

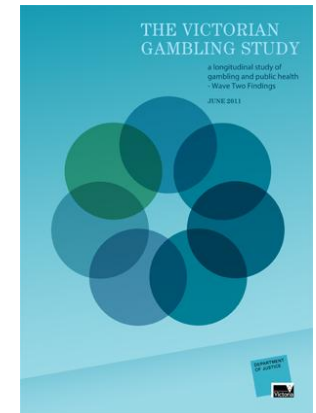
victorian gambling study

exploring your health & gambling over time

Call the information line (03) 8682 8698
(9am-5pm Mon-Fri)



**Rosa Billi, AGRI Conference, Banff
April 2012**



**Department of Justice
121 Exhibition St, Melbourne***



**Free City Circle Tram in front
of Parliament House, Melbourne**



**The home of
Australian Rules Football**



*Photo by Madam3181 at FlickrR

Victorian Longitudinal Study

DEPARTMENT
OF JUSTICE



Acknowledgements

Expert Panel

- Max Abbott
- Sarah Hare
- Damien Jolley
- Penny Marshall
- Jan McMillen
- Elmer Villanueva
- Rachel Volberg

Board

- Rosa Billi
- Paul Marden
- Christine Stone

Website/communications

- Sharon Herbert

Qualitative

- Market Access

Presentation Overview



- Background
- Wave one
- Wave two
- Wave three
- Qualitative study
- Wave four

Background

- Large general population prospective studies underway in Canada, Sweden, New Zealand and Victoria
- All waves are quantitative - respondents complete structured surveys and the analysis is essentially numerical (how many shifted categories etc)



Background



JHREC

Objectives

To explore:

- Factors that contribute to an increase or decrease in problem gambling
- Risks and vulnerabilities related to changes in gambling status
- Incidence
- Movements in and out of PGSI states

Wave One Sampling frame

- Random Digit Dialling sampling households
- Stratified to reflect relative proportions of pop^s in Victorian Government regions
- Enriched for high spend per capita LGAs- 70/20/10

DEPARTMENT
OF JUSTICE

State Government
Victoria



Weighting



- **W1**
 - Adjusted for disproportional sampling methodology (LGA and Vic region)
 - In lieu of Census 2006, more current DHS population benchmarks were used
- **W2, W3, W4**
 - no weightings (except incidence estimate in W2)
 - representativeness of sample affected by loss to follow up, therefore study can no longer provide reliable population estimates

Weighting



Final weight, p_w is product of all three:

- Selection weight, S_w
 - Number of adults / number of phone lines (n_a/n_p)
- Intraregion sampling weight i_w
 - Adult population in region, N_r & regional expenditure stratum, N_{re}
 - Completed interviews in region, n_r & regional expenditure stratum, n_{re}
- Population benchmark weight, pb_i
 - Population size, N
 - S_w & i_w at specific age-sex-region strata i and individual participants j

$$S_w = n_a / n_p$$

$$i_w = \frac{N_{rl}}{N_r} / \frac{n_{rl}}{n_r}$$

$$pb_i = N_i / \hat{a}_i (s_{wij} i_{wij})$$

Imputed missing data - n_a , n_p , age data,

Measurement Scales and Analytic technique



- CPGSI
- NODS-Clip2
- Self rated health status
- K10 categories
- Household and personal income
- CAGE alcohol screen
- Gambling readiness to change scale

- Survey data analysis
- Ordinal logistic or binary logistic
- GEE or hierarchical techniques
- Markov Chain Monte Carlo

Contextual Questions

Wave two-

GFC

Bushfires

ESP

Wave Three-

Linked jackpots

Recall of first win

Spring Racing

carnival

Challenges



- Validity and reliability
- Confounding, bias
- Precision of effect estimates
- W1 relationship to future waves and other cohorts
- Impact on policy
- Communication of results
- \$\$\$\$\$
- Missing data points
- Definition- changes over time
- Measurement- changes over time
- Time
- Attrition-loss to follow up
- Staff, admin
- Management of international expert panel

Limitations



- Wave 1-general population study
- Waves 2,3,4 - track specific cohort
 - not generalisable
- Findings refer to association, not causation

Data collection periods



- Wave One: July 2008- October 2008
- Wave Two: September 2009- January 2010
- Wave Three September 2010- January 2011
- Qualitative May 2011- August 2011
- Wave Four October 2011- January 2012

