A cross-cultural comparison of belief in luck between Chinese and Caucasian individiuals

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Luck

› Intuitive but hard to define (Pritchard & Smith, 2004)

- Something supernatural (Cohen, 1960)

- Luck occurs in the absence of control (Nagel, 1979)

- Luck is an external and uncontrollable factor (Rotter, 1966)

- *"Success or failure apparently brought about by chance rather than through one's own actions"* (Oxford Dictionaries)

› But the *'lay person'* may not hold the same '*rational*' definition of luck (Darke & Freedman, 1997)

- Luck is stable (Darke & Freedman, 1997)

- Luck is internal

- Luck is deployable

Luck (continued)

› In gambling research…

    - Luck is distinct from chance and skill (Keren & Wagenaar, 1985)
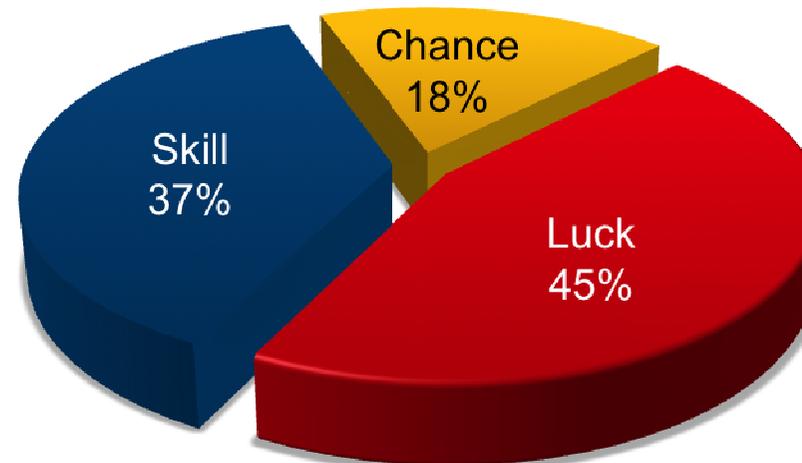
Luck (continued)

› In current study

- Luck is a perceived causal agent that has direct or indirect influence on the outcome of an event

  o An attribution (Cohen, 1960; Keren & Wagenaar, 1985)

  "It was just luck"

  o A personal quality (Wohl & Enzle, 2002, 2009)

  "I am lucky"

Relationship Between Luck and Gambling Behaivours

1. Influence betting pattern (Keren & Wagenaar, 1985)
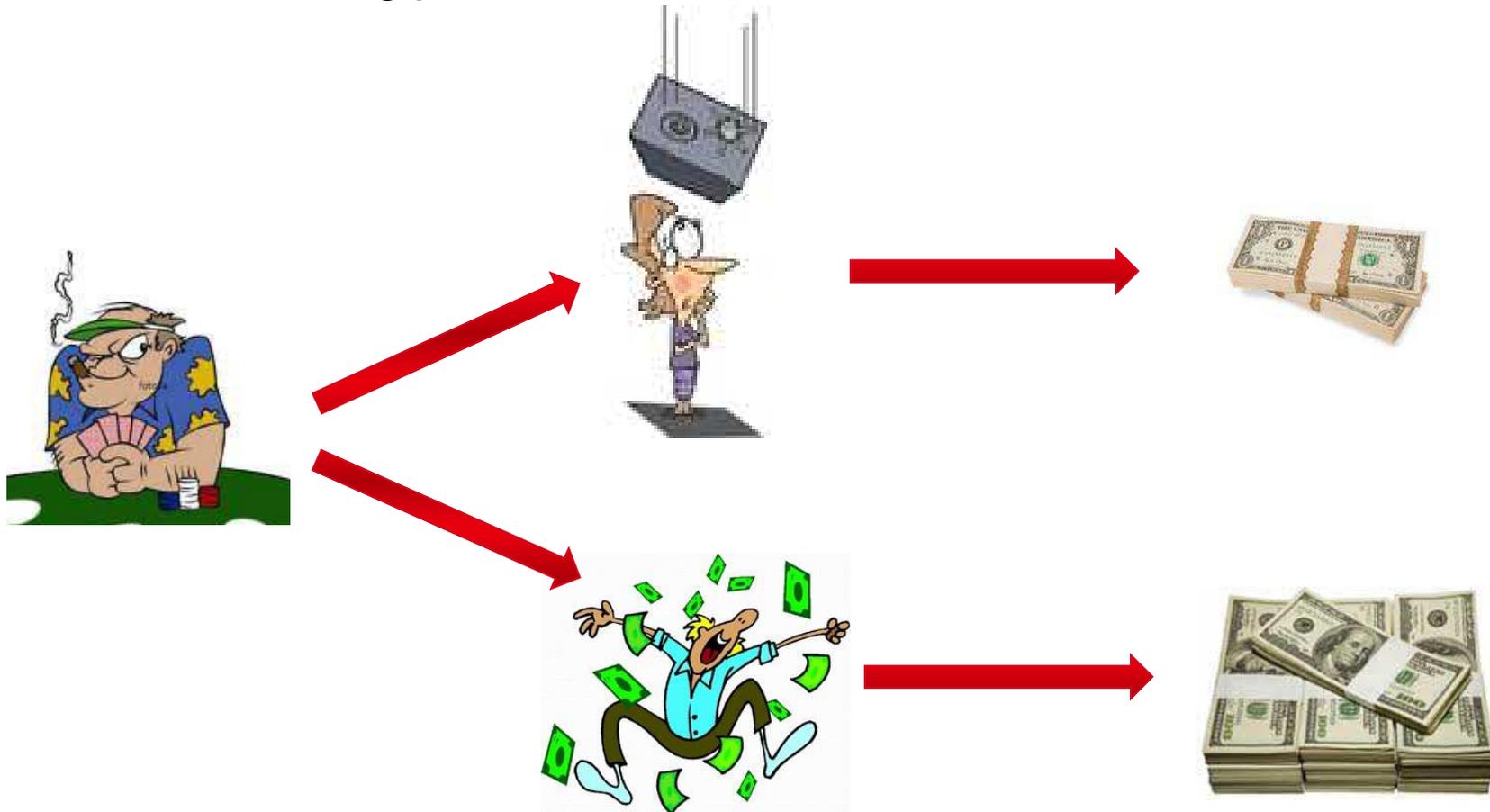
Relationship Between Luck and Gambling Behaivours

2. Influence betting pattern (Friedland, 1998)
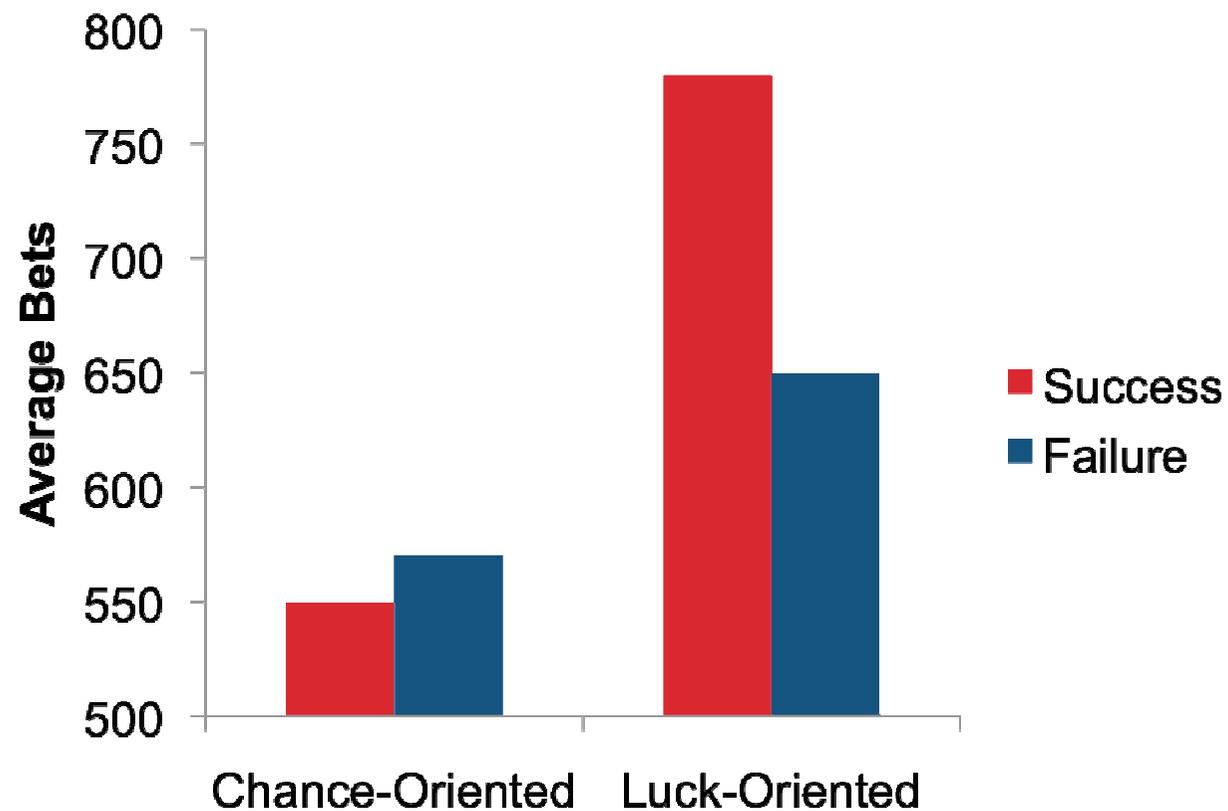
Relationship Between Luck and Gambling Behaivours

