

**GAMBLING AND
INDIVIDUALS' WELLBEING:
EVIDENCE FROM A LARGE-SCALE BRITISH SURVEY**

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*International Symposium on Pathological Gambling
Montevideo- September, 2014*

THE RISE OF HAPPINESS STUDIES

“The New Science”

It started in the 1970s with the US General Social Survey which asked the question

Taken all together how would you say things are these days? Would you say you are very happy, pretty happy or not too happy?

very happy=3, pretty happy=2, not too happy=1

- Since the 1970s, a variant of this question has been put in social surveys all over the World
- The scale has tended to change over time, so that there is now usually a ten point rather than a three point scale
- But the essence of the question has remained the same
- It asks how people rate their life “these days”- ie it attempts not to measure mood today but **some long-run concept of wellbeing**
- Sets of answers now exist for many countries, rich and poor, for long periods of time, with hundreds of thousands of respondents
- Systematic happiness data by country are tabulated annually in the *World Happiness Report* for the United Nations

ARE PEOPLE'S ANSWERS CREDIBLE?

- it seems so- statistical models reveal intuitively plausible patterns in answers that are stable over time and space
- for example, marriage always raises predicted happiness score by about 0.6-0.8 points on a ten point scale, very good rather than very bad health always raises predicted happiness score by about two full points
- this suggests that people's answers are considered and sensible and we can with confidence ask questions like "what difference does gambling behaviour make?"
- moreover, psychologists' validation studies find high correlation between individuals' happiness scores and other indicators of mental wellbeing (eg how often the subject smiles) and other people's assessment of the subject's state of mind
- the medical literature provides evidence from longitudinal data that happiness score predicts *future* heart disease, stroke, suicide and longevity- more evidence that asking the happiness question generates potentially useful data
- a caveat is that large samples are needed since unobserved personality characteristics are liable to have an important influence on responses to the happiness question and only in a large sample will the effects of unobserved factors cancel out across respondents and allow statistically significant patterns to emerge

- to be sure, mental well-being might be better measured by an instrument with many items.
- But surveys with other goals seldom have space for multiple extra questions
- and a single question allows respondents to give their own implicit weights to the various elements that might be included in clinicians' scales to measure quality of life
- by 2005, analysis of happiness data and the determinants of happiness was sufficiently advanced that Prof. Lord Layard published a book arguing that **all** government policy decisions should be evaluated in terms of expected impact on happiness
- In July, 2011, a resolution of the UN General Assembly invited member states to gather data that would capture the importance of the pursuit of happiness “with a view to guiding their public policies”
- Before then, the **2010 British Gambling Prevalence Survey** became the first in the World to include a happiness question
- **what does the pattern of answers say that can help guide public policy towards gambling?**