*Core survey plus contextual W2,W3 and W4 questions

Cohort sizes



Wave One

- 15,000

Wave Four

- 3700

Wave Two

- 5003

Waves One, Two, Three

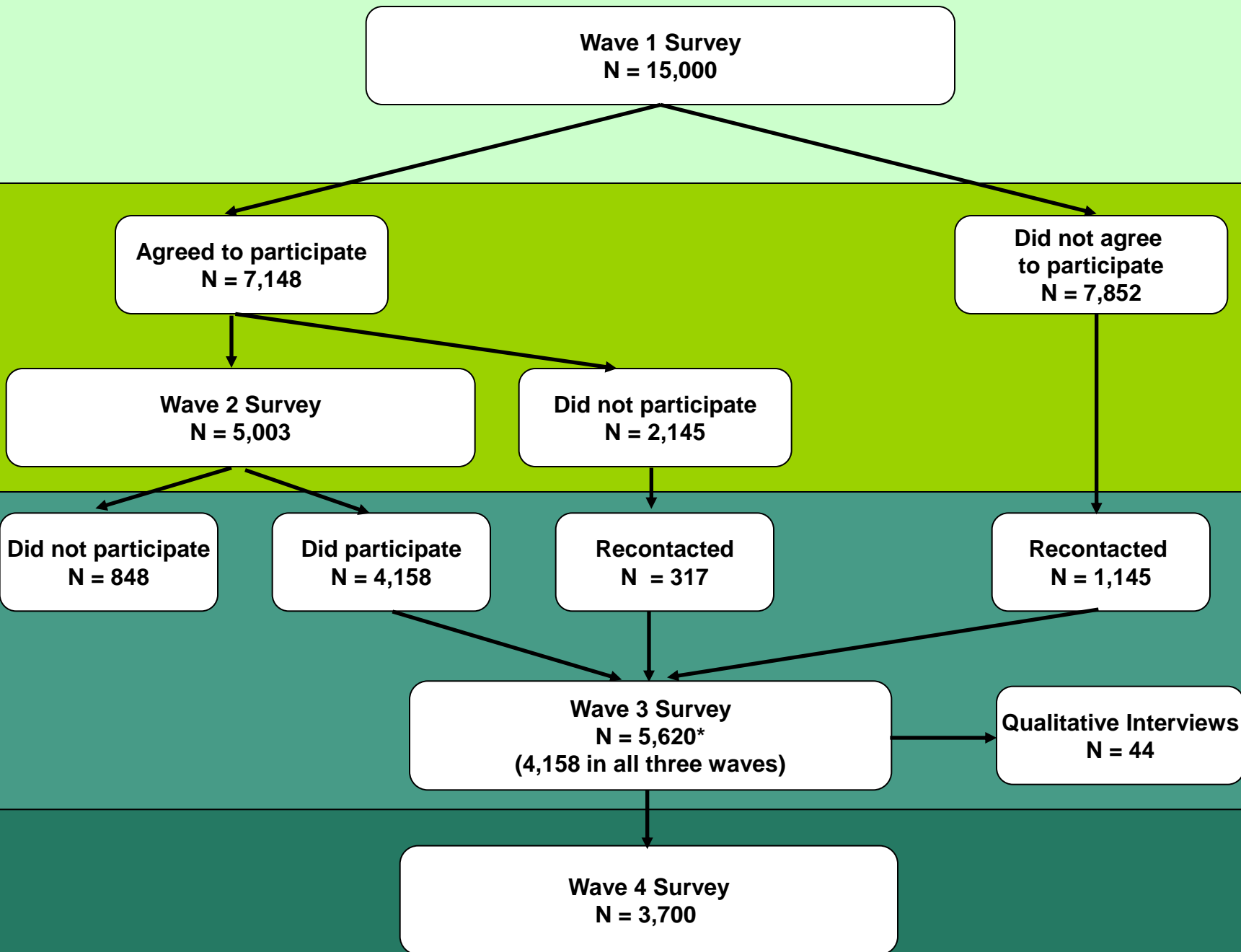
- 4158

Wave Three

- 5620

Qualitative Study

- 44



Transitions W1-W2

DEPARTMENT
OF JUSTICE

State Government
Victoria

		Wave Two						
Wave One		Completed 2009	NG	NPG	LR	MR	PG	TOTAL Shifted W1 to W2
		NG	1024	464	526	24	9	1
	NPG	3569	240	3131 87.7%	169	24	5	438
	LR	274	9	144	81	38	2	193
	MR	96	3	20	26	39	8	57
	PG	40	0	2	0	9	29 72.5%	11
	Total	5003	716	3823	300	119	45	1259