2. Affect estimates of winning probabilities (Friedland, 1998)
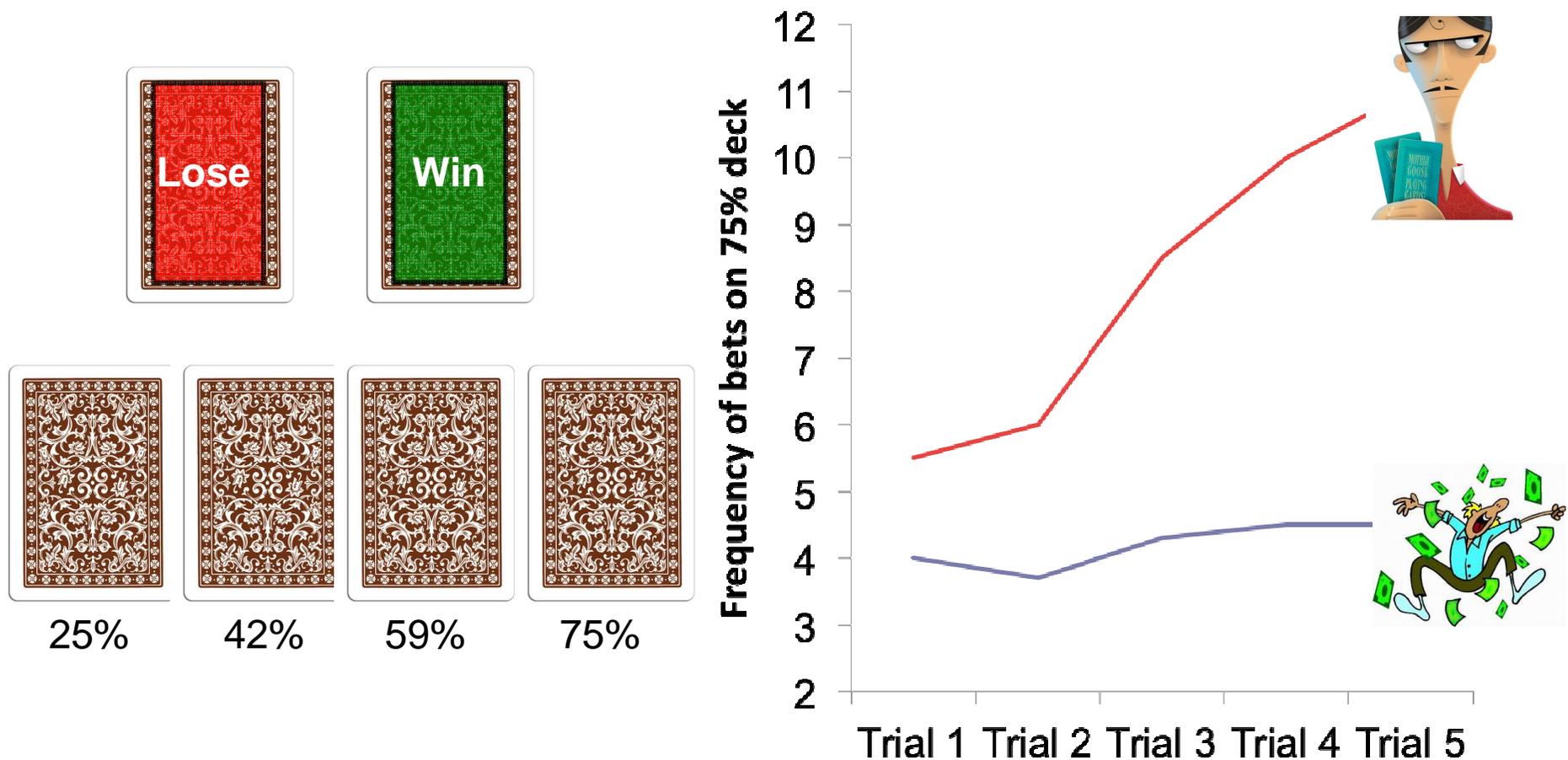
Relationship Between Luck and Gambling Behaivours

3. Mediate enjoyment of gambling and attitudes toward treatment (Wohl, Young & Hart, 2005)
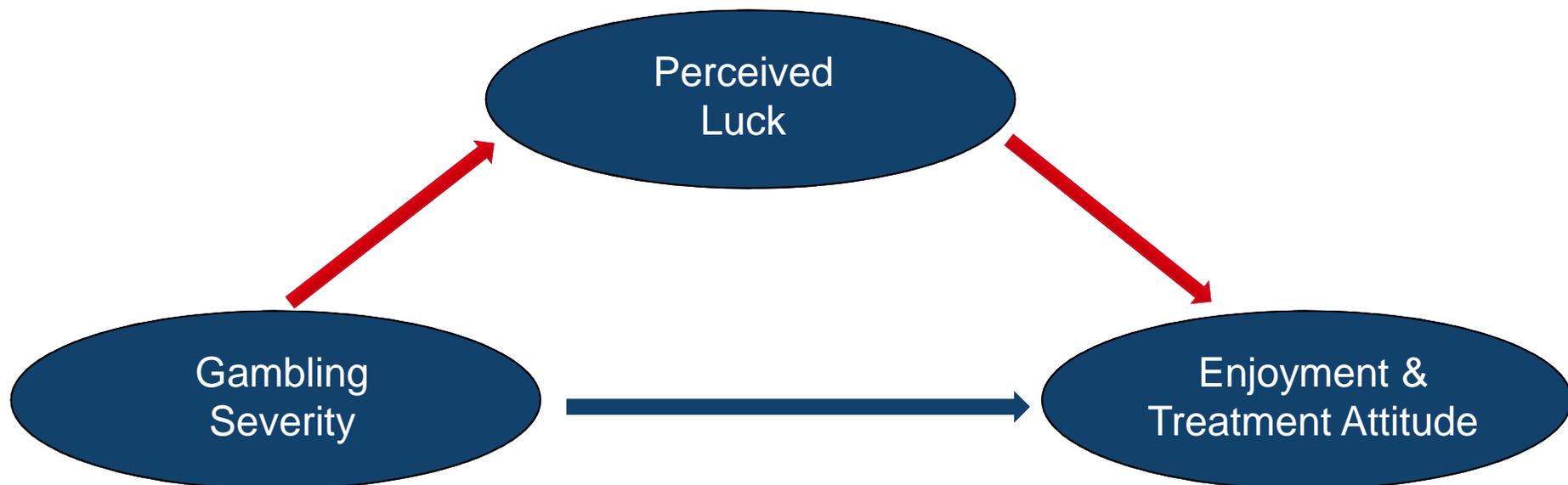
Relationship Between Luck and Gambling Behaivours