THE BGPS QUESTION

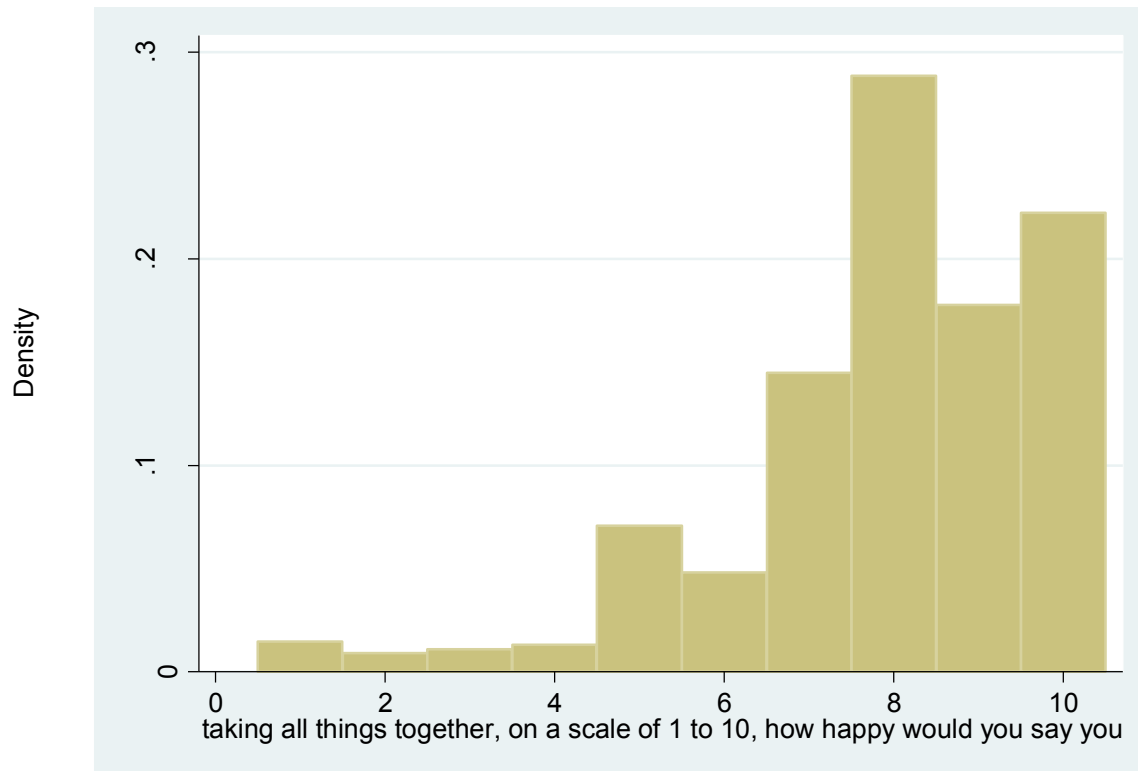
“Taking all things together, on a scale of 1 to 10, how happy would you say you are these days?”

- the achieved sample size was 7,756
- 7,721 answered the happiness question
- the answers of these 7,721 are used today to explore association between wellbeing and an individual’s engagement with gambling

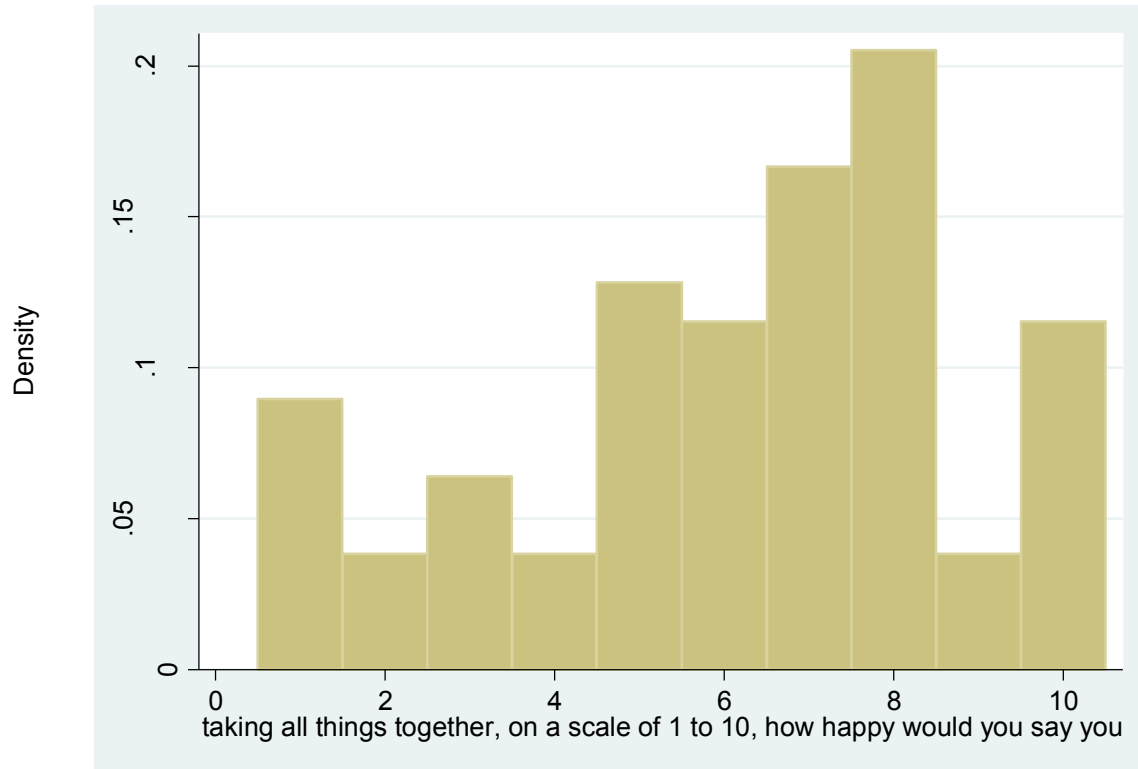
problem gambling in the BGPS (2010)

