

Leisure, Lifestyle, Lifecycle Project (LLLP): How stable is gambling involvement and problems?

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The Course of Gambling Behaviour and Gambling Problems

- Max Abbott & Rachel Volberg question the “progressive and chronic” model of gambling problems
- 7 year follow-up of 1991 New Zealand Prevalence survey
 - Of 13 current pathological gamblers in 1991, only 3 remained current PGs at follow-up (23%)
 - Of 23 problem gamblers in 1991, 3 escalated to pathological gambling (14%), and 2 remained problem gamblers (9%)

Winters et al. (2005) Adolescent sample (N = 305)

Age 16

7 PGs

Age 17.2

4 PGs

3 NPGs

Age 23.8

2 PGs

2 NPGs

0 PGs

3 NPGs

Age 16

298
NPGs

Age 17.2

12 PGs

286
NPGs

Age 23.8

5 PGs

7 NPGs

5 PGs

281
NPGs

Slutske et al. (2003) Young adult sample (N = 384)

Age 21-22

11 PGs

Age 24-25

4 PGs

7 NPGs

Age 28-29

1 PGs

3 NPGs

0 PGs

7 NPGs

Age 21-22

377
NPGs

Age 24-25

8 PGs

369 PGs

Age 28-29

1 PGs

7 NPGs

5 PGs

364
NPGs

Why is this important?

- Implications for prevention and treatment
 - Brief treatments versus chronic and lengthy treatments
 - Episodic treatments?
 - Different trajectories needing different approaches?

Background of Leisure, Lifestyle, Lifecycle Project

- A prospective, panel study of gambling behavior
 - 4 assessments over 5-years
 - Initial sample
 - Stratified by region of the province
 - 5 age groups
 - Over sampled high frequency gamblers
 - -70th percentile for age and sex



Recruitment and Retention

- Time 1 – N = 1808
 - High frequency did not differ from high frequency in general population
 - General population bootstrapped weights derived (age, sex, geography, high frequency)
- Time 2 – n = 1495 84% (online)
- Time 3 – n = 1316 73% (online)
- Time 4 – n = 1343 75% (online)
- Blood and spit – n = 679

Attrition Bias

- Males
- Non-Caucasians
- single, less educated, attending school,
- More types of gambling, more time spend gambling (not frequency)
- Greater gambling problem severity

Analytic Approach

- Parallel analysis with Quinte Longitudinal Study (QLS) – many of the same instruments
- 4123 Quinte residents
 - Same timeframe
 - No age cohorts
 - Over sampled higher frequency
 - 5 assessments over 5 years
 - 94% retention rate

Stability of Problem Gambling

- Important to factor in measurement error
- Accuracy of self-report compromised by:
 - short period of time participants given to answer the questions
 - incomplete recall
 - recency bias
 - self-deception
 - mood state
 - social desirability
 - genuine uncertainty about whether they meet the criteria we are asking about (guilt, financial problems, etc.)

Reliable Change Index (RCI)

- Is the difference between a person's 2 scores larger than might be expected due to measurement error?
- Difference in the person's score over 2 time periods divided by the standard error of difference between the 2 test scores:

$$RCI = \frac{X_1 - X_2}{\sqrt{2(S_{SE1} \sqrt{1 - R_{XX}})^2}}$$

- RCI scores provide a measure of the change in *standardized units*. Thus, a RCI of 1.96 or larger is needed for statistical significance at $p < .05$

Jacobson & Truax (1991)

Reliable Change Index: QLS & LLLP

- PGSI has average test-retest reliability of .765 (over a number of studies)
- Average *SD* of PGSI over the 4 Time periods is 2.15 in LLLP and 1.86 in QLS over the 5 Time Periods
- Hence, a raw score increase or decrease of ≥ 3 at the subsequent time period is what is required for a statistically significant change

Summary of PG Stability Findings

- **Good consistency** in findings across the two data sets (QLS and LLLP)

Chronicity and Duration

- About half of problem gamblers are problem gamblers in only one time period.
- Chronic unremitting problem gambling is uncommon.
 - Only one-third of problem gamblers are problem gamblers in 3 or more time periods
 - Only one-quarter are problem gamblers in 4 or more time periods
 - Only 10% have problem gambling in all 5 years.