› Relationship between luck and gambling severity (Chiu & Storm, 2010)
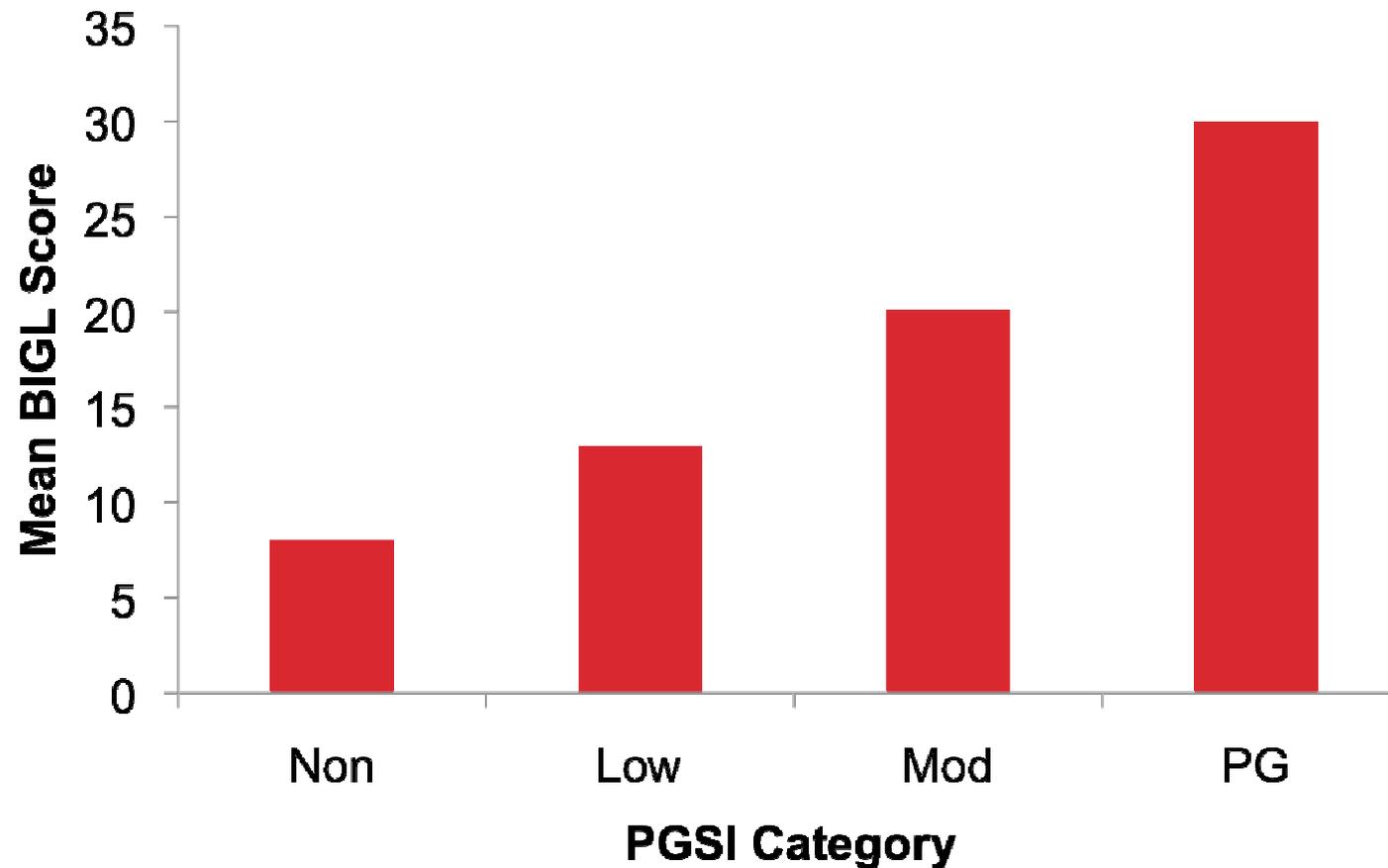
A note on superstition

› Similar but not necessarily the same as luck

- Often used interchangeably in the literature

- Can be 'supernatural' but not necessarily based on cultural or religious influences

› Defined as a perceived causal link between two contiguous events

- Usually between action and outcome (e.g., ritualistic behaviours)

Wade Boggs
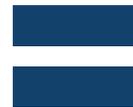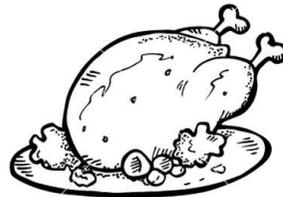
A note on superstition (continued)

A note on superstition (continued)

A note on superstition (continued)

› Similarities:

- Elevated expectation of desired outcome

› Difference:

- Luck: passive attitude (gambler not the agent)

- Superstition: action-oriented (gambler is the agent) or referred to as positive/negative superstition

A note on superstition (continued)

Luck

"I feel lucky therefore I gamble"

Superstition

Tapping the table twice to increase probability of win

Rubbing my coin brings good luck and may increase my chances of winning

1. Ethnic differences in prevalence rates

› Higher rates of problem gambling reported amongst Chinese

Australia Dickerson et al., 1996	**Australia (Chinese)** Blaszczynski et al., 1998	**Taiwan** Lesieur & Blume, 1987	**Hong Kong** Wong & So, 2003
1.2%	2.9%	4.7%	4.0%

› Similar patterns were found in a recent worldwide prevalence report (Williams, Volberg & Stevens, 2012)

› But factors underlying these trends not well-researched (Raylu & Oei, 2004)

2. Differences in motivation for gambling

› Chinese more likely to report 'testing luck' as their motivation to gamble than other ethnic communities (VCGA, 2000)

- As opposed to Greeks and Arabs who gambled 'to win money quickly'

3. Ethnic differences in luck beliefs

› Anecdotal evidence suggests that beliefs in luck more profound amongst Chinese (Papineau, 2005; Tsang, 2004)

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3. Ethnic differences in luck beliefs (continued)

› Yet such observations not empirically supported

› Do the Chinese have stronger beliefs in good luck than Caucasians?

› What is the relationship between ethnic differences in beliefs in good luck and gambling severity?

› Chinese participants will score higher good luck scale than Caucasian participants

› Chinese participants who score high on the good luck scale will report more problems with gambling

Recruitment and Procedure

› Participants were recruited from the following sites:

  - University of Sydney

  - University of Macau

  - Community members in Perth, Australia (as part of another study conducted by Edith Cowen University)

› Participation was voluntary and anonymous

› Participants were required to complete a set of questionnaire (approx. 20mins)

Measures

› Questionnaire consists of:

1. Demographic questions (e.g., ethnicity, age)

2. Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001)

   - 9 items

   - "*Thinking about the last 12 months, have you bet more than you could really afford to lose?*"

   - 4-point likert scale – 'Never' to 'Always'

   - Responses are summed to give a total score which would correspond with non-problem, low, moderate, and problem gambling

Measures (continued)

3. Belief in Good Luck Scale (BIGL; Darke & Freedman, 1997)

   - 12 items

   - *"Luck works in my favour"*

   - 6-point likert scale – 'Strongly disagree' to 'Strongly agree'

   - High scores reflect strong beliefs in dispositional good luck

4. Superstition Scale (Joukhadour, Blaszczynski & Maccallum, 2004)

   - 8 items

   - *"I have a ritual which I must carry out when I'm gambling"*

   - 5-point likert scale – 'Not at all' to 'Very much'

   - High scores indicate strong superstition

Sample Characteristics

	Caucasian	Chinese (Australia)	Chinese (Macau)
Female	51%	57%	58%
Male	49%	43%	42%
	N = 177	N = 159	N = 194
Mean Age	19.6 years	20.1 years	21.4 years
Age Range	17 – 45 years	18 – 40 years	17 – 53 years