- the Survey asked detailed questions over respondents' participation in gambling and applied two conventional problem gambling screens
- **according to the DSM-IV screen, the problem gambling prevalence rate was 0.9% (implying 451,000 problem gamblers)**
- **according to the PGSI screen, the problem gambling prevalence rate was 0.7% (implying 360,000 problem gamblers)**

ANSWERS TO THE HAPPINESS QUESTION (WHOLE SAMPLE EXCEPT PROBLEM GAMBLERS)



ANSWERS TO THE HAPPINESS QUESTION (PROBLEM GAMBLERS)



- so the raw data show that problem gamblers as a group report much lower wellbeing than the rest of the sample
- mean score is **6.15** for PG, **7.90** for the rest
- PG appears to be associated with a happiness score that is depressed by approximately one standard deviation
- if we define wellbeing poverty as being in the bottom 15% of happiness scores, more than 47% of problem gamblers fall in that range
- problem gamblers appear to be **three times** as likely to be “very unhappy” as the general population

BUT....

- summary statistics from raw data are not enough
- problem gamblers may have a different profile from others
- for example, if they are disproportionately male and low-income and drawn from ethnic minorities, these characteristics may account for at least some of their tendency to be unhappy
- therefore we need a statistical model to predict happiness score and that allows us therefore to control for as many other relevant variables as possible

modelling

- the established strategy in the literature is to estimate a baseline statistical (regression) model to account for happiness score
- it is well established that such a model will as a minimum, include variables measuring demography, family circumstances, health, labour force status and income
- after estimation of a baseline model, add to it a focus variable representing the characteristic in which the researcher is interested (here problem gambler)
- the result then shows how much difference the focus variable makes to expected happiness score **given** “life circumstances”--demographic status, family structure, health, income, labour force status, and so on

principal explanatory variables in the baseline model

ethnicity

age

education level

marital status

presence of children

household income

labour force status

alcohol use

smoking status

ADDING GAMBLING VARIABLES

- in all the results reported subsequently, all the variables included in the baseline model are retained
- the results on all of them proved highly robust in the presence of extra “gambling variables”
- I estimated separate models using (1) information from DSM-IV and (2) information from PGSI
- I will show you the results from the PGSI model- results were broadly similar between the two

the PGSI gambling variables

- *no-risk gambler* (gambles, pgsi score 0)
 - *low-risk gambler* (pgsi score 1-2)
 - *moderate-risk gambler* (pgsi score 3-7)
 - *problem gambler* (pgsi score 8 or more)
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- the model reported here is linear regression
 - **the coefficient estimates will show the difference in expected happiness score compared with a non-gambler where all the other variables (age, ethnicity, income, etc, etc) are held constant**
 - I also worked with a more sophisticated statistical model which predicted the probability of an individual being in “wellbeing poverty”- results were similar to those I will now show you

focus first on no-risk gambler

	males	females
no-risk gambler	0.157***	0.026
low-risk gambler	-0.124	-0.546***
moderate-risk gambler	-0.672***	-0.897***
problem gambler	-1.173***	-0.953*

- for males, safe gambling (relative to no gambling) is associated with elevated wellbeing
- the effect is stronger than shown if the model is estimated on a whites-only sample
- no such effect is found for women
- but the positive correlation is found for women if there is an additional variable which indicates that the gambling includes bingo at a land venue (i.e. not online)

- so, there is some evidence that recreational gamblers are “happier” than non-gamblers
- this is not evidence of **causation**- the model reveals only **association**
- perhaps people who gamble have unobserved characteristics (eg extroversion or optimism) which also make them happy
- but there is a *possibility* that responsible gambling promotes wellbeing for some

focus next on problem gamblers

	males	females
no-risk gambler	0.157***	0.026
low-risk gambler	-0.124	-0.546***
moderate-risk gambler	-0.672***	-0.897***
problem gambler	-1.173***	-0.953*

