

Understanding the relationship between subjective wellbeing and gambling behavior

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Research question

- Examine the relationship between gambling behavior and subjective wellbeing.
- Often assume that subjective wellbeing is negativity associated with an individual's level of gambling addiction.
- But gamblers may choose to gamble because they derive utility from participating in this activity and so the relationship between happiness and gambling might be positively correlated.

- It is often asserted that populations consist of different types of gamblers: those for whom gambling is a harmless leisure activity and those (pathological/problem gamblers) for whom the activity has harmful effects. So it could be that relationship has a different sign depending on the level of attachment to the gambling market.
- In this paper we test this association, empirically, using data from the 2010 British Gambling Prevalence Survey.

Rationalising gamble?

$$U_{gi} = \alpha + \beta EU_{gi} + \gamma fun_i + e_i$$

Psychological effects
Both negative and positive

Positive psychology (Martin Seligman, 1998)

- Negative and positive thoughts are correlated but not perfectly. (Zheng, 2016)
- Gambling can impact on both negative thoughts and on positive thoughts.
- CBT approach to gambling disorder is known to be effective.

Unhappy gamblers literature

- Empirical research generally supports the notion of a significant association between gambling and **depression**. Pioneering studies (see, e.g., Blaszczynski et al., 1990; McCormick et al., 1984; Törne and Konstanty, 1992)
- More recent studies include Blanco et al., 2012; Moghaddam et al., 2015; Quigley et al., 2015; Savron et al.

Show: positive association between gambling and depression.

Also Suicide studies

Happy gamblers literature

Positive effects of recreational gambling have been reported in studies of the elderly.

- Vander Bilt et al. (2004) recorded emotional responses (such as, smiling) while individuals were engaged in the act of simulated gambling on a laptop, offered a choice between playing slot machines, standard video poker, roulette, blackjack or craps.

Focus on mood enhancement, arousal and excitement generated by gambling.

Dixon et al. (2010),

- participation in bingo, outside the home, is positively associated with happiness.

Focused on social support as the explanation for this observation (given the known issues around social isolation facing this particular age group)

Studies focus on the short term effects not the longer-term effects on overall happiness.



Literature utilising addiction screens

- Ohtsuka et al. (1997) showed that happiness is inversely related to scores on the South Oaks Problem Gambling Screen (SOPGS) among a sample of gaming machine (pokies) players in Australia. (on exit from the venue).
- Shiue (2015) found that self-reported gambling addicts were most likely to report fair to poor self-rated happiness, but the survey instrument used to capture gambling disorder in these data was based on self-reporting of addiction

Data: The British Gambling Prevalence survey 2010

The total sample size is 7756 people but item-level non-responses resulted in an estimation sample of 6624 people.