Wave Two

DEPARTMENT
OF JUSTICE

State Government
Victoria

Stability and Change

- 5.6 % of gamblers increased their risk segment
(This means they moved into the low risk, moderate risk or problem gambling categories)
- 4.3 % of gamblers decreased their risk status.
(This means they moved away from problem gambling, moderate risk or low risk categories)

* NG→NPG not included as risk (score = 0)

Factors associated with increasing risk to W2

- poor general and psychological health
- past year smoking
- group households or one parent families
- a language other than English at home
- weekly betting on racing

DEPARTMENT
OF JUSTICE

State Government
Victoria

Factors associated with move to problem gambling



Strongest ASSOCIATIONS

- people who took up/played gaming machines
- Playing keno.

Other factors shown to be important are:

- poor general & psych health
- those from one-parent families
- people who have had a major illness or injury in past year
- new marriage or other relationship partner.

Factors associated with move to moderate risk



- **All gambling-related activities**
 - Wagering
 - Gaming machines
 - Sports and events betting

Wave Two

DEPARTMENT
OF JUSTICE

State Government
Victoria

Self-reported depression

- 51% of PGs
- 10.4 % of NPGs

and anxiety

- 48.9% of PGs
- 7.6% of NPGs

Wave Two

DEPARTMENT
OF JUSTICE

State Government
Victoria

Incidence

- 12 month incidence rate - **0.36%**
- Vic prevalence rate at Wave one - **0.7%**

Lifetime Incidence- NODS CLiP2

- **0.12%** - (of 0.36%) new gamblers
- **0.24%** - (of 0.36%) previous history of path/problem gambling ('relapse')

Transitions W2-W3 (n=4158)