- for males, problem gambler status predicts a happiness score depressed by 1.2 points
- for women, the effect is not so strongly significant, probably because only ten female pgsi problem gamblers were identified
- the size of the effect on expected happiness score is in each case comparable to the effect of changing health status from average to very bad
- in the DSM-IV model, results are even stronger, both in size of effect and statistical significance (similar to changing from good to very bad health)

- in the probability models, problem gambler status **tripled** the probability of being in the bottom 15% of wellbeing scores
- again, we cannot say that problem gambling *causes* very low wellbeing
- but we can say that **problem gamblers as a group are experiencing very depressed wellbeing, comparable with those suffering serious physical illness**
- yet the British Health Service has only one dedicated clinic for problem gamblers; and even In europe, many countries have not even sought to estimate the prevalence-rate
- if public policy is to be informed by happiness studies, then (so long as programmes can be shown to be effective), the implication of these results is that gambling disorder treatment programmes should be much better resourced.

focus next on at-risk gamblers

	males	females
no-risk gambler	0.157***	0.026
low-risk gambler	-0.124	-0.546***
moderate-risk gambler	-0.672***	-0.897***
problem gambler	-1.173***	-0.953*

- for men, *low-risk* gambling does not change expected happiness score but *moderate-risk* is associated with a happiness ‘penalty’ of 0.7 points, similar to the effect of being unemployed or without a partner
- for women, even *low-risk* gambling predicts depressed wellbeing
- similarly, in the DSM-IV results, even endorsement of *one* item on the screen was a marker for significantly depressed wellbeing among women (only)

- for either gender, symptoms of dysfunctional gambling predict depressed wellbeing at levels below the threshold for classification as problem gamblers
- many more people exhibit sub-threshold pgsi scores than reach the threshold
- if we were to count people whose gambling behaviour predicts unhappiness, the estimated number of problem gamblers in the population would increase greatly
- on the basis of the PGSI threshold, BGPS (2010) estimated that there were 360,000 “problem gamblers” in Britain
- if “moderate risk” status qualified as problem gamblers, the prevalence rate would increase from 0.7% to 2.5% and the estimate of numbers would swell to well over one million
- **the analysis here provides support for a less conservative threshold since moderate risk gamblers as a group not only exhibit problematic gambling behaviour but they also have low wellbeing relative to persons in otherwise similar life circumstances; evidence here presents a prima facie case that we should be worried about moderate-risk gamblers**

finally.....

- the results show that the problems of problem gamblers should be taken very seriously indeed
- **but other people as well as problem gamblers themselves suffer harm**
- “ripple effects” blight the lives of others
- the BGPS asked respondents whether they had a “close relative” who had had a gambling problem in the previous twelve months
- I modelled happiness score as a function of the indicator variable “relative with problem”
- the model controls for life circumstances (as before) and for the respondent’s own gambling behaviour
- there are more females with relatives who have a problem (most problem gamblers are men, so most spouses and partners are women)

ripple effects

males

females

relative with problem

-0.995***

-0.393***

-very strong negative effects for both genders

-males particularly so

this could be because female problem gambling is so rare and men therefore find it hard to cope- or may be women are just more resilient (the controls show they are also “less” affected by widowhood and unemployment)

CONCLUSIONS

1. **In terms of wellbeing, resolving the problems of problem gamblers deserves high priority in public policy** and it would arguably be irresponsible to expand gambling opportunities without committing significant resources to mitigating the harm that may result
2. The industry quotes very low prevalence rates of problem gambling in most jurisdictions (less than 1% of adults) but **talk of “low prevalence-rates” may be complacent** as there is evidence that at-risk gamblers (of which there are many more) are also badly off in terms of wellbeing
3. It is possible that the source of problem gamblers’ problems lie outside gambling but **public policy needs to be very cautious in case it *worsens* the problems of problem gamblers-** the count of problem gamblers is given too much emphasis as it is total harm which is policy relevant
4. The industry attracts problem gamblers and perhaps 30-40% of its revenue comes from this group of very vulnerable individuals- **the industry and its regulators have a strong duty of care because this analysis shows that problem gambling is a proxy for very unhappy lives**

thank-you for listening.....

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