Repeated cross sections, 2000, 2007, 2010 was special as

it is the only population based data in the world that contains

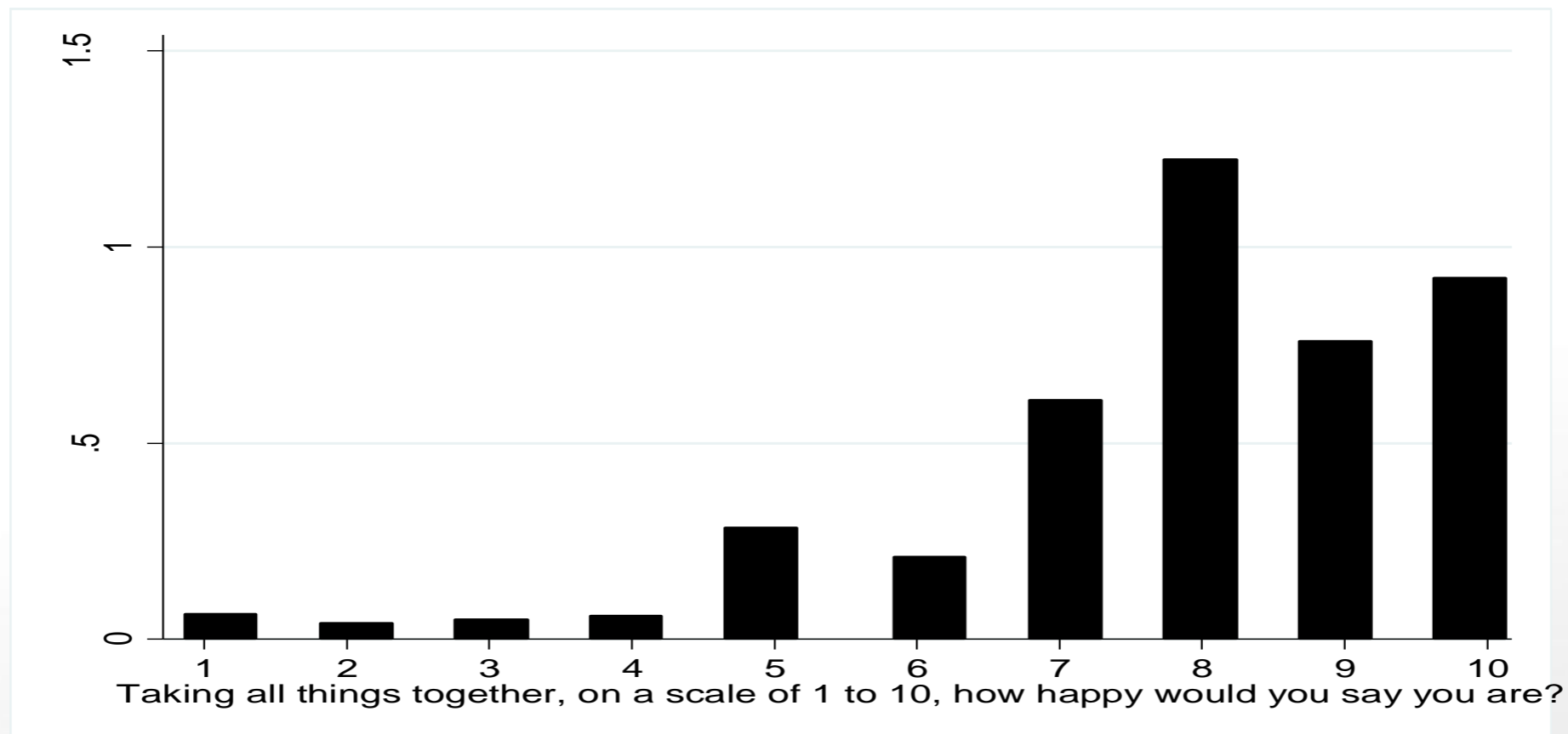
SWB, DSM-IV and PGSI

<https://www.gov.uk/government/publications/british-gambling-prevalence-survey-2010>

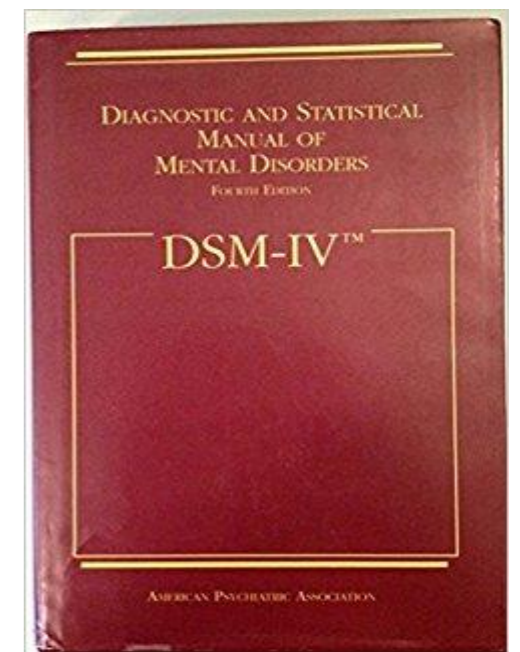


Dependent variable: happiness

Taking all things together, on a scale of 1 to 10, how happy would you say you are these days?'



Key covariate: gambling disorder



DSM-IV instrument is a 10-item

Each item is assessed on a four-point scale.

The item response is then dichotomized such that a 'negative' response is coded as 0 and a 'positive' response is coded as 1.