Sample Characteristics (continued)

› Comparison of gambling severity with other studies (in percentage)

	Non	Low	Mod	PG
Arthur et al., 2008	79	11	5	3
Thomas & Jackson, 2008	86	7	4	2
Current - Caucasian	70.1	19.8	7.3	2.8
Current – Chinese (Australia)	64.2	16.4	14.5	5.0
Current – Chinese (Macau)	46.9	17.0	22.2	13.9

Sample Characteristics (continued)

› Comparison with other studies (mean PGSI scores)

	M	SD	N
Chiu & Storm, 2010	0.97	2.99	149
Current - Caucasian	0.81	1.85	177
Current – Chinese (Australia)	1.44	3.12	159
Current – Chinese (Macau)	2.79	4.10	194

Sample Characteristics (continued)

› Comparison with other studies (BIGL scores)

	M	SD	N
Day & Maltby, 2005	38.80	8.50	108
Darke & Freedman, 1997	37.87	10.05	494
Current – *Caucasian*	36.12	7.89	177
Current – *Chinese (Australia)*	42.09	10.16	159
Current – *Chinese (Macau)*	40.85	7.59	194

Sample Characteristics (continued)

› Superstition scores

	M	SD	N
Current – Caucasian	12.24	4.23	177
Current – Chinese (Australia)	13.92	4.92	39
Current – Chinese (Macau)	16.61	6.13	190

2x4 ANOVA (Etinicity x PGSI) – Mean BIGL scores

› No interaction

- $F_{(6,518)} = .696$, $p = .653$ (n.s.)

› Main effects (Ethnicity)

- $F_{(2,518)} = 9.494$, $p < .001$
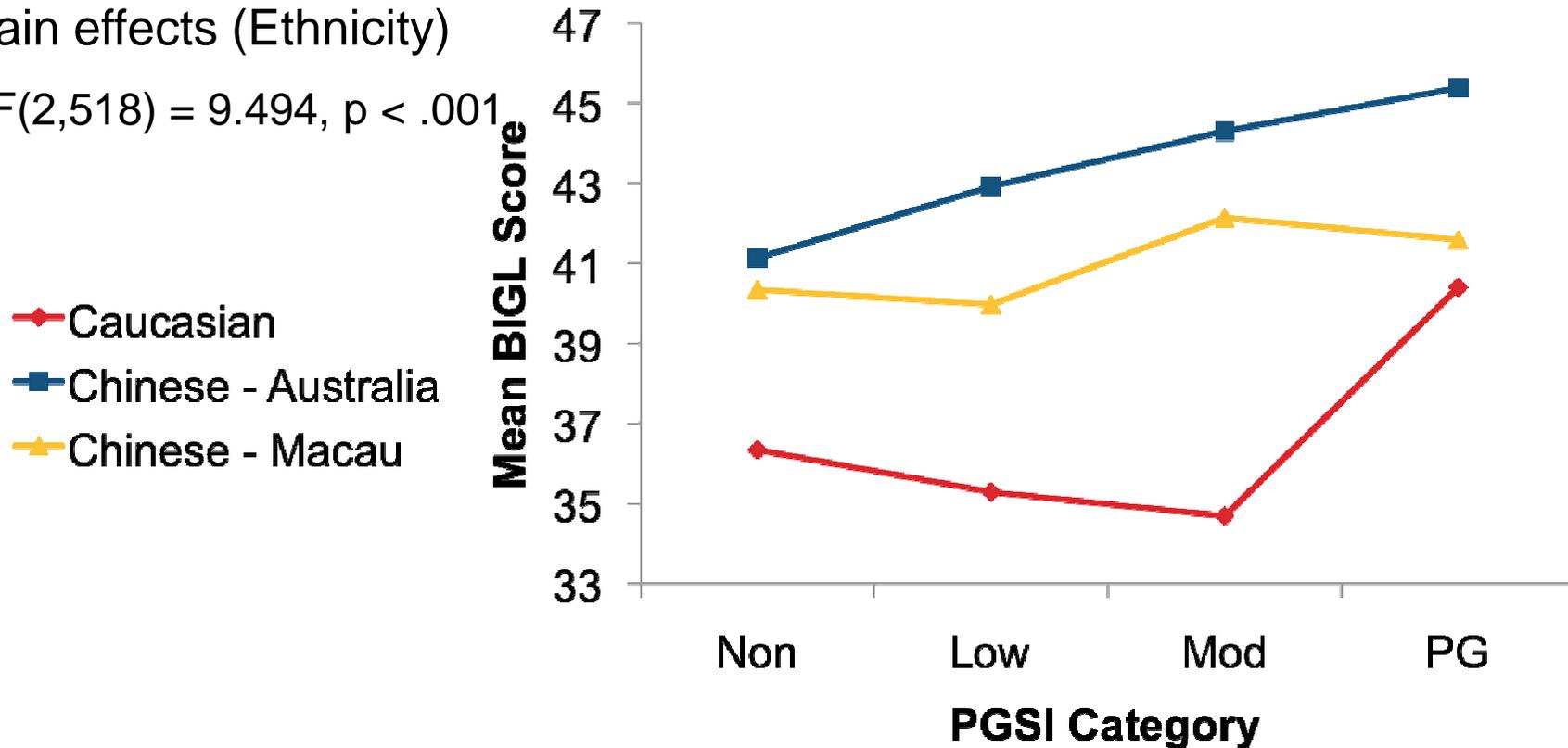
Percentage of Low/High luck individuals by ethnicity
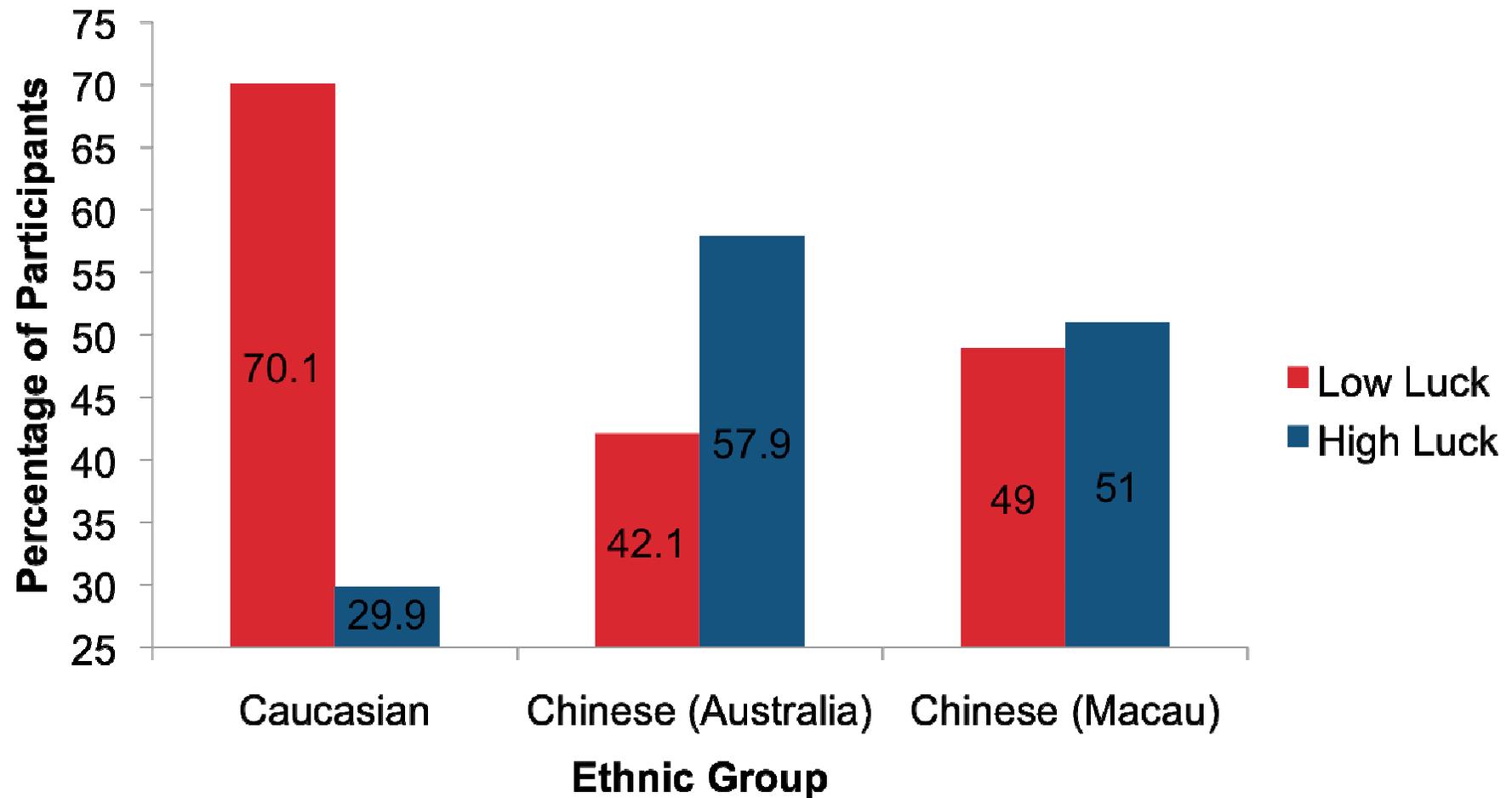
Percentage of participants in each PGSI category by ethnicity
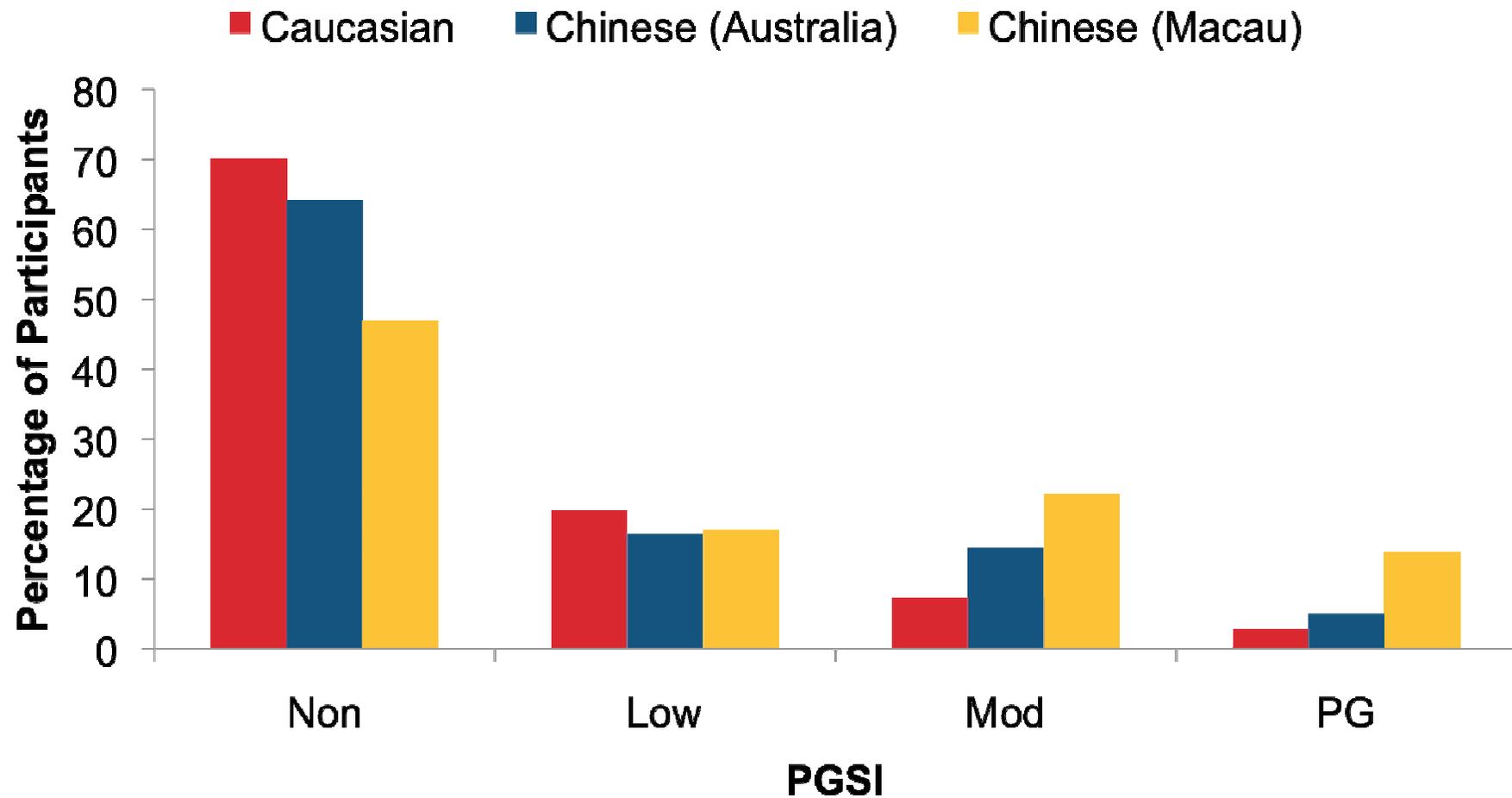
3x2x2 ANOVA - Interactions