DEPARTMENT
OF JUSTICE



Wave Three

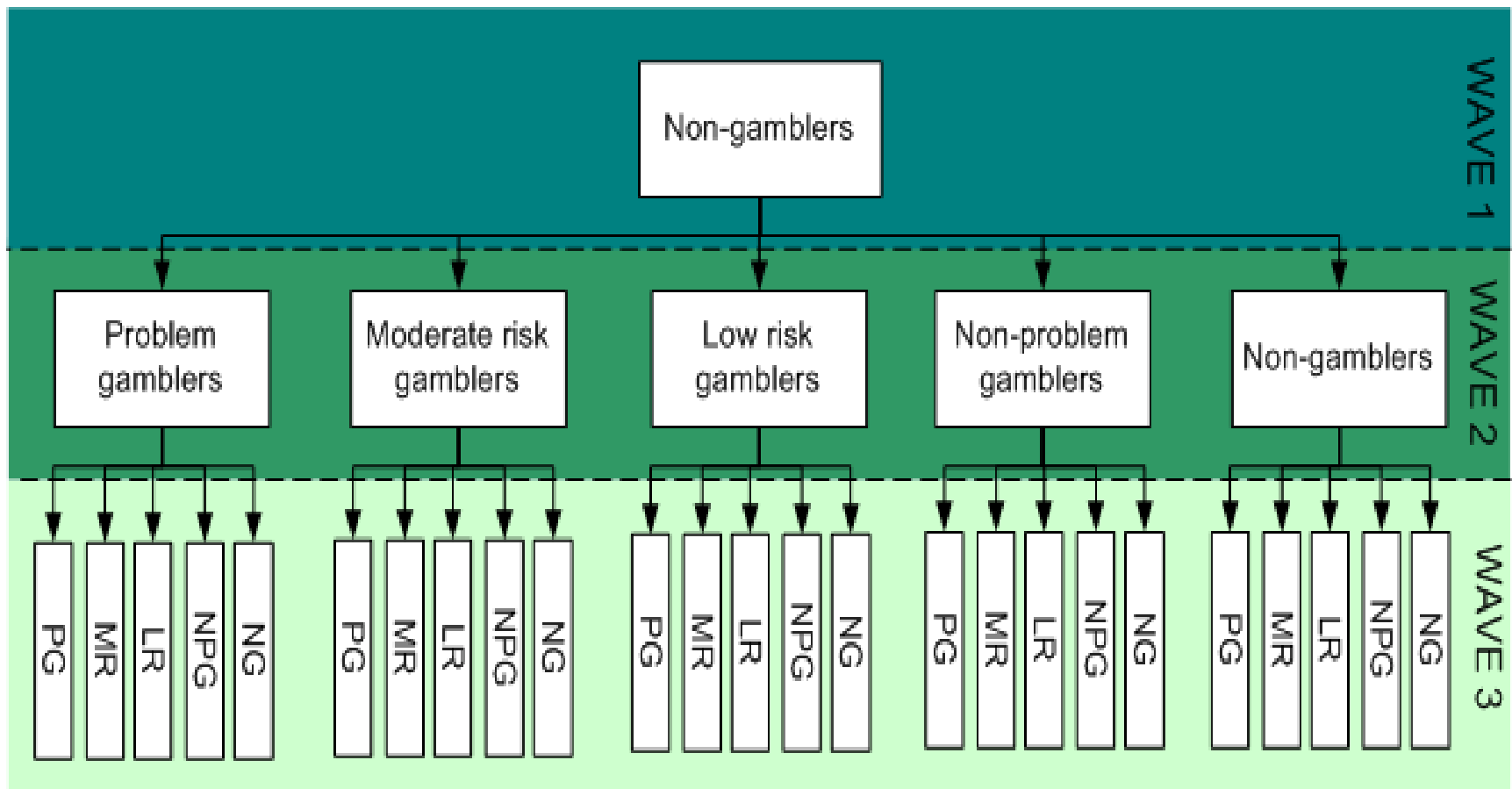
Wave
Two

	NG	NPG	LR	MR	PG	Total
NG	323 (57%)	230	9	1	1	564
NPG	225	2785 (86%)	192	19	3	3225
LR	10	141	63 (26%)	25	1	240
MR	0	15	21	46 (49%)	11	93
PG	1	1	3	6	25 (69%)	36
Total	559	3170	288	97	41	4158

4158

Markov models

DEPARTMENT OF JUSTICE



Predictive probability analysis

The logo for the Department of Justice is a tilted orange rectangle with a white border. Inside, the words "DEPARTMENT OF JUSTICE" are written in white, uppercase letters, stacked in two lines.

DEPARTMENT
OF JUSTICE

The logo for the State Government of Victoria features a black square with a white border. Inside, the words "State Government" are written in small white letters above the word "Victoria" in a larger, bold white font. To the right of the text is a white stylized 'V' shape containing several small white stars.

State Government
Victoria

CAUTION

- statistical characteristics are not fully known
- three waves have been examined
- some sample sizes are small
- the probability transitions conducted are time and place specific
- the results, however, do give a general trend.

Predictive probability analysis

DEPARTMENT
OF JUSTICE



- MR gamblers in wave one had the greatest probability, compared to other risk groups, of becoming problem gamblers by wave three (10.6%)
- over three years, most problem gamblers are likely to stay in that risk category. In the longitudinal sample, 71.4% of problem gamblers in year one were likely to remain problem gamblers in year three whilst 18.6% would decrease to moderate risk

Predictive probability analysis

- most NP gamblers (87.3%) were likely to remain so year to year
- 56.6% of LR gamblers were predicted to move to the NP gambler category over the three year period

DEPARTMENT
OF JUSTICE

State Government
Victoria

Wave Three - MRPG

DEPARTMENT
OF JUSTICE

State Government
Victoria

MRPG Analysis

- PGSI categories collapsed
- small cells
- to understand what differentiates those who remain in MRPG from those who move away and from those who have not been in MRPG
- nearly 95 % of participants in all three waves were not in the moderate/problem group.

Wave Three

DEPARTMENT
OF JUSTICE

State Government
Victoria

MRPG Analysis

- o W1 - 3.06% (W1- random population-based)
- o W2 - 3.2%
- o W3 - 3.3%
- 1.4 % of all participants who completed all three waves remained in the MRPG throughout that period (i.e. all three waves)
- > 5% of participants were in moderate/problem group for at least one of the three waves.

