Challenges of Small Samples

PG<2%: A CCGR Workshop

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Theoretical Challenges

• Purposes of surveys have evolved & become more complex
  – Prevalence surveys (1980s – 2000s)
    • # of PGs in population
    • Demographics of PGs
  – Planning for PG services
    • Risk & protective factors
    • Barriers to treatment seeking
    • Effectiveness of services
  – Impact studies
    • Positive & negative impacts of gambling
Methodological Challenges

• Population surveys are always constrained by available resources
  – Researchers must balance conflicting demands
    • Achieving an adequate sample size
    • Achieving adequate coverage of subgroups in population
    • Obtaining reliable answers from respondents
    • Attaining acceptable response rates
  – Costs & sources of error are related
Methodological Challenges

• Sampling frames
  – Probability vs. non-probability methods
  – Matching sampling approach to study goals
    • Convenience sampling
    • Quota sampling
    • Random sampling
    • Stratified sampling
  – Calibration / weighting
Methodological Challenges

• Sampling modalities
  – Area probability sampling
    • Randomly selected residences
    • Face-to-face interviews
  – Telephone sampling
    • Can achieve probability samples of HHs w/phones
    • Coverage low for rural HHs, large HHs, unemployed, low income
    • Phone number portability & cell phone only HHs compromise coverage
  – Address Based Sampling (ABS)
    • Randomly selected residences
    • Permits multiple modes of data collection
Methodological Challenges

• Interview modality
  • Self Administered Questionnaire (SAQ)
  • Computer Aided Telephone Interview (CATI)
  • Computer Aided Personal Interview (CAPI)
  • Computer Aided Web Interview (CAWI)

• Seeking most honest/valid reports of behavior
  • Self administered modes better than interviews?

• Reported behavior also affected by questionnaire & response rates
Methodological Challenges

• Response rates
  – Rapid declines, esp. for telephone surveys
  – Generally assumed that PGs more likely to refuse
  – BUT, those with little involvement/interest in gambling may also refuse
  – Do they balance each other out?

• Calculating response rates has become more complicated as sampling modalities proliferate
  – Resolution rate
  – Screener completion rate
  – Interview completion rate
Methodological Challenges

• Weighting survey samples
  – Used to account for differential probabilities associated with selection & population coverage
    • Non-coverage of some kinds of HHs
    • Under-reporting of eligible population in large HHs
  – Additional adjustments for
    • Non-resolution of addresses/telephone numbers
    • Screener non-response
    • Within-HH selection probability
    • Interview non-response
Example: US Impact Survey

• Study purpose
  – Primarily to investigate impacts of gambling
  – Secondarily to estimate PG prevalence

• Dual-frame sampling
  – Used to efficiently capture large numbers of frequent gamblers
  – Used 2 sampling frames & 2 interview modalities
    • National random sample of adults interviewed by telephone (2417)
    • Random stratified sample of gambling venue patrons interviewed in person (530)

• Statistical procedure that took account of differential opportunities for inclusion used to combine the samples & re-weight the data
Example: SWELOGS

• Epidemiological track focuses on measuring PG prevalence & incidence
• In-depth track focuses on assessing risk & protective factors
  – Telephone interviews & postal questionnaires
  – National registers used to obtain population coverage
  – Sample stratified by age, gender & risk for PG
    • Male, low income, unemployed, received social benefit
  – Calibration weights used to align achieved sample with population
Example: MAGIC

• Study focus is on incidence & etiology
  – Incidence requires representative sample of population
  – Etiology requires enriched sample of high risk people
• Stratified sampling plan using SEIGMA baseline survey
  – Include all High Risk respondents
    • PGs, At Risk, Spending $1200+ annually, Gamble weekly, Served 9/11 or later
  – Random sample of Low Risk respondents
• Strata used to estimate population incidence
Audience Experiences

DISCUSSION
Summary of Discussion

• First Nations communities – research is challenging
  • Extremely remote
  • Low telephone ownership
  • Urban populations very transient

• Obtaining valid/reliable responses
  • Experience in LLLP suggests that interviews are somewhat better than self-administration b/c of established relationships
  • Need to understand people’s initial assumptions, attitudes, willingness to disclose
Summary of Discussion

• Changes in PG status over time
  • How much change is REAL?
  • Need to understand changes qualitatively?
  • Corroboration from others needed?

• New technologies & new gamblers
  • Online environment especially challenging
  • Are traditional survey research techniques obsolete?
  • What can we learn from new generations, how they communicate?
Summary of Discussion

• Recommendations for explaining survey research challenges
  • What are the research questions?
  • What are the available resources?
  • What are the trade-offs in answering the priority questions?

• Financial & other incentives
  • Small incentives can be powerful
  • But may not work with some communities & cultures
  • Must use incentives that have synergy & value to community members
  • Need to experiment with incentive schemes to find most successful approaches