BE WHAT YOU WANT TO BE

The Consumption Screen for Problem Gambling (CSPG):

Why a Penchant for Big Macs May Predict Appetites for Gambling

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Evidence for a common underlying trait: “Consumptiveness”

- Consumptiveness: “A persistent orientation towards acquiring and using resources in excess of a proper accounting of their costs and benefits - resulting in harm.”

- simple behaviors that result in immediate, sensation-oriented rewards
  - alcohol, caffeine, smoking, illicit drugs, energy-rich foods (including salt)
  - Gambling

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Evidence for a common underlying trait

- Empirical evidence for co-morbidity / co-variation is well established
  - eg gambling + alcohol + nicotine
- But is gambling fundamentally different?
  - eg no physical ingestion of substance
- The consumption hypothesis:

The observed covariation between gambling and other appetitive behaviors is a consequence of an underlying trait of consumptiveness

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Testing the consumption hypothesis

- Substance consumption behaviors show significant co-variability
- Therefore, other consumption behaviors should predict:
  - whether one gambles or not
  - how much one gambles (if a gambler)
  - even after controlling for other covariates (demographic, social)

The survey

- CATI survey conducted by the CQUniversity Population Research Laboratory
- 1,194 completed surveys
- Incorporated multiple self-report measures of health, lifestyle, and well-being
- A relatively high-risk population with regard to issues around health and/or well-being
  - Shift-workers preferred
  - Central Queensland (mining intensive)
  - mixed SES

Consumption, social, and demographic variables

CSPG	Consumption screen for problem gambling (frequency and intensity)
AUDIT-C	Alcohol Use Disorders Identification Test - Consumption (frequency & quantity)
BMI	Body Mass Index (self-reported height and weight used to calculate)
CAFFEINE	Custom scale – tea, coffee, and energy drinks
SALT	Two simple questions regarding adding to prepared food at home
CIGARETTES	Based on number of cigarettes smoked per day
ILLICIT DRUGS	One item screen converted to yes / no binary variable
BRCS	Brief Resilient Coping Scale – coping with stress in an adaptive manner
PSS	Perceived Stress Scale – self-perceptions of stress
AGE	Recorded numerically
MARRIED	(or de facto) versus single, divorced, etc.
OCC. SECTOR	Converted to binary variable: Primary / secondary versus tertiary sector
EDUCATION	11 point scale from none to post-graduate qualifications
GENDER	

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CSPG:
How often?

IMPORTANT: When you think about gambling DO NOT include lottery tickets, instant scratch tickets or raffles, but DO include all other types of gambling such as poker machines, card games, racing, sports betting, day trading, bingo and casino games.

Q1: How often did you gamble in the past 12 months?

- I have NEVER gambled
- I have not gambled at all in the past 12 months
- Monthly or less
- 2 to 4 times a month
- 2 to 3 times a week
- 4 to 5 times a week
- 6 or more times a week

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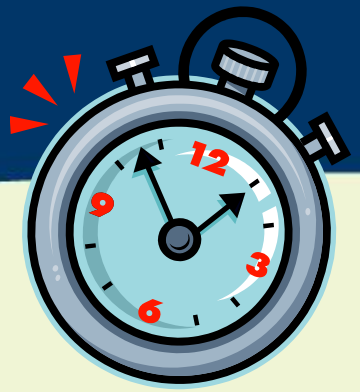
CSPG:
How much?



Q2: How much time did you spend gambling on a typical day in which you gambled in the past 12 months?

- Less than 30 minutes
- More than 30 minutes but less than 1 hour
- More than 1 hour but less than 2 hours
- More than 2 hours but less than 3 hours
- More than 3 hours

