RESEARCH SNAPSHOT

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Testing if the Problem Gambling Severity Index measures problem gambling consistently across demographic groups and gambling formats

What this research is about

The Problem Gambling Severity Index (PGSI) is a very commonly used measure to assess risk of problem gambling in the general population. The PGSI comprises nine items, with each scored from 0 (never) to 3 (almost always). The total score ranges from 0 to 27, and people who score 8 or above are considered to be at high-risk for problem gambling. The PGSI covers numerous aspects of gambling behaviour. While it is not developed based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for gambling disorder, the PGSI has been found to be a highly reliable and valid measure.

For a scale to accurately measure a construct, such as problem gambling, it is important that the scale works similarly across different groups of people. If this is not the case, the scale may be biased and could lead to incorrect conclusions. When this happens, the scale is described as lacking in measurement invariance (MI).

For the PGSI, research on its MI has been relatively sparse. There have been some studies that tested the PGSI across different demographic groups. For instance, the PGSI was found to display MI across gender in college students and adults in treatment; that is, the PGSI was found to measure problem gambling consistently across males and females. Other studies have also validated its MI across age, income, and education.

Despite these studies, several important gaps remain. First, research on MI has not adequately considered that most people score quite low on the PGSI, with fewer people scoring as experiencing problem gambling. Second, further testing of MI across a wider number of demographic groups is needed. Third, previous studies have generally not included representative samples.

The aim of this study was to further test the MI of the PGSI. The researchers expanded the analysis to various demographic factors (sex, age, race, income, and education level) and gambling formats (online gambling, sports gambling, and casino gambling). A key strength of the study was the use of a large sample of US adults that was matched to the census.

What you need to know

The Problem Gambling Severity Index (PGSI) is widely used measure of problem gambling in the general population. While it is a reliable and valid instrument, questions remain over the measurement invariance (MI) of the PGSI. MI describes the degree to which an instrument consistently measures the same construct (e.g., problem gambling) in different groups of people.

In this study, the researchers assessed the MI of the PGSI in a large sample of US adults who gamble. It was found that the PGSI has strong MI across the tested demographic factors (sex, age, race, income, and education level) and gambling formats (online gambling, sports gambling, and casino gambling). In other words, the PGSI measures the risk of problem gambling in a consistent way across different demographic groups and gambling formats. PGSI scores were found to be similar between men and women. But higher scores were reported by younger adults, people who bet on sports, and people who engaged in online gambling.

What the researchers did

The researchers analyzed data from a previous survey study. Respondents to the survey were initially recruited based on the 2019 American Community Survey. The PGSI was answered by people who reported gambling, and those who completed it were included in the study. PGSI scores were categorized as 'non-problem gambling' (score of 0), 'low risk' (score of 1–2), 'moderate risk' (score of 3–7), and 'high risk' (score of 8 and above). The final sample of this study comprised 2,972 adults who gambled. Over half of the respondents were men (57.6%).

What the researchers found

First, the researchers found that the MI of the PGSI was quite strong overall. MI was found across all of the tested demographic factors and gambling formats. In sum, the PGSI measures the risk of problem gambling in a consistent way across different demographic groups and gambling formats.

Next, the researchers assessed differences in PGSI scores according to demographic factors. Both men and women were found to have similar PGSI scores overall. Similarly, no differences were found according to income or education. However, differences in PGSI scores were notable by age, with younger adults displaying higher scores than middle-aged adults. Older adults, though, reported the lowest scores. Differences in scores were also found between white and non-white groups, with non-white respondents having higher scores.

Lastly, different gambling formats were assessed. It was found that people who gambled online had higher PGSI scores on average compared to people who primarily engaged in land-based gambling. People who bet on sports were also found to have higher PGSI scores than those who did not bet on sports. But differences in PGSI were not observed for casino gambling.

How you can use this research

The findings of this study provide further evidence on the validity of the PGSI as a measure of gambling severity. It was found that the PGSI has good MI across various demographic factors and gambling formats. These findings may be of interest to researchers as well as policy makers involved in assessing gambling severity in population surveys.

About the researchers

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Citation

Azizsoltani, M., Ghaharian, K., Kraus, S., & Grubbs, J. (2025). Measurement invariance of the Problem Gambling Severity Index across sociodemographics and gambling modalities. *International Gambling Studies*. Advance online publication. https://doi.org/10.1080/14459795.2025.2529177

Study Funding

This study was funded by the Nevada Department of Health and Human Services (NVDHHS).

About Greo Evidence Insights

Greo Evidence Insights is an independent, non-profit organization specializing in research, knowledge mobilization, and evaluation in the health and well-being sectors. Greo transforms research and insights into actionable strategies to prevent and reduce harm related to gambling, gaming, technology use, and substance use. To learn more about funding for Research Snapshots visit our website.