Summary of PG Stability Findings

Recovery

- The above results also mean that close to three-quarters of problem gamblers are observed to recover (no longer meet problem gambling criteria).

Relapse

- Of those that no longer meet problem gambling criteria, three-quarters do not relapse (at least during a 4-5 year time frame). Only a minority of people move in and out of problem gambling in a 4-5 year time period.

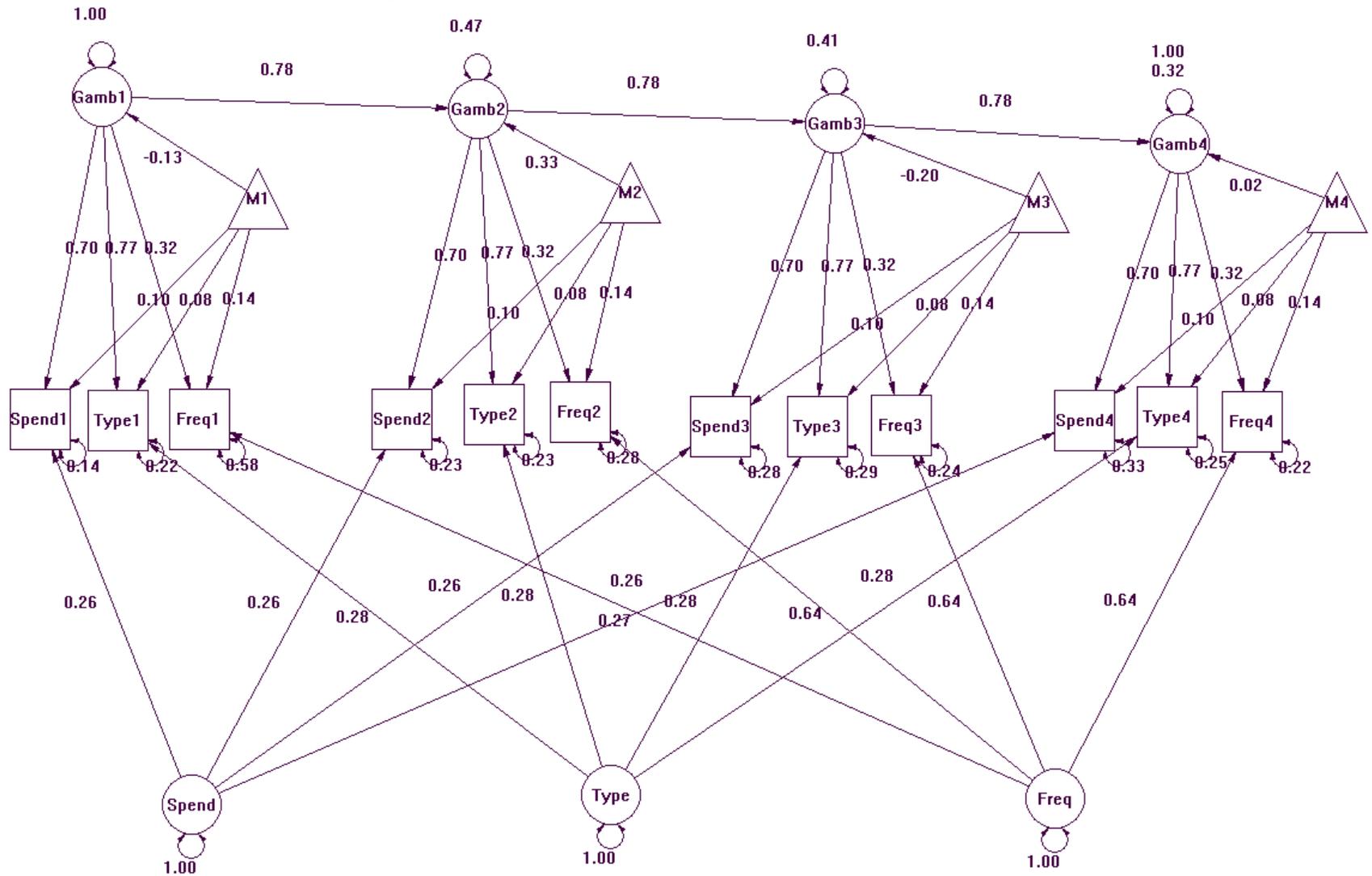
Longer time frames are needed to understand overall course of problem gambling.

