

research snapshot

summarize | mobilize



Is the Problem Gambling Severity Index appropriate for use with older adults?

What this research is about

Gambling participation and problem gambling among older adults seem to be increasing. It is important to get an accurate estimate of gambling and related problems among older adults. Gambling studies often use the nine-item Problem Gambling Severity Index (PGSI) to measure problem gambling severity. The PGSI was developed for use among the general population instead of for clinical populations. It is a measure of gambling severity on a continuum. The total score can be used to categorise participants into one of four subgroups: non-problem, low-risk, moderate-risk, and severe problem gambling.

The PGSI has been found to be a valid and reliable measure for use with the broader adult population. It is unknown if the PGSI is suitable for use with older adults, whose gambling experiences may differ from younger adults. The researchers evaluated whether the PGSI was appropriate for use in older age groups.

What the researchers did

Gambling Research Exchange of Ontario (GREO) provided the researchers with access to data from the Quinte Longitudinal Study (QLS). The QLS was a five-year study of gambling and problem gambling. It took place between 2006 and 2011 in the Quinte region of Ontario, Canada. Participants were recruited to the QLS through random-digit dialling.

The researchers used data from the first wave (2006) of the QLS. This was because this wave included participants with diverse levels of problem gambling severity. The data that were included in this study were from participants that had completed all 9 of the PGSI items. Participants also had to report gambling a minimum of once in the previous year.

What you need to know

Gambling studies often use the nine-item Problem Gambling Severity Index (PGSI) to measure the severity of problem gambling. The researchers evaluated whether the PGSI was appropriate for use in older age groups. Gambling Research Exchange of Ontario (GREO) provided the researchers with access to data from the Quinte Longitudinal Study (QLS). The researchers used data from 571 older adults (aged 60–80+) to assess how suitable the PGSI was for use with older adults and any differences between how males and females answered the items. The researchers used a larger sample of 3206 respondents to examine differences in responses to the items across three age subgroups. The results supported that the PGSI measured a single dimension of problem gambling. But the PGSI could not distinguish older adults with lower levels of problem gambling severity. Three of the nine items did not fit the model well. Older adults did not often select “almost always” when responding to an item. There were no differences between how older adults answered the items by gender. But there were some items that differed between how older and younger adults answered them.

The researchers used data from 571 older adults aged 60–80+ years. The average age was 66 years of age. About 47% were female. About 53% were male. Over half had completed at least some technical school, college, or university. More than 67% were labelled “non-problem” according to the PGSI. About a quarter (23%) were “low-risk”, while 8% were “moderate-risk” and just over 1% had “severe problem gambling.”

The researchers did a Rasch analysis. The researchers first checked to see if participants' responses fit the Rasch model, which suggested the PGSI measured a single dimension of problem gambling. Next, the researchers examined how participants responded to each item of the PGSI and whether certain items might have a poor fit. Items of the PGSI were rated on a 4-point scale ranging from 0 (never) to 3 (almost always). The researchers checked to see how often participants selected each of these response options.

The researchers also analysed the differential item functioning (DIF). The DIF values show whether an item is more difficult (less endorsable) by a target group. The researchers did two DIF comparisons for each of the PGSI items. The researchers compared the DIF of each item by gender among older adults only. They also compared responses across three age groups (18–24 years, 25–59 years, and 60–80+ years). To do this, the researchers used a broader adult sample (18–80+ years) of the QLS. This sample consisted of 3206 participants.

What the researchers found

When used with older adults, the PGSI measured a single dimension of problem gambling. However, the PGSI items did not distinguish older adults with lower levels of problem gambling severity. Also, older adults did not often select the response option "almost always" when responding to the items. But removing this response option did not make any improvement.

Most of the 9 items showed appropriate fit to the Rasch model. But 3 items did not. These included the items that measured whether a person returned to gamble another day to try to win the money they lost (i.e., chased losses), experienced financial problems due to gambling, and whether they felt that they had a problem with gambling. The researchers suggested that the 'chased losses' item might be removed from the scale when being used with older adults. This item was under-fit to the Rasch model and responses to this item did not distinguish between different levels of problem gambling severity.

The researchers did not find any significant difference in responses between older males and females. But

compared to younger adults, older adults were less likely to endorse the two items that reflected betting more than they could afford to lose and borrowing or selling items to gamble. Older adults were more likely to endorse the item that reflected feeling guilty.

How you can use this research

Researchers can use these findings to support modifying the PGSI for use with older adults, such as by adding items that represent less severe symptoms of problem gambling.

About the researchers

Julie A. Gorenko and **Candace A. Konnert** are affiliated with the Department of Psychology at the University of Calgary in Calgary, Alberta, Canada. For more information about this study, please contact Julie A. Gorenko at Julie.gorenko@ucalgary.ca.

Citation

Gorenko J. A., & Konnert, C. A. (2022). Examination of the Problem Gambling Severity Index for use with older adults: A Rasch model approach. *Journal of Gambling Studies*. Advance online publication. <https://doi.org/10.1007/s10899-022-10138-2>

Study funding

This research was supported by scholarships to Julie Gorenko from the Social Sciences and Humanities Research Council, the Alberta Gambling Research Institute, and the Brenda Stafford Centre on Aging.

About Greo

Greo has partnered with the Knowledge Mobilization Unit at York University to produce Research Snapshots. Greo is an independent knowledge translation and exchange organization with almost two decades of international experience in generating, synthesizing, and mobilizing research into action across the health and wellbeing sectors. Greo helps organizations improve their strategies, policies, and practices by harnessing the power of evidence and stakeholder insight.

Learn more about Greo by visiting greo.ca or emailing info@greo.ca.