Qualitative Study design



Sample

- Sourced from people who had participated in the longitudinal study, had a pgsi score of 8+ (on at least one wave) and had agreed to participate in additional research
- 54 included:
 - continuing gamblers
 - those who had reduced or ceased their gambling
 - those who had increased their gambling

Qualitative Study design



Sample

- 44 completed interviews
- 29 female, 15 male
- Average age was slightly older than 50
- Only 4 participants <30 yrs, one participant older than 70
- >2/3rds were located in metropolitan Melbourne
- Of the 10 non participants, 9 were male

Qualitative Study design



Factors explored in study

- Circumstances-family, personal, social, community
- Gambler meaning of gambling
- First exposure
- Gambling history
- How gambling fits in family, social milieu
- Where, when, with whom
- Why gambling occurs
- Gambling preferences
- Associations with drinking, smoking
- Feelings
- What makes successful unsuccessful gambler
- Effect of life events
- Help seeking behaviour
- Guilt, stress, health

Qualitative Study – some findings

- Almost all of the sample ‘usually’ gambled alone
- People with the most severe symptoms preferred to gamble alone
- A few problem gamblers gambled socially at times, but reported problems typically arose when gambling alone.
- Chasing losses and gambling escalated when alone



Qualitative Study – some findings



- Gambling difficulties in past 12 months
 - majority of sample reported this
 - directly financial or related to financial (e.g. relationship problems arising from these concerns)
 - consistent with findings of the W2 surveys
- Poor psychological health
 - half reported being **clinically** diagnosed with depression
 - some reported anxiety, however not all reported receiving medication
 - a few reported other specific conditions- BP and BPD
 - consistent with W2 survey (K10, self reported)

Qualitative Study Findings- EGMs



- Widespread, most problematic
- *“The pokies are the worst killers, they are the pricks if you get on them. No I only do it if I’m there with the boys and they’ll say oh let’s put \$20 in or something like that. I’ll never go sober to go and play the pokies ever. I probably lost a bit of money on them and just thought this is crap. I could have bet on the horses for friggin a week with the money you’ve lost on the pokies.” (male, late 40s)*
- *‘The machines are, that’s the big problem. You used to be able to spend hours, with \$20. You can’t spend five minutes with \$20.’(male, mid 20s)*

Qualitative Study

Findings-Reasons to gamble



Emotional escape

- *“Sometimes I just need time out” (female early 60s)*
- *“You live on your own and you’re bored, and you’ve got to have something to do’ (male late 40s)*
- *“You lose yourself in the machine. You lose yourself in the machine: (female mid 60s)*

To win, or re-experience earlier win

- *“Oh yes, you never forget a big win. .Oh lord no, no” (male mid 80s)*
- *“Oh yeah if I’m going to win, I’m going to win big, I’m not going to walk out of here with \$50, what’s \$50? So if I’m going to win, I want to win big” (female mid 40s)*

Qualitative Study

Findings-Reasons to gamble



Enjoyment

“But with the pokies it’s more exciting, because you get all these free spins and you are like wow, and the music was \$2, you know, I think I get more joy from the pokies from all the rah rah” (female early 60s)

Compulsion

- *“Just constantly think about when’s the next time I would be able to play, when’s the next time I would have enough money to go and play” (female early 60s)*
- *“No, no, you’ve never got control” (Male mid 80s)*

Qualitative Study

Findings-Reasons to gamble



To recover losses

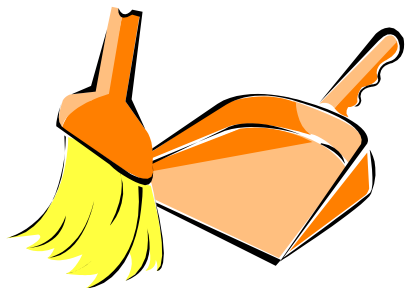
- *“and later, it’s about trying to win, because you are constantly losing you know, so you are constantly going back to chase what you’ve lost” (female early 50s)*
- *“Well I’ve seen that chasing your losses is something I’ve done me whole life, you know” (male mid 60s)*

Wave Four

DEPARTMENT
OF JUSTICE

State Government
Victoria

- Fieldwork 'done and dusted'



- N=3700
- Nothing further to report at this stage

victorian gambling study

exploring your health & gambling over time

Call the information line **(03) 8682 8698**
(9am-5pm Mon-Fri)

www.gamblingstudy.com.au

victorian gambling study

exploring your health & gambling over time

Call the information line **(03) 8682 8698**

(9am-5pm Mon-Fri)



Thank You