

Research Summary: LaPlante, D. A., Nelson, S. E., LaBrie, R. A., & Shaffer, H. J. (2009). 'The relationships between disordered gambling, type of gambling, and gambling involvement in the British Gambling Prevalence Survey 2007'. *European Journal of Public Health*, epub ahead of print.

Aim: The purpose of the study was to examine the relationships between types of gambling and disordered gambling. This was done with and without controlling for gambling involvement (i.e. the number of types of games with which respondents were involved during the past 12 months).

Methodology: Using the BGPS 2007 data¹, three types of analyses were undertaken: First, gender participation rates for each game types (using chi-square analyses). Second, for each game type, a calculation of the sample of individuals who have played the game during the past 12 months, the proportion reporting 3+ gambling symptoms (using the DSM IV) during the past 12 months, the mean number of gambling symptoms reported during the past 12 months and the mean number of gambling types played during the past 12 months. Finally, an analysis into participation in each gambling type to predict disordered gambling status among past 12 month gamblers was undertaken².

Results: Individuals who participated in spread betting and used virtual gaming machines (also known as "FOBTs") had the highest likelihoods of reporting any DSM gambling symptoms during the past 12 months, as well as reporting 3+ DSM gambling symptoms during the past 12 months. Spread betting and FOBTs were associated with the highest mean numbers of DSM IV gambling symptoms and mean number of types of gambling during the past year (i.e. involvement). The top five prevalence rates of any DSM IV gambling symptoms by types of game were: FOBTs (26.9%), spread betting (26.3%), casino table games (17.1%), other sports betting (16.8%) and betting on dogs (16.1%). The top five prevalence rates of 3+ DSM gambling symptoms by the type of game were: spread betting (15.5%), FOBTs (11.3%), other types of betting (8.7%), casino table games (5.2%) and betting on dogs (5.2%). The top five types of games for the mean number of DSM gambling symptoms were: spread betting (1.05), FOBTs (0.89), casino table games (0.42), Internet gambling (0.42) and betting on dogs (0.42). The top five types of games for the mean number of types of gambling during the past year (i.e. involvement) were: spread betting (8.89), FOBTs (7.05), casino table games (6.00), internet gambling (5.63) and other sport betting (5.60).

Using logistic regressions, the authors sought to illustrate how well each type of gambling contributes to the "prediction" of gambling problems³. Bivariate analyses showed that all types of gambling, except for the National Lottery, contributed significantly to the prediction of gambling-related problems and all increased risk for gambling-related problems. The top five odds ratios were for: FOBTs (24.01), spread betting (21.84), Internet gambling (9.58), betting on dogs (9.39), and casino table games (8.15). Subsequent regressions that added involvement (i.e. number of types of games played in the past 12 months) showed that involvement contributed significantly to the prediction of gambling-related problems in all models. The addition of involvement greatly reduced the contribution of games to the prediction of gambling-related problems in each model. For almost all games, the addition of the involvement variable rendered the significant positive association between gambling type and gambling-related problems non-significant. The exception was FOBTs, which maintained a significant positive relationship to disordered gambling status after adjusting for involvement.

Discussion:

This analysis places emphasis on the nature and the strength of associations between types of games and gambling related problems. For example, fruit/slot machines were not included among the top five game types for gambling-related problems. FOBTs had the strongest association with gambling-related problems, but few people (i.e. 2.6%) endorsed that they had played these games during the past 12 months. These findings suggest that popular perceptions of risk associated with specific types of gambling for the development of gambling-related problems might misrepresent actual risk. In the case of FOBTs, this analysis indicates that FOBTs have the strongest association with gambling-related problems compared with other forms of gambling identified in the BGPS 2007. The findings are also consistent with emerging research that indicates that gambling involvement is a better predictor of gambling problems than participation in a particular game.

Key Findings:

- Individuals playing FOBTs had the highest likelihoods of reporting any DSM IV symptoms over the last 12 months and of reporting 3+ DSM IV symptoms.
- FOBTs (along with spread betting) were associated with the highest average number of DSM IV gambling symptoms and average number of types of gambling over the past year i.e. FOBT players gamble on lots of other products.
- At 11.3% FOBTs were second only to spread betting (15.5%) for the highest prevalence of 3+ DSM IV gambling symptoms.
- FOBTs had the strongest association with gambling-related problems out of all gambling products.

Notes:

¹ A secondary analysis of BGPS 2007 data was undertaken. The sample included 9003 residents, aged 16 or older, recruited from 10 144 randomly selected addresses. 5832 households contributed at least one participant. Post-facto weighting to produce a nationally representative sample yielded 8968 observations. The BGPS included four primary types of measures: Participation in gambling (during the past 12 months and during the past 7 days), disordered gambling assessments, attitudes toward gambling and descriptive information.

² Initially, logistic regressions were undertaken without controlling for involvement and then added involvement as a control.

³ The term 'predict' is used in a technical sense to indicate a relationship between the logistic regressions 'predictor' variables and outcome, and not to suggest these predictor variables cause gambling problems.