

Research Summary: Markham, F., Young, M., & Doran, B. (2014). 'Gambling expenditure predicts harm'. *Addiction*, 109, 1509-1516.

Aim: If a definite relationship between expenditure and harm was established, existing expenditure data could be used to estimate changes in gambling-related harm over time without the need for expensive and ultimately unreliable prevalence studies. The purpose of the present study was to be the first to explicitly examine the relationship between gambling expenditure and the prevalence of gambling-related harm at the venue level.

Methods: Participants were 7049 (38% males) Australian residents aged 18 years and older. Questionnaires regarding gambling-related behaviours and problems were mailed to 48563 households in the Northern Territory of Australia between April and September 2010. The questionnaire elicited information about which gambling venues the respondent had visited in the last month. Respondents selected their most frequently visited venue from a list of all EGM venues in, or proximate to, their town of residence. They also reported whether they participated in EGM gambling on their last visit to this venue. The Problem Gambling Severity Index (PGSI) assessed past year gambling-related problems. The prevalence of gambling-related harm for each venue in the study was estimated by allocating individual respondents to the venue they had visited most frequently in the previous month. EGM expenditure data for each venue were obtained from the state regulatory authority and included nominal monthly EGM expenditure and the number of EGMs operational at the end of each month. The expenditures were adjusted for inflation.

Results: At a venue level, per capita EGM expenditure was significantly correlated with rates of gambling harm. The level of gambling-related harm varied substantially among venues, both between venues of different types (i.e. hotels, clubs and casinos) and within those categories. The prevalence of gambling-related harm at the venue level was correlated with estimated monthly EGM expenditure per adult. The hypothesis was supported such that holding all other variables constant, for a typical venue in the study area, each \$AU20 increase in monthly EGM expenditure per adult was associated with an estimated 1.7% increase in the prevalence of gambling harm for a club with 22 EGMs.

Discussion: The findings support existing and established theories (total consumption theory) that EGM expenditure predicts the rate of gambling-related harm. The authors cautiously suggest the use of per capita EGM expenditure as a proxy for gambling-related harm. However, the relatively low response rate impacts the internal validity of the results¹. The authors propose that the findings of a significant relationship between EGM expenditure and the prevalence of gambling-related harm at EGM venues is generalisable to other settings (and to other modes of gambling), wherever those experiencing gambling-related harm account for a substantial proportion of aggregate gambling expenditure. However, the precise size of the relationship between expenditure and rates of harm is likely to vary between jurisdictions due to environmental, regulatory and social differences. Importantly, the authors argue that excessive gambling expenditure is conceptually and empirically separable from gambling-related harm because expenditure of money is the proximate source of many of the negative consequences associated with harmful gambling. The money lost at the EGM venues constitutes a harm in itself for some gamblers and this is detectable in aggregate gambling expenditure data.

Key Findings:

- Venue level EGM expenditure may be used as a proxy for measuring gambling-related harm. This approach is used by other regulators e.g. the

New Zealand gambling regulator (the Department of Internal Affairs) publishes EGM expenditure or “losses” by local authority.

- For a club with 22 EGMs, a \$20AUD increase in monthly EGM expenditure per adult was associated with an estimated 1.7% increase in the prevalence of gambling harm.
- Money lost at EGM venues constitutes a harm in and of itself and therefore gambling regulators should be paying particular attention to gambling expenditure on EGMs as a high confidence indicator of harmful gambling.

Notes

¹ Other limitations include the use of a mail survey and the recruitment method whereby any household member was eligible to reply to the questionnaire likely skewed the sample in favour of gamblers when compared to a telephone survey. There were several possible sources of non-sampling error including the use of estimated service areas and failure to account for household income.