The total number of positive responses is then summed to generate the respondent's DSM-IV score (ranging from 0–10)

Focuses on 'addiction' 'maladaptive behaviours'

American Psychiatric Association, 1994

Table A2: DSM-IV Diagnostic Criteria used in BGPS

DSM-IV

	For the next set of questions about gambling, please indicate the extent to which each one has applied to you in the last 12 months.
1.	When you gamble, how often do you go back the next day to win back the money you lost?
	In the last 12 months....
2.	...how often have you found yourself thinking about gambling (that is, reliving past gambling experiences, planning the next time you will play, or thinking of ways to get money to gamble)?
3.	...have you needed to gamble with more and more money to get the same excitement you are looking for?
4.	...have you felt restless or irritable when trying to cut down gambling?
5.	...have you gambled to escape from problems or when you are feeling depressed, anxious or bad about yourself?
6.	...have you lied to family, or others, to hide the extent of your gambling?
7.	...have you made unsuccessful attempts to control, cut back or stop gambling?
8.	...have you committed a crime in order to finance gambling or to pay gambling debts?
9.	...have you risked or lost an important relationship, job, educational or work opportunity because of gambling?
10.	...have you asked others to provide money to help with a desperate financial situation caused by gambling?

??????

PGSI

Population Gambling Severity Index (PGSI).

This index is composed of nine items taken from the longer Canadian Problem Gambling Inventory (CPGI) (Ferris and Wynne, 2001)

Each item is assessed on a 4 point scale and scored accordingly: never=zero; sometimes=one; most of the time=two; almost always= three. The scores for each question are then summed and a final score for each respondent ranging from zero to 27 is obtained.

Focus on 'harms' and 'consequences'

PGSI Table A3: PGSI Diagnostic Criteria used in BGPS

	In the last 12 months, how often...
1.	...have you bet more than you could really afford to lose?
2.	...have you needed to gamble with larger amounts of money to get the same excitement?
3.	...have you gone back to try and win back the money you'd lost?
4.	...have you borrowed money or sold anything to get money to gamble?
5.	...have you felt that you might have a problem with gambling?
6.	...have you felt that gambling has caused you any health problems, including stress and anxiety?
7.	...have people criticised your betting, or told you that you have a gambling problem, whether or not you thought that it is true?
8.	...have you felt your gambling has caused financial problems for you or your household?
9.	...have you felt guilty about the way you gamble, or what happens when you gamble?

??????

Source: British Gambling Prevalence Survey 2010, Copyright© 2011, National Centre for Social Research. Appendix 3: Questionnaire documentation. (Wardle, H. et al., 2011).

Discrete Analysis: Gambler types

DSM-IV		PGSI	
0	Never	0	Non-problem
0,1,2	Social	1,2	Low risk
3,4	At risk	3,4,5,6,7	Moderate risk
5+	Pathological	8+	Problem

