

Research Summary: Orford, J., Wardle, H. & Griffiths, M. (2013). 'What proportion of gambling is problem gambling? Estimates from the 2010 British Gambling Prevalence Survey'. *International Gambling Studies*, 13:1, 4-18.

Aim: The paper presents findings from a secondary analysis of data from the BGPS 2010 analysing the proportion of gambling associated with problem gambling; the proportion of gambling days attributable to problem gamblers; and the proportion of spend attributable to problem gamblers¹.

Methods: The authors sought to arrive at an estimate for each form of gambling separately, of the contribution problem gamblers (and moderate risk gamblers) make to the total number of attendances by all players i.e. the total number of days play; and the total amount spent by all players. Following this, three sets of estimates were calculated: days and spend attributable to DSM IV scale problem gamblers; those attributable to PGSI problem gamblers; and those attributable to PGSI problem gamblers plus moderate risk gamblers. In each case, a single estimate of the attributable percentage of days play, and two separate estimates of the attributable percentage of spend, were calculated².

Results: *Estimates of the percentage of all days play on different gambling activities attributable to problem gamblers* – using both the DSM IV based scale and the PGSI, both sets of estimates were averaged to produce a set of best estimates of percentage of days play attributable to problem gamblers. There were three forms of gambling where the estimate of days play attributable to problem gambling exceeded 20%: casino games (31%), FOBTs (26%) and dog races (22%)³.

Estimates of the percentage of spend on different gambling activities attributable to problem gamblers - Four separate estimates of the percentage of all spend attributable to problem gamblers were calculated: two using the DSM IV scale for assessing problem gambling and two using the PGSI. The four estimates were averaged to produce the best estimates. Two forms of gambling, betting on dog races and FOBTs, are ranked highest with estimated percentages of spend attributable to problem gamblers which are considerably greater than the estimates for all other forms of gambling (dog races 27%; FOBTs 23%)⁴.

Estimates of the percentage of all days play and all spend attributable to PGSI problem and moderate risk gamblers combined - Estimates using the PGSI and a score on that scale of 3 and above in order to include both problem gamblers (scores of 8 and above) and moderate risk gamblers (scores of 3 to 7)⁵. The sizes of these estimates are based on a much larger group of gamblers (both problem and moderate risk gamblers as opposed to problem gamblers alone). For FOBTs, 38.8% of all days play and all spend was attributable to PGSI problem and moderate risk gamblers combined. FOBTs were third highest ranked after casino games (42.29%) and dog races (38.99%).

Discussion: Estimates of the proportion of gambling attributable to problem gamblers varied greatly by type of gambling, from a low of 1 – 2% for the National Lottery and other lotteries to 20– 30% for FOBTs and dog races. Estimates of attributable spend were consistently somewhat lower than estimates of attributable days play (although dog races was an exception). The lower figures for spend appear to be due to frequency of play being a stronger differentiator of problem and non-problem gamblers than was reported monthly spend (which affects the first estimate of attributable spend) and the consistent trend in the data for the most frequent players to spread their spending over a larger number of days than was the case for less frequent players, hence spending less per gambling day (which affected the second estimate of spend). When estimates are made of the days and spend

attributable to problem and moderate risk gambling combined, using the PGSI scale (which theoretically assumes that gambling and problem gambling lie on a continuum), then estimates are necessarily greater, varying from a low of 5 –6% for other lotteries to around 40% for dog races and FOBTs⁶.

Key Findings:

- At 26% FOBTs were second highest only to casino games (31%) in the estimate of days play attributable to problem gambling.
- 27% of spend on FOBTs is estimated to be attributable to problem gamblers. FOBTs were second only to dog races (23%). Both FOBTs and dog races were ranked highest in the estimates of spend attributable to problem gamblers and are considerably greater than the estimates for all other forms of gambling in the BGPS 2010⁷.
- 28.8% of spend on FOBTs is estimated to be attributable to PGSI problem gamblers and moderate risk gamblers (combined). FOBTs were third highest ranked after casino games (42.29%) and dog races (38.99%).
- The authors state they have been cautious in their estimates for percentage attributable to spend. As most people, particularly problem gamblers, underestimate their gambling losses, the real figures (and therefore attributable percentages) are likely to be much higher.

Notes

¹ Responses to questions about frequency of gambling and average monthly spend on each of the 15 forms of gambling, and responses to two different problem gambling screens (DSM-IV and PGSI), were used to derive estimates, for each form of gambling separately, of the percentage of (1) all days play (two estimates), and (2) all spend (four estimates), attributable to problem gamblers.

² Based on the BGPS 2010 data, the authors offer two separate definitions of the proportion of gambling associated with problem gambling: the proportion of gambling days attributable to problem gamblers; and the proportion of spend attributable to problem gamblers. Two alternative ways of calculating the attributable proportion according to the second of those definitions were employed and the results have been shown separately and combined. All analyses were carried out twice, once using the DSM IV based scale to categorise gamblers as problem or non-problem gamblers, and once using the alternative PGSI method. In addition, the PGSI enabled a further set of analyses to be carried out which included 'moderate risk' gamblers.

³ These estimates are dependent on two factors. The first is the relative concentration of problem gamblers amongst participants in a particular form of gambling (the prevalence of problem gambling for that form of gambling). The second is the differential frequency of engagement in a form of gambling by problem and non-problem gamblers. Frequency of engagement was greater for problem than non-problem gamblers in the case of each of the 15 separate forms of gambling.

⁴ As was the case for estimates of the percentage of days play attributable to problem gamblers, the rank order of forms of gambling in terms of estimates of percent of spend attributable to problem gamblers is similar to, but not identical with, the ordering according to the prevalence of problem gambling associated with each activity (rank order correlation with DSM prevalence = 0.73; with PGSI prevalence = 0.85).

⁵ Again rank orders of forms of gambling in terms of percent of days play and percent of spend attributable to problem and moderate risk gamblers are similar to one another and similar to the order in terms of prevalence of problem gambling and moderate risk gambling combined (attributable percentage days play = 0.82; attributable percentage spend = 0.83).

⁶ In the case of percentage attributable to spend, the authors note that they have been cautious in their estimates which for a number of reasons are likely to be underestimates. It is likely that most people underestimate their gambling losses (Griffiths, 1994) and it is possible that this bias may particularly be the case for problem gamblers.

⁷ This figure was calculated using the DSM IV.