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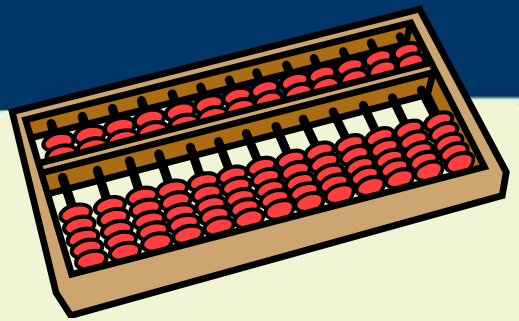
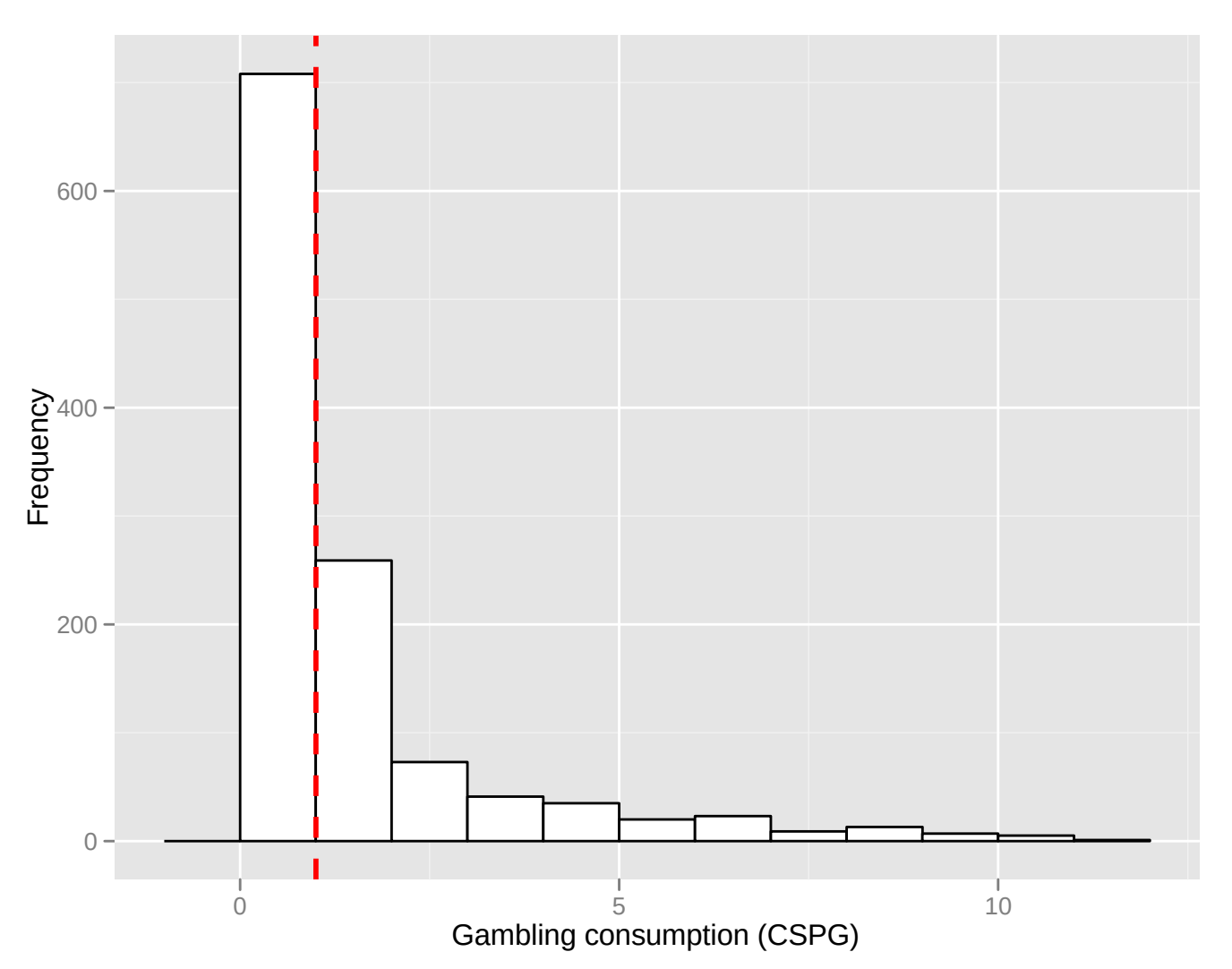
CSPG:
How frequent?



Q3: How often did you spend more than 2 hours gambling (on a single occasion) in the past 12 months?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

Distribution of CSPG scores in the general population



Bivariate analysis

- Comparison of gamblers versus non-gamblers

	Gambles					
	No		Yes			
	M	*SD*	M	*SD*	t^a	df
AUDIT-C	1.02	*1.06*	1.51	*1.02*	+7.53***	898
Caffeine	12.35	*5.39*	13.43	*5.23*	+3.2**	885
BMI	27.77	*5.88*	28.31	*5.38*	+1.5	848
Cigarettes	.67	*1.98*	.94	*1.63*	+2.24*	783
Hi-en. food	25.32	*7.22*	27.00	*6.92*	+3.77***	877
Salt	4.41	*1.99*	4.80	*1.97*	+3.22**	898
Illicit drugs	N				Chi-square	
No	599		393		4.22*[b]	
Yes	25		29			

*p<0.05
**p<0.01
***p<0.001
[a]One-tailed Student's independent groups t-test
[b]Pearson's chi-squared test with simulated p-value (based on 2000 replicates)