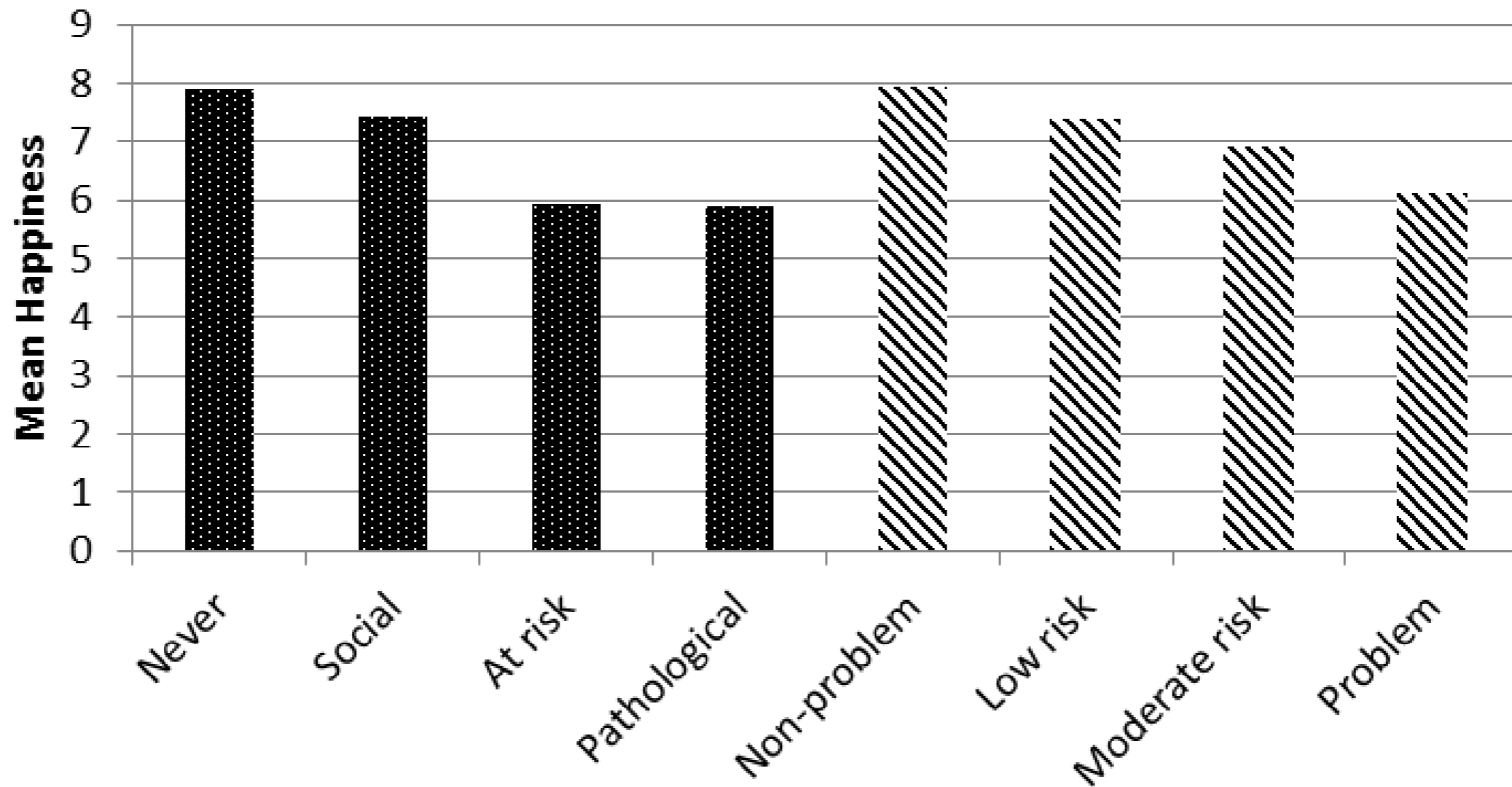
The correlation coefficient is 0.7523

Cronbach's alpha: 0.82=DSM-IV scale and 0.90 PGSI

Pathological gamblers 0.5%

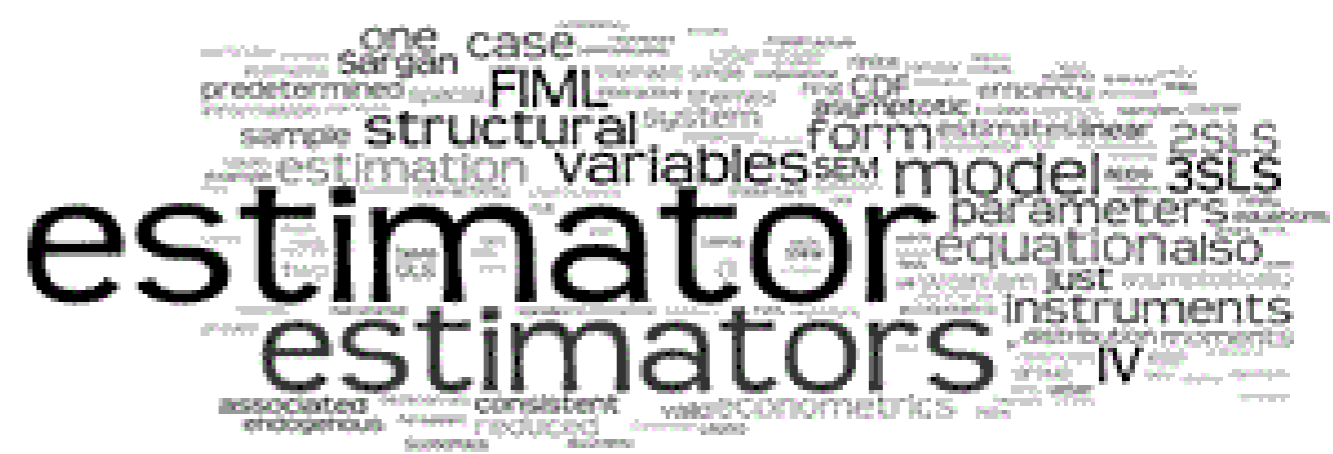
Problem gamblers 0.7%.

Mean happiness by gambler type



Gambler Types: DSM=IV (dotted bars) and PGSI (stripped bars)

Model



$$H_i = \alpha + \beta_1 X_i + \beta_2 GB_i + \epsilon_i$$

Simple ordered probit model

Robust standard errors

Full set of controls that are usually found in happiness equations (results in the paper)...

