



Exploring Measures of Adolescent Online Gambling: Insights from a Narrative Literature Review

Maryrose C. Macaraan

De La Salle University, Manila, Philippines

Abstract— With the increased accessibility to digital technology, adolescents' exposure to online gambling activities has dramatically increased over the previous years and is eventually becoming a part of many adolescents' daily experiences. These exposures may range from online sports betting and digital card games to gambling simulations in video games. The frequency and immediacy of exposure to these types of activities may pose significant threats to adolescents' health, which therefore warrants particular attention for appropriate assessment measures to minimize harm among the youth. The study aims to explore the current tools used to assess online gambling problems among adolescents, highlighting the importance of timely and appropriate measures to address the various aspects of problematic gambling among youth. Findings showed that many instruments demonstrated sound psychometric properties and initial cultural adaptability. However, there is a need to enhance the generalizability by reducing reliance to self-reported data, expand representation, improve diagnostic accuracy, and integrate assessments that reflect the digital landscape. By rethinking how online problem gambling is assessed, this study hopes to contribute to a more proactive intervention and better mental health outcomes for adolescents who are navigating a digitally connected world.

Keywords— adolescent, literature review, online problem gambling.

I. INTRODUCTION

Online gambling refers to activities done via an internet-connected device that allows an individual to wager or place bets on various gaming activities and receive rapid and instant feedback. The digital nature of these activities enables behaviors to occur with ease and privacy, at any given time and location (Gainsbury, 2015; Gainsbury & Wood, 2011; Monaghan, 2009). As these digital technologies become more mainstream, adolescents have better access to online gambling activities, which raises significant public health concerns.

Problematic gambling can be defined in various ways, but it often refers to the less severe form of the disorder, which is considered acute and contextualized based on the detrimental effects of the behavior (Delfabbro, 2013). This is in contrast to the definitions of pathological gambling or gambling disorder, where it is defined as a behavioral addiction that is persistent, recurring, and leads to clinically significant impairment or distress that warrants an understanding of both life experiences and psychopathological components (Gori et al., 2022). However, similar to pathological gambling, problem gambling is found to be a heterogeneous construct that involves the interaction of multiple biological, psychological, and social components. Identifying early can minimize harm and provide appropriate intervention strategies (Stinchfield, 2010; Montiel et al., 2021; King et al., 2020; Delfabbro, 2013). Pathological and problematic gambling are both viewed as public health concerns. (Potenza et al., 2019; Delfabbro, 2013; Abbott, 2020). A consensus on its definition can be conceptualized by



focusing on behavioral indicators that could potentially result in various gambling-related harms (Neal et al., 2005; Delfabbro, 2013).

While this definition of problem gambling is generally accepted, there is an ongoing debate about the most efficient way to measure it (George & Murali, 2005). The majority of the existing assessments primarily focus on the psychopathological definitions of gambling instead of harm conceptualizations of problematic gambling. In addition, most of the assessments were originally developed to identify problem gambling among the adult population and were later modified for use with adolescents, where the accuracy of the results may not be suitable for the particular population. The current measures need to be improved to better conceptualize the severity and multidimensionality of gambling behaviors, which a scale with a single construct may miss out on. In a review conducted by Calado et al. (2017) on the prevalence of adolescent problem gambling, it was found that there is a higher prevalence among adolescents than in adults. There is significant heterogeneity in methodologies which suggests a need for standardized assessment tools (Montiel et al., 2021). Likewise, existing tools are mostly based on Western conceptualization of gambling behavior which could limit their applicability in other cultural settings. There is a need for assessments that are not only psychometrically sound but also culturally relevant while taking into account the shift to digital behaviors.

This study aims to review the current tools for assessing problem gambling among adolescents and their respective strengths and limitations, cultural relevance and ability to reflect current digital gambling trends. As a critical period of development, it is crucial to immediately address gambling concerns among adolescents as a preventive measure from possible future negative consequences such as concerns about mental health, relationships, academic performance, and financial well-being. Specifically, it aims to answer this research question: "What are the strengths and limitations of existing assessment tools for adolescent problem gambling?"