Ongoing Qualitative Study of Transitions

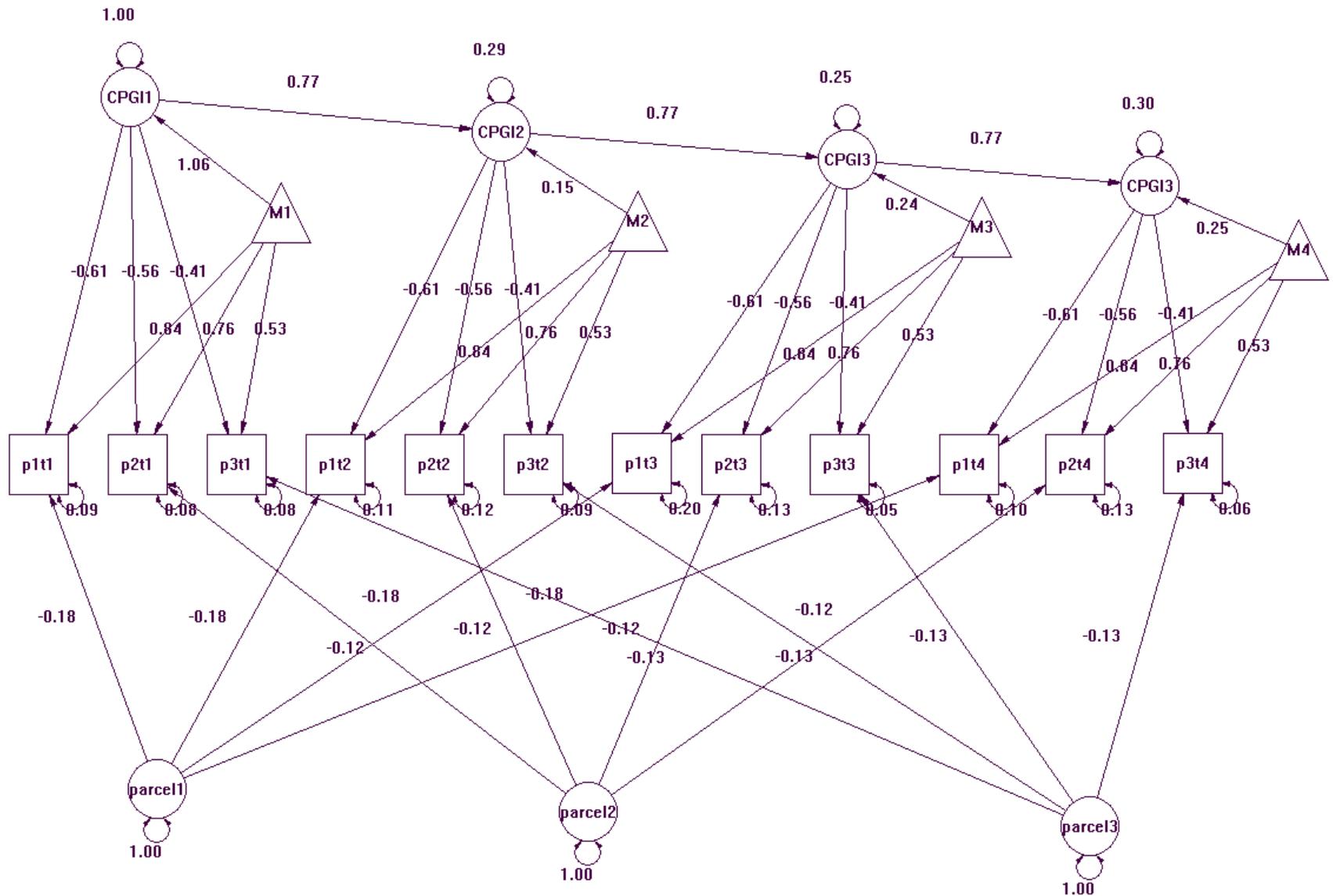
What about a broader population perspective?