› Three-way interaction (Ethnicity x Luck x Superstition)

- $F_{(2,394)} = .419$, $p = .658$ (n.s.)

› Two-way interaction (Ethnicity x Luck)

- $F_{(2,394)} = .201$, $p = .818$ (n.s.)

› Two-way interaction (Ethnicity x Superstition)

- $F_{(2,394)} = 9.961$, $p < .001$

3x2x2 ANOVA – Main Effects

› Main effects of Ethnicity

  - $F(2,394) = 9.515$, $p < .001$
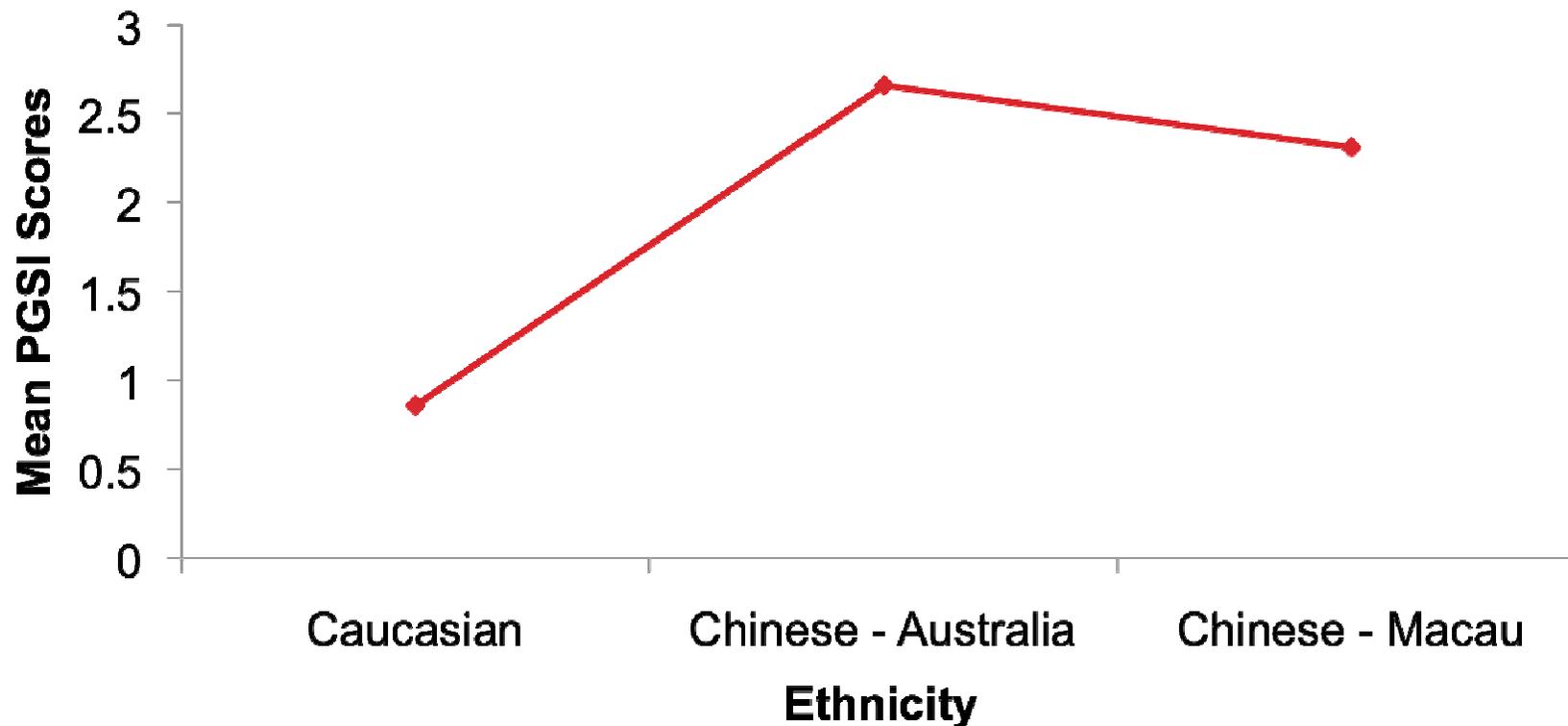
3x2x2 ANOVA – Main Effects

