populations.[2] According to recent meta-analyses that include mixed measures, the global prevalence of gaming disorder is 2–3%.[3] This letter reports a sequence of events that can significantly affect the interpretation of such epidemiological rates.

As part of the participant recruitment for our longitudinal research, we surveyed the general Finnish population to identify people who have sought clinical treatment for gaming disorder symptoms. Gaming disorder criteria from ICD-11 were used for pre-screening. We contacted 44 people who self-reported treatment-seeking due to gaming, 7 of whom replied and expressed interest in joining the study. In the entrance interview with a clinician, however, it turned out that six out of the seven people had sought treatment not for gaming but for gambling.

This led us to closely reinvestigate the content of validated gaming disorder measures, which are based on DSM-5, ICD-11 and other nosological systems. Surprisingly, we did not find any of the validated English DSM-5 and ICD-11 based gaming disorder self-report measures[2] nor those listed as the most used measures[3] to have items or instructions that would exclude gambling. Because these measures ask about behaviours in digital games (i.e. computer games, internet games, video games) and many gambling products are also digital games, people with symptoms of gambling disorder can also meet the criteria of measures for gaming disorder.



Fig. 1 Conceptual overlap between gaming and gambling in English.

The above has not been a problem in gambling measurement because gaming conceptually includes gambling, but not *vice versa*: in English, all gambling is gaming but not all gaming is gambling (Fig. 1). In other languages the clinical associations between gambling and gaming terminologies vary[4] and would benefit from systematic global assessment.

Our findings imply that most, if not all, epidemiological estimates of gaming disorder combine both gaming and gambling prevalence rates. Considering that the global prevalence of clinical gambling problems has been estimated to be 0.12–5.8%,[5] the present finding should encourage researchers to critically reconsider the current epidemiological knowledge produced by gaming disorder self-report measures and meta-analyses. This can also help explain previously found correlations between gaming- and gambling-related health problems.[6]

Next, researchers should carefully investigate the prevalence of efforts to exclude gambling from gaming disorder measurement across languages, populations and specific scales to produce more reliable epidemiological estimates. This will be helpful to further improve both policy and practice globally as well as regionally. The developers of new gaming disorder screening measures should, by default, include instructions or items that explicitly tell participants not to report their gambling behaviours.

Veli-Matti Karhulahti, University of Jyväskylä, Jyväskylä, Finland; **Tiina Auranen**, University of Jyväskylä, Jyväskylä, Finland

Correspondence: Veli-Matti Karhulahti. Email: vmkarhwu@jyu.fi

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Data availability

The data generated with participants who consented to be studied are currently being made accessible for research purposes in the Finnish Social Science Data Archive.

Author contributions

V.M.K. wrote the original draft and is responsible for coordinating the project on which this letter is based. T.A. contributed revisions to the original draft and served as the clinician in the entrance interviews.

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Declaration of interest

None.

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Poem

juvenile psychiatry, burning out

Philip Archard

cobalt carpet tiles, blotchy
pitted beige walls
a sanitised toy house
not crying, but trying
to lie; lying to try
when they say overwhelm, this means little to me
I know, I think, I know what they mean, exactly, all the same
tired of the practice, of transitions anticipated
transference-counter, leave me alone

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