- Iterative process of modeling relationships using structural equation models
 - Gambling behaviour
 - Number of types of gambling
 - Expenditure
 - Frequency
 - Gambling Problem Continuum
 - CPGI - PGSI (3 parcels of items)

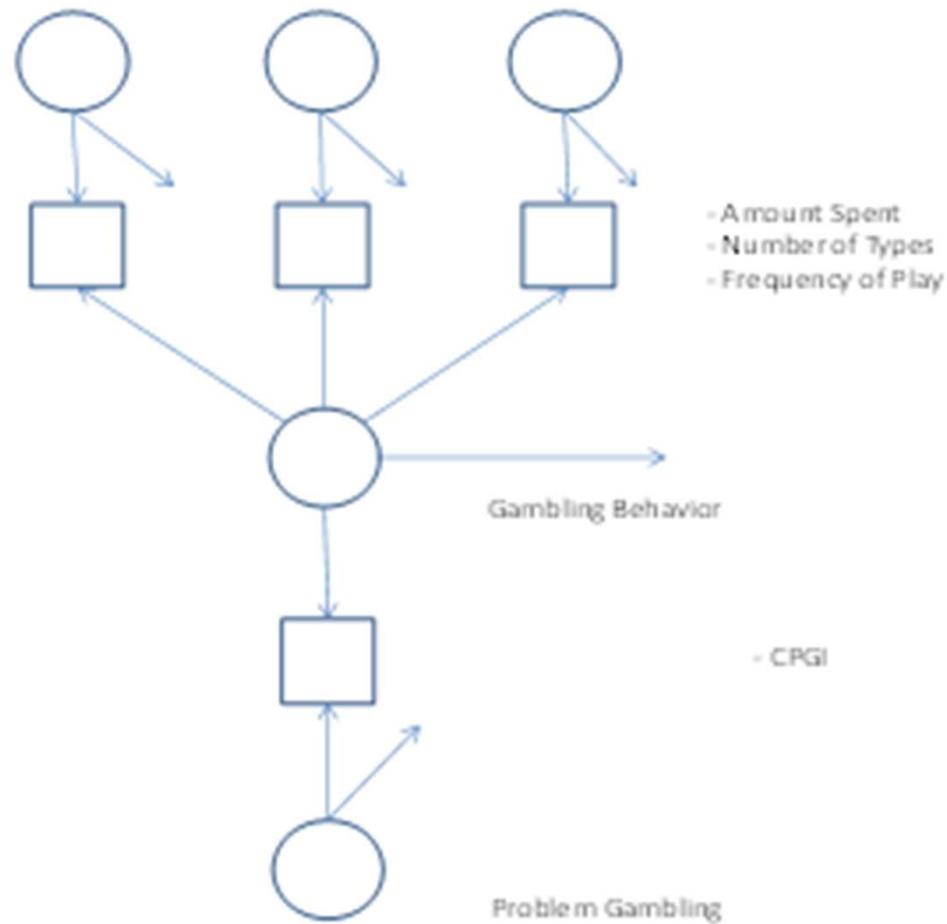
Gambling is stable over time



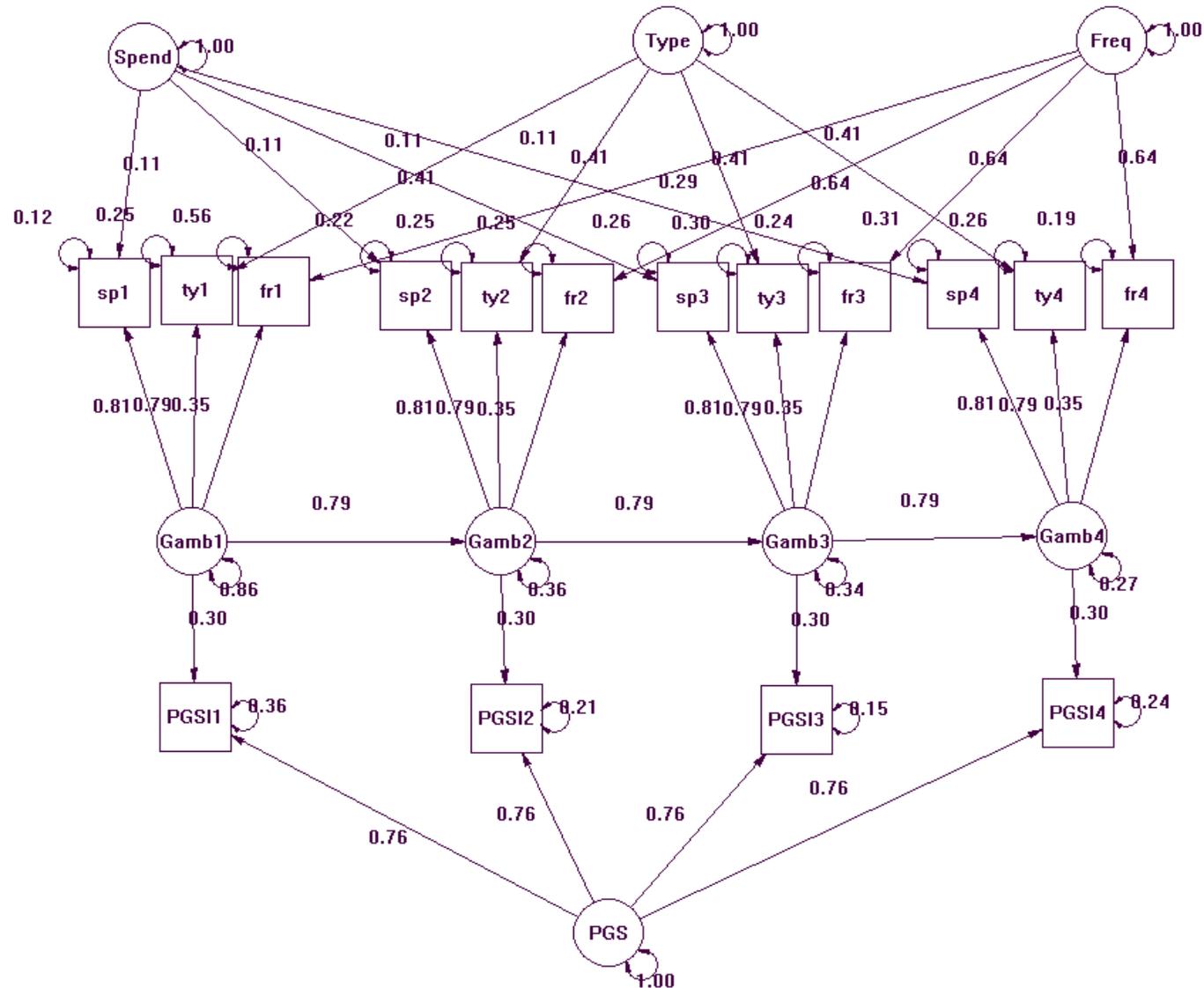
Problem gambling is stable over time



Putting them together....



Gambling and Problem Gambling are stable over time



Reconciling all this stability and all
this change....



Next steps...

- Examine factors that predict stability and change...
- Qualitative investigation of individual change...