› Main effects of Superstition

- $F(1,394) = 20.075$, $p < .001$
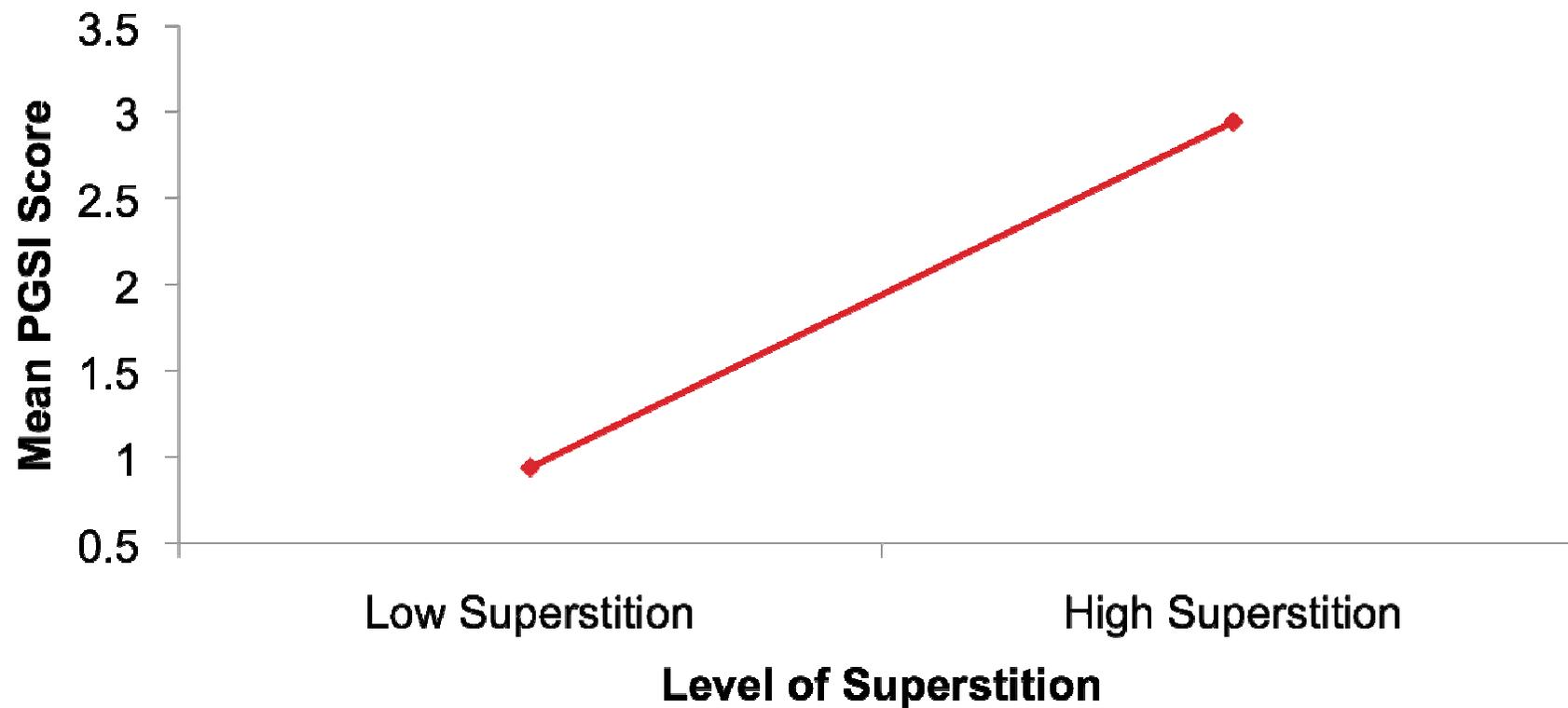
3x2x2 ANOVA – Main Effects

› No main effects of Luck

- F(1,394) = .453, p=.501 (n.s.)
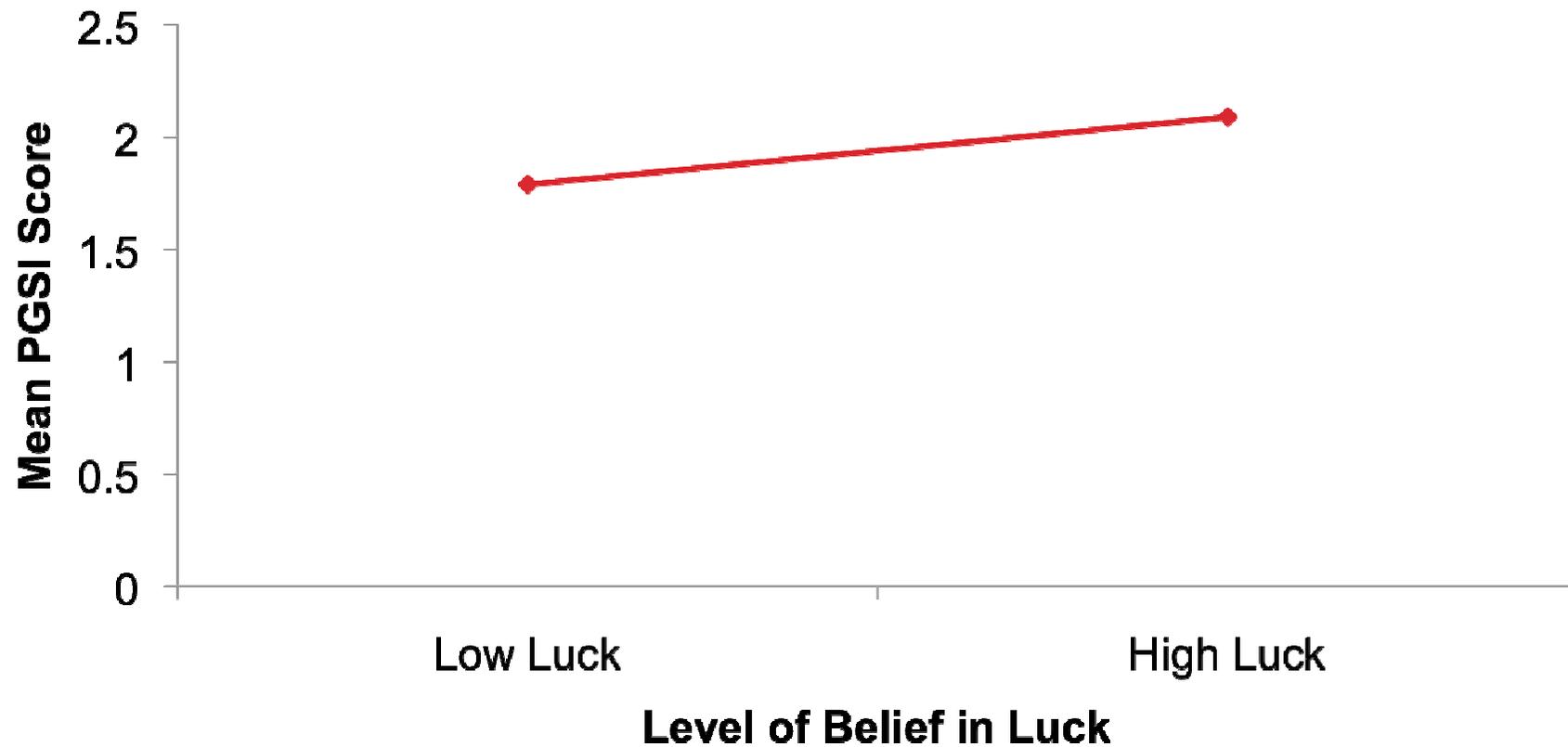
3x2x2 ANOVA – Simple Main Effects (Superstition)