Bivariate analysis

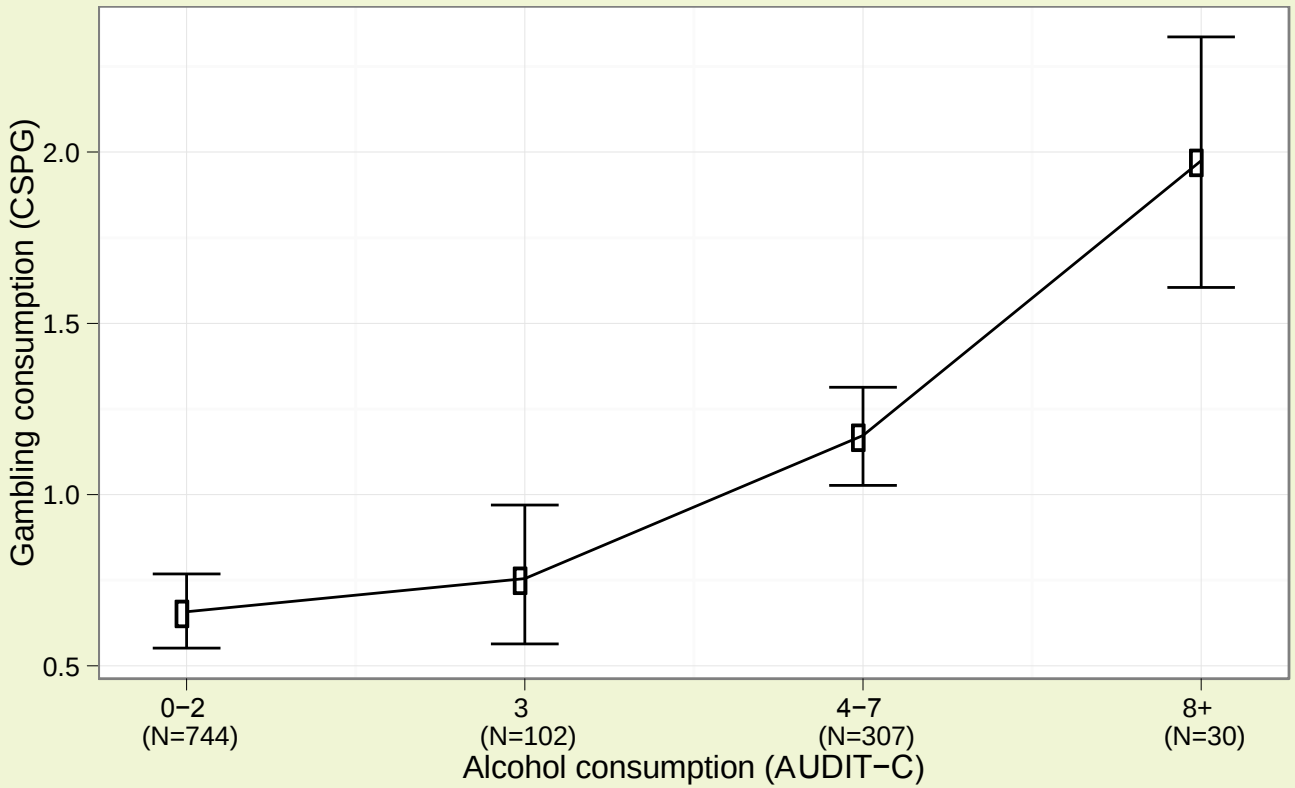
- As gambling consumption increases, does other forms of consumption increase?

	CSPG
AUDIT-C	+.17***
Caffeine	+.12**
BMI	+.10*
Cigarettes	+.14**
Hi-en. food	+.01
Salt	+.05
Illicit drugs	+.03[a]

*p<0.05
**p<0.01
***p<0.001

[a]The non-significant relationship between CSPG values and binary variable 'drug use' was confirmed using a independent 2-group Mann-Whitney U test.

Relationship of alcohol consumption to gambling consumption



Multivariate analysis

- Stepwise inclusion of all variables
- Consumption variables proved useful after including other effects

Zero hurdle model coefficients (binomial with logit link)			
	Estimate	SE	z
Intercept	-1.541	.597	- 2.578**
Gender	.452	.247	+1.824[a]
Education	-.321	.137	- 2.336*
Occ. Sector	-.249	.179	- 1.393
Married	-.185	.191	- .970
Married:Gender	-.740	.288	- 2.568*
BRCS	-.048	.021	- 2.221*
PSS	.028	.017	+1.633
AUDIT-C	.452	.067	+6.743***
Caffeine	.027	.012	+2.174*
Hi-en. food	.023	.009	+2.396*

Multivariate analysis

- Highly conservative model
- Alcohol not significant after including gender
- Smoking and caffeine significant

Coefficients for estimation of non-zero CSPG values (truncated negative-binomial with log-link)			
	Estimate	SE	z
Intercept	-2.637	.815	- 3.234**
Log(theta)	-1.54	.716	- 2.154*
Age	0.018	.007	+ .016*
Gender	.817	.213	+4.085***
Smoke	.217	.061	+3.524***
Smoking:Gender	-.234	.085	- 2.753**
AUDIT-C	.084	.089	+ .940
Caffeine	.040	.017	+2.276*
Salt	.008	.045	+ .176

Conclusions

- Cautious support
  - In agreement with previous findings in terms of known predictors (alcohol, cigarettes, drugs – less so)
  - Contribute unique portions of explained variance
  - Mostly out-competed social or demographic explanatory variables
  - Junk-food, caffeine and salt added to the list of known co-occurring use-behaviours
- Interpretation
  - Causality issues eg gamblers spend more time in clubs being exposed to alcohol
  - A general trait towards ‘healthy lifestyle choices’ - or a true shared motivation mechanism?
  - Regardless, highly suggestive support for the ‘consumption hypothesis’ is shown