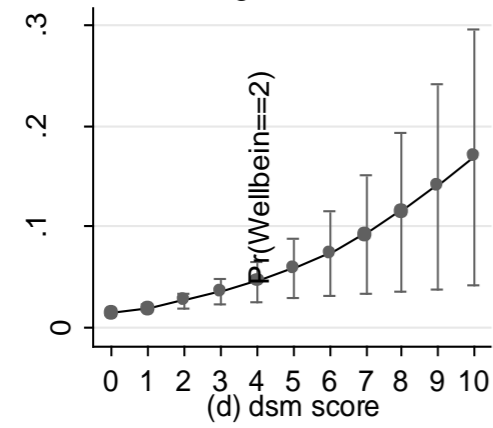
age, personal income, education, marital status, employment status, ethnicity, long term disability, general health, household structure, region

Results

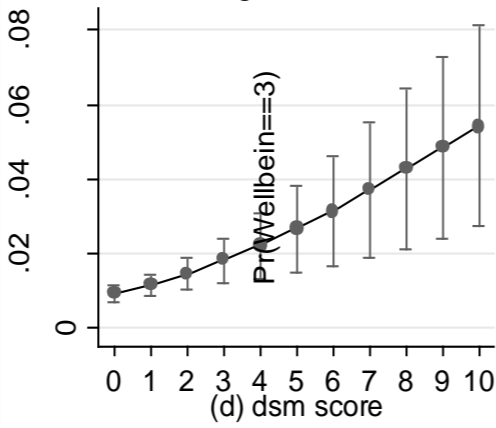
	DSM-IV: Gambler type		DSM-IV		PGSI: Gambler type		PGSI	
	Coef	P> Z	Coef	P> Z	Coef	P> Z	Coef	P> Z
DSM-IV: Social	-0.144	0.065						
DSM-IV: At risk	-0.757	0.000						
DSM-IV: Pathological	-0.71	0.005						
DSM-IV			-0.131	0.000				
PGSI: Low					-0.228	0.000		
PGSI: Medium					-0.47	0.000		
PGSI: Problem					-0.562	0.002		
PGSI							-0.058	0.000