› Low Superstition

- F(2,203) = .238, p = .789

› High Superstition

- F(2,197) = 12.318, p < .001

- Caucasians scored significantly lower than Chinese on PGSI

- No difference was noted in PGSI between Chinese-Australia and Chinese-Macau

3x2x2 ANOVA – Simple Main Effects (Ethnicity)

› Caucasian

   - $F_{(1,175)} = .091$, $p = .763$ (n.s.)

› Chinese - Australia

   - $F_{(1,37)} = 5.855$, $p < .05$

› Chinese – Macau

   - $F_{(1,188)} = 31.280$, $p < .001$

Two way interaction – Ethnicity x Superstition
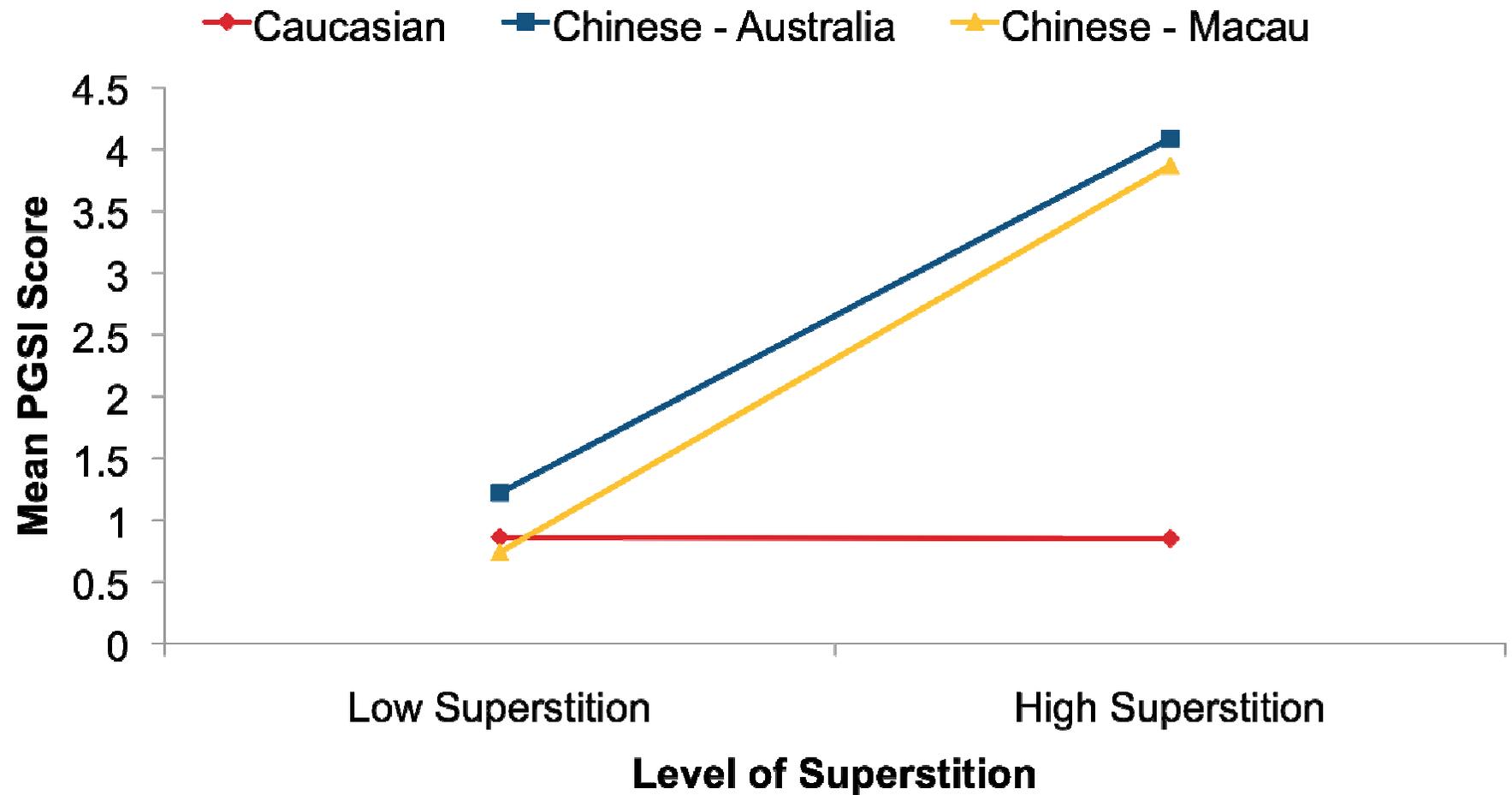
Study Findings – What we expected

1. Chinese participants endorsed stronger beliefs in good luck than Caucasian participants

   - Current study provided empirical support for what had been purported in the literature (e.g., Papineau, 2005)

2. Chinese participants reported more severe gambling problems

   - Caucasians participants were over-represented in the non-problem gambling group

   - Chinese (Macau) participants were over-represented in the problem gambling group

   - Consistent with previous findings (e.g., Williams, Volberg & Steven, 2012)

Study Findings – What we expected

3. Chinese participants reported higher levels of superstition than Caucasian participants

   - Higher superstition amongst Chinese participants was associated with more severe gambling problems

   - Consistent with previous studies on superstition

Study Findings – What we did not expect and possible reasons

1. Stronger beliefs in good luck across ethnic groups were not associated with more severe gambling problems

   - No significant differences were noted in gambling severity between high and low luck beliefs

     i. BIGL only taps on beliefs about dispositional good luck

        • What about those who believe in dispositional bad luck, reject luck, or merely holds a general belief in luck; Relationship not clear at this point

     ii. Both the BIGL survey and the nature of study measures 'trait luck'

        • Perhaps there is a greater influence of luck 'in-session' than 'across time'

        • They only gamble when feeling lucky (or to test luck as mentioned earlier)

Study Findings – What we did not expect and possible reasons

2. Level of superstition amongst Caucasian participants was not associated with severity of gambling problems

    -   PGSI scores were similar between high and low superstition for Caucasian participants

3. Other possible reasons:

    -   Perhaps the difference that we expect might be observable in gamblers attending treatment

1. There is empirical support for higher endorsement of luck in Chinese than Caucasian individuals

2. However, the concept of luck alone did not appear to account for the differences in gambling severity across culture

Thank you!

Questions and comments…

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Caucasian participants – Comparing superstition scores across PGSI groups

› There was no difference in superstition scores across gambling groups amongst the Caucasian participants

- $F_{(3,173)} = 1.027$, $p = .382$ (n.s.)

