The Gambling Participation Instrument

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- I have no current affiliation with the gambling industry.

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The Challenge

- No universal definition of what constitutes 'gambling'

- No standard way of measuring participation in gambling

- A lack of research investigating the most reliable and valid way of collecting self-reports of gambling participation

As a result …

- Comparisons between studies and jurisdictions are difficult

- Calls into question research results that posit a link between gambling participation and:
  - Gambling availability
  - Attitudes towards gambling
  - Problem gambling status

The GPI Study: Purpose

To develop a reliable, valid, and internationally agreed upon measure of self-reported gambling participation

The GPI Study: Components

1. Create a standard definition of gambling

2. Identify the dimensions of gambling participation that should be captured

3. Construct draft versions of the instrument

The GPI Study: Components

4. Empirically evaluate uncertain aspects of the instrument
   - Reliability & validity of two measures of consumption
     - Graduated-Frequency (GF)
     - Quantity-Frequency (QF)
   - Optimal reporting timeframe
   - Utility of assessing time spent gambling

Creating a Standard Definition

- Identify what activities should/should not be included

- Consistency with different definitions of gambling
  - Legal definitions of gambling
  - Public perceptions of gambling
  - Academic definitions of gambling (core elements)

- Unambiguously include all activities that are publicly, academically, and legally considered to be gambling in Western countries

- Unambiguously exclude all activities that are publicly, academically and legally not considered to be gambling

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Creating a Standard Definition

- Reviewed definitions

- Created proposed definition

- Obtained feedback from international experts (15 from 10 countries)

Consenus Standard Definition

"Staking money or something of material value on an event having an uncertain outcome in the hope of winning additional money and/or material goods"

Dimensions of Gambling

- Primary dimension is **type of gambling**, with individual types being grouped into lottery-style games, wagering-style games, or continuous versions of lottery or wagering games

- Another dimension is the nature of the **gambling provider** with regards to whether it is a commercial provider; a private individual; or a charity, community, or nonprofit group

- Third dimension concerns **means of access**, with direct face-to-face access and remote access being the two main subtypes

- Additional dimensions include:
  - Frequency of participation
  - Gambling expenditure
  - Time spent gambling

Dimensions of Gambling

- Completed thorough review of all of these dimensions

- Found considerable variability in how gambling participation has been assessed as well as the terminology used
  - Tendency to ask about a lengthy list of 12-20 items that represent a mixture of gambling types, gambling provider, and gambling access
  - Inefficient approach that produces imprecise measures of participation due to overlap in categories and incomplete coverage of dimensions

- Report presents taxonomy of gambling participation
  - Intended to be both cross-cultural and cross-historical

Constructing the Instrument: Principles

- Need to use optimal methodology for collecting reliable and valid retrospective self-report

- Need to comprehensively capture the dimensions of gambling participation, but in a manner that is not completely divergent from conventional ways of assessing it

- Need an instrument that is efficient as well as generic, flexible, and modular
  - Important so that the instrument could be used for different age groups, cultures, and countries; as well as in population prevalence studies, clinical studies, and experimental studies.

- Need to assess gambling participation with a one year time frame to align gambling participation with problem gambling assessments, which conventionally use a one year frame

Constructing the Instrument

- Review of literature of reliability & validity of retrospective self-report
  - Alcohol use
  - Tobacco use
  - Illicit drug use

- Ensuring optimal self-report
  - Ensure confidentiality & anonymity
  - Allow sufficient time for recall
  - Specific questions & memory aids
  - Ask about shorter, more recent time periods
  - Careful construction of response options

Empirical Evaluation

815 online panelists invited
- Random assignment (QF vs GF)
- Weekly gambling diaries (6 mos)

587 (72%) completed 18+ weeks
- Online survey of frequency, time, $$

575 (98%) completed survey
- 6 questionnaire formats

563 (96%) completed 2-week reliability retest

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Evaluation Results

- PARTICIPATION/NON-PARTICIPATION individual types of gambling
  - Validity excellent, test-retest reliability very good
  - Very high rate of infrequent participants forgetting about their past involvement as recorded in their diaries, particularly for lottery and raffle tickets

- ACCESSING GAMBLING (in person, remotely via phone or online, both)
  - Validity excellent, test-retest reliability good
  - Tendency for people to report having just in-person access, or just online access, but diaries indicating both remote and in-person access

- FREQUENCY OF GAMBLING
  - Validity good to excellent, test-retest reliability fair to excellent
  - Strongest reliability & validity coefficients, best absolute match with diary amounts with QF and TA formats

Evaluation Results

- TIME SPENT GAMBLING
  - Validity fair to good, test-retest reliability fair to good
  - QF formats had highest coefficients as well as the closest match with diary amounts
  - Utility of capturing time spent gambling modest (in general, highly correlated with frequency of gambling which had slightly higher validity & reliability coefficients)

- NET GAMBLING EXPENDITURE
  - Validity & reliability poor to fair

- GAMBLING LOSSES (i.e., excluding people reporting net wins)
  - Validity & reliability good
  - Strongest coefficients and best absolute match with diary totals for the QF Past 3 Months format

- REPORTING FORMAT (timeframe)
  - Shorter timeframes (per occasion, past month, typical month in past 3 months) not found to offer superior validity or reliability

Conclusions

- Quantity-Frequency (QF) approach using a time frame of the past 6 months offers the best combination of reliability and validity and is the optimal format for the GPI

- This aligns remarkably well to reviews of assessment of alcohol consumption, where a QF approach and a one year time period are currently identified as best practice

- The final *Gambling Participation Instrument* is a comprehensive, flexible, reliable and valid instrument assessing gambling participation in all of the primary dimensions of gambling
  - Assesses type, means of access, gambling provider, frequency, time & expenditures
  - Validity coefficients are good to excellent, ranging from .60 to .91
  - Test-retest reliability coefficients are fair to excellent, ranging from .46 to .84

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For more information

Williams, R.J., Volberg, R.A., Stevens, R.M.G., Williams, L.A. & Arthur, J.N. (2017). *The Definition, Dimensionalization, and Assessment of Gambling Participation.* Report prepared for the Canadian Consortium for Gambling Research. February 1, 2017.

Available online:
http://www.ccgr.ca/en/projects/gambling-participation-instrument.aspx

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