Graphical Analysis

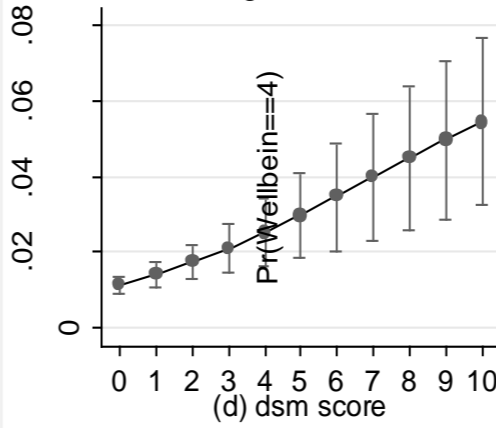
Predictive Margins with 95% CIs



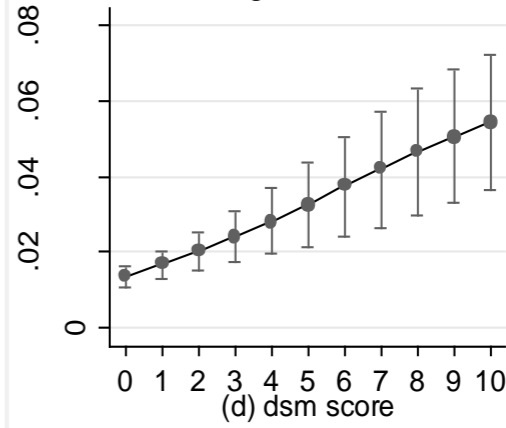
Predictive Margins with 95% CIs



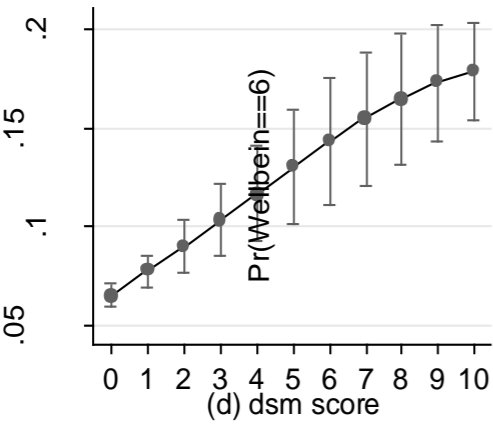
Predictive Margins with 95% CIs



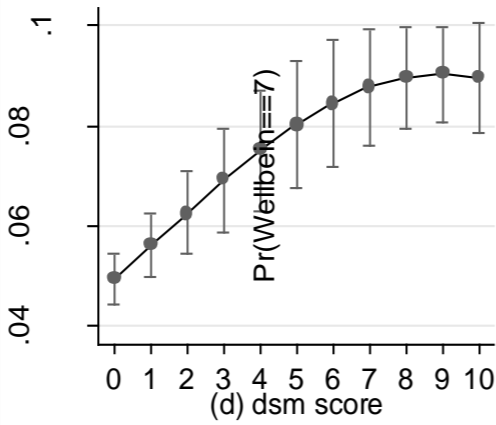
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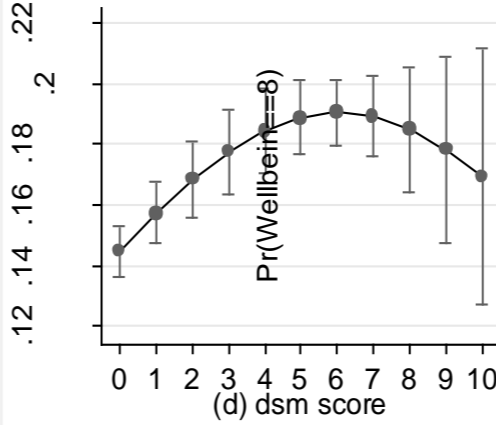
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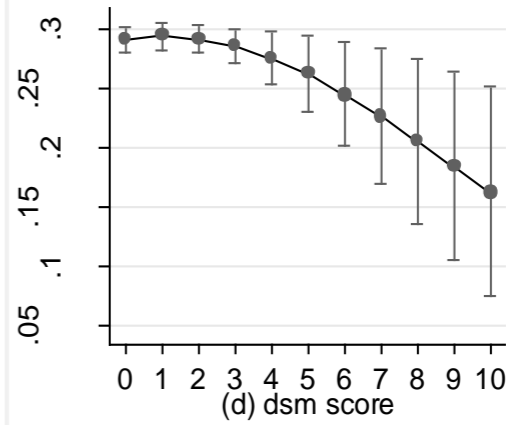
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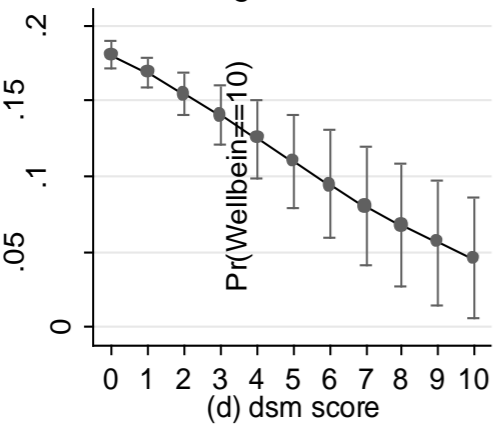
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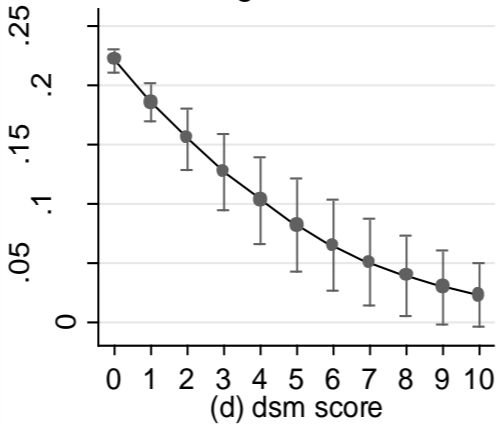
Predictive Margins with 95% CIs