Additional Information
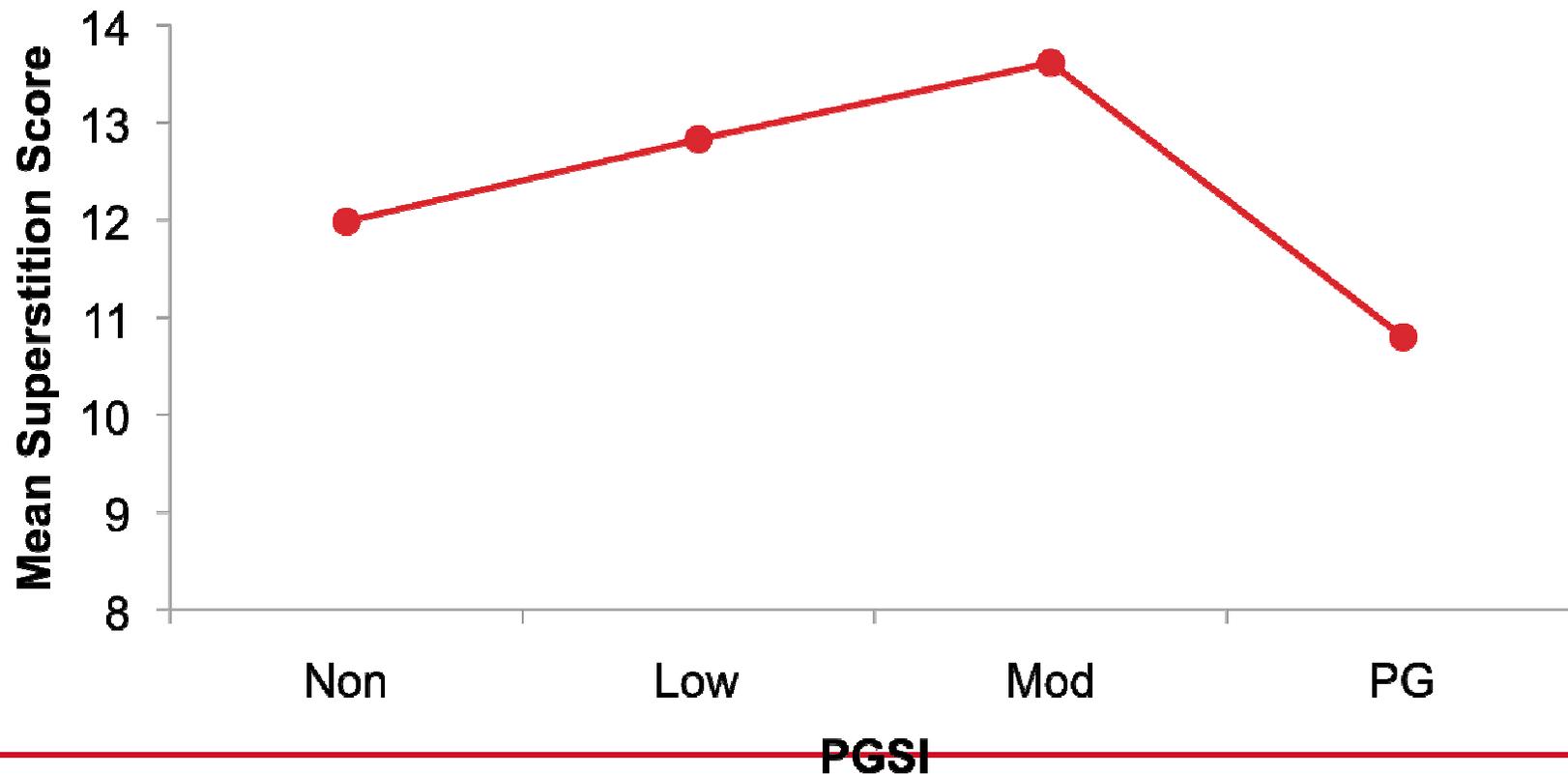
Percentage of participants in each luck/superstition category
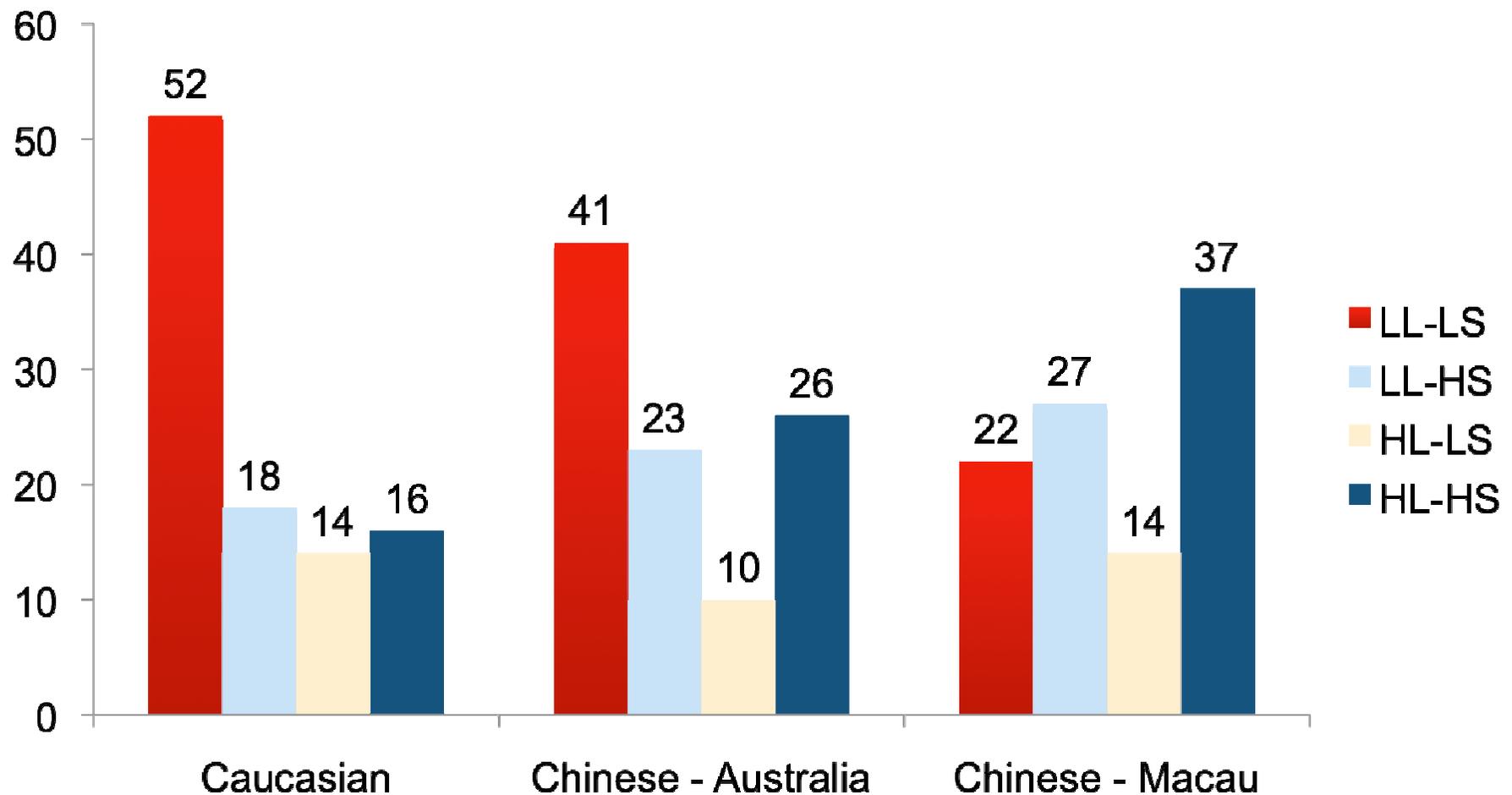
› BAD higher than GOOD

- Finding not surprising

- Refer to Friedland, 1998

- LO likely to bet higher if perceived to be losing (luck is going to change)

- Doesn't make a difference to CO whether win/lose

- **BUT** yet Keren & Wagenaar, 1985 found that those who feel lucky bet more.

- What's happening? **Recall bias?!**

Thank you!

Questions and comments…