II. METHODOLOGY

A narrative review is conducted to explore existing literature on adolescent online gambling behaviors. A narrative review presents the summary findings of studies in a condensed format, which is helpful in presenting a broad perspective on a certain topic and generating insights (Agarwal et al., 2023).

A literature search was conducted using the following search terms ("adolescent" OR "youth" OR "teen") AND ("problem gambling" OR "pathological gambling" OR "gambling addiction") AND ("measurement" OR "assessment") AND ("review"). The articles were analyzed, and the instrument's strengths and limitations were identified.

For the inclusion criteria, this narrative review selects articles that directly focus on measurement tools that examined online gambling behaviors among adolescents that were conducted within the past 10 years (2014-2024) to ensure relevance and timeliness. The exclusion criteria involve studies that are not articles and do not measure gambling among adolescents, as well as books and opinion articles. Additionally, studies not available in English and those outside the 10-year span are excluded.

III. RESULTS AND DISCUSSION

Due to its potential to cause significant harm, including psychological, social, and financial issues among adolescents, online problem gambling has posed significant concern. In order to develop timely and effective prevention and intervention strategies, identifying and understanding problematic gambling among adolescents is important. This review explored current tools used in assessing online problem gambling among adolescents by discussing their respective strengths and limitations.

Several assessment tools for problem gambling among adolescents showed sound psychometric properties. The South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) is found to be a reliable and valid tool for use among Chinese adolescents (Zhou et al., 2022). Likewise, the tool is found to be an effective tool in identifying adolescents in need of support (Anselmi et al., 2021). Additionally, the Korean version of the Canadian Adolescent Gambling Inventory (CAGI) showed reliability and validity as well (Kim et al., 2020) and it is also a reliable and valid tool for identifying for early identification of gambling issues in a Spanish sample (Jimenez-Murcia et al., 2017). The Online Gambling Disorder Questionnaire (OGD-Q) by Gonzalez-Cabrera et al. (2020) not only demonstrated reliability and validity but also correlated with symptoms of anxiety and depression. The Gambling Craving Scale (GCS) showed internal consistency and convergent validity (Donati et al., 2023). Calado et al (2016) validated the DSM-IV-MR-J which is found to be a culturally appropriate instrument for youth gambling in Portugal.

However, some limitations were identified in the various studies. Zhou et al. (2022) and Anselmi et al. (2021) noted concerns in generalizability of the SOGS-RA. Kim et al. (2020) cautioned on the sensitivity and specificity which may not reflect the full spectrum of the adolescent gambling experience of the Korean CAGI. Jimenez-Murcia et al. (2017) also noted on the specificity concerns by having a small sample size and the inclusion of young adults in the sample. Gonzalez- Cabrera et al. (2020) and Donati et al. (2023) highlighted concerns on using self-report measures and noting possible bias of the OGD-Q and GCS, respectively.

In a comprehensive systematic review by Montiel (2021), challenges across existing measures were identified, including a lack of consistency in defining and operationalizing problematic gambling among adolescents. The review emphasized the heterogeneous nature of methodologies of previous measures that remains challenging in comparing prevalence rates or establishing universal screening criteria. Moreover, some of the tools had limited cross-cultural validation and focused more on constructs related to pathological gambling rather than harm-based or developmental indicators that could directly address adolescent gambling behaviors.

III. CONCLUSION

Adolescence is a critical developmental period needing relevant assessments and interventions. The current review highlights that while existing tools for measuring adolescent problem gambling offer a structured approach to early identification, several gaps remain. Many instruments demonstrate solid psychometric foundations and initial cultural adaptability. However, further refinement is needed to enhance their generalizability and specificity. There is a need to reduce reliance on self-reported data, expand representation to validation to include



marginalized and high-risk adolescent populations, improve diagnostic accuracy, and integrate assessments that reflect the online modalities. Addressing these gaps will help ensure that assessment tools are developmentally appropriate and culturally responsive which would contribute to effective prevention and intervention strategies. This would also be a guide in crafting evidence based policies.

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