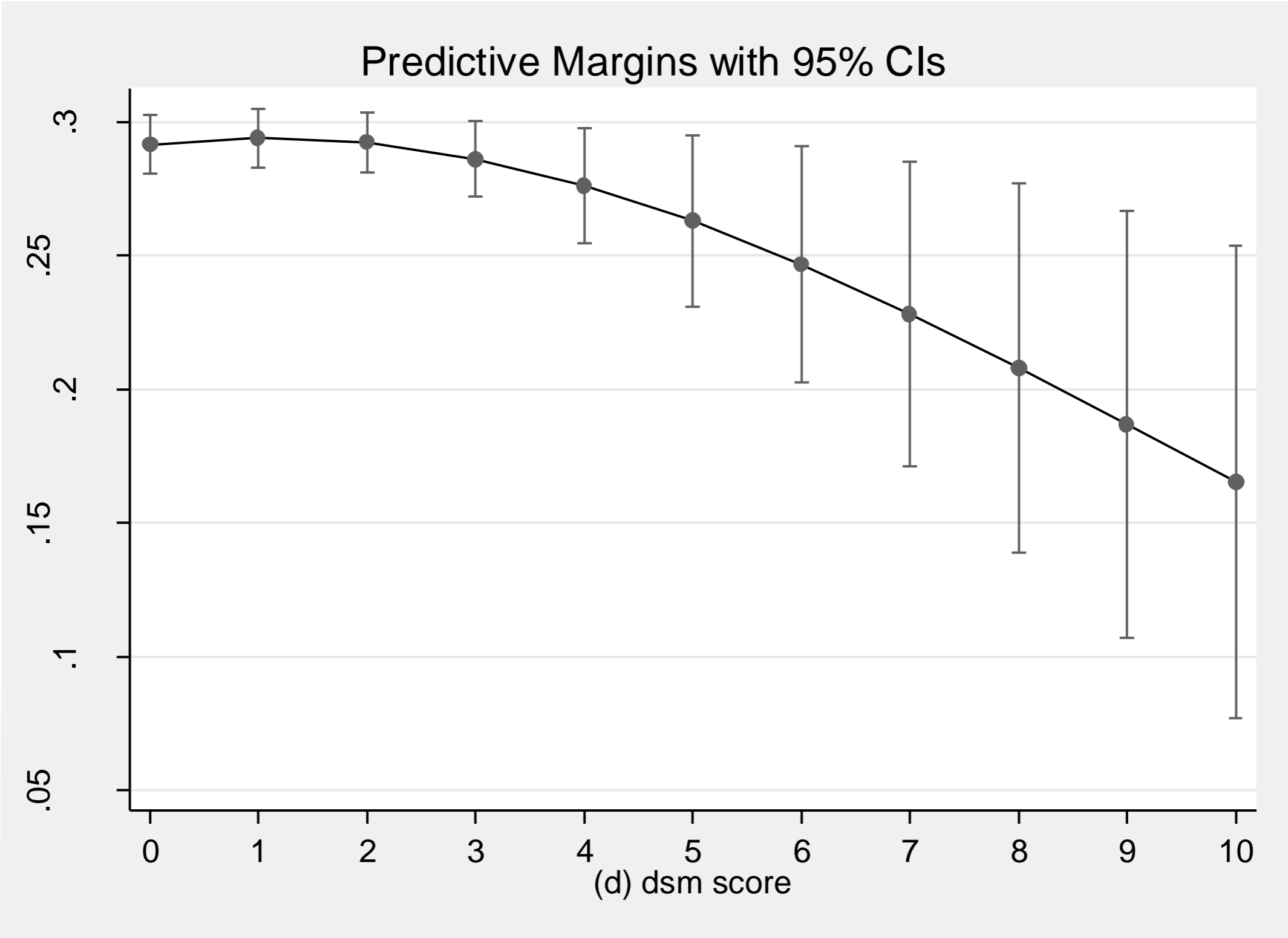
Predictive Margins with 95% CIs



Predictive Margins with 95% CIs



Mean level of happiness



Conclusions

SWB and gambling behaviour are negatively related.

- DSM-IV and PGSI show the same results
- Discrete and continuous functional forms are consistent with this result

Gambling behaviours impact on feelings of happiness in life in general

- When treating gambling disorder we should look at the impacts on both negative and positive thoughts/feelings
- Maybe an insight into why CBT can be successful in treating gambling disorder

Highlights



- Subjective wellbeing and gambling are negatively correlated.
- Gambling disorder is negatively associated with subjective wellbeing.
- The DSM-IV and PGSI are negatively correlated with general happiness.
- Pathological and problem gamblers see the greatest impact on their happiness.

Think you might need help

Responsible gambling Victoria

Gambler's Help [1800 858 858](tel:1800858858)

Beyond Blue

Support. Advice. Action [1300 22 4636](tel:1300224636)