The Wager, Volume 8(9) – Location, Location, Location: Casino Accessibility and Prevalence Rates

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The expansion of legalized gambling during recent years has spawned debate on whether or not increased availability of gaming venues has led to a corresponding increase in the prevalence of problem and pathological gambling. Since emotions run deep among both supporters and opponents of gambling, objective scientific data is essential to advance this discussion. This week the WAGER addresses possible links between gambling exposure and gambling disorders by examining existing scientific literature focused on this issue.

The National Opinion Research Center (NORC) reported that the availability of a casino within a 50 mile radius of a person's home is associated with doubled levels of problem and pathological gambling (Gerstein et al., 1999). Similarly, a recent study of the Iowa Gambling Treatment Program revealed that counties within 50 miles of at least one gaming venue received the highest number of crisis contacts from problem gamblers (Shaffer, LaBrie, LaPlante, Kidman, & Korn, 2002). Although tempting, these studies cannot be used as evidence of causation. As Shaffer and Korn (2002) pointed out, an increased incidence of disordered gambling can be caused by a variety of other factors. For example, it is possible that those with gambling problems are attracted to areas that are casino gambling sites, or perhaps casinos settle in areas where vulnerable or problem populations dominate, or that both are attracted to an area because of some other factor (e.g., isolation, urban development, etc.).

In addition, it must also be considered whether simple distance is an adequate measure of gambling access. For example, gaming venues located in areas with sophisticated public transportation and highway systems might be more accessible to greater populations than venues in more rural areas. While several studies have used 50 miles as the marker for venue accessibility, this distance is actually arbitrary and makes no distinction as to the relative ease or difficulty of

travel to the facility. In such studies, it is unknown how the distribution of persons with gambling disorders would increase or decrease if the travel distance or mode of travel were changed. This suggests that researchers will need to develop more continuous measures of distance and give careful consideration to travel-related variables if they are to produce meaningful results.

Table 1. A Comparison of National and Nevada Past-Year Prevalence Estimates

	National Estimates		Nevada Estimates		
Level of Gambling Problems	Kallick et al. 1979	NORC NODS 1999	Nevada NODS 2002	Kallick et al. 1979	Nevada SOGS 2002
Level 1 (no problems)	97.1%	93.8%	97.9%	n/a	93.6%
Level 2 (sub-clinical number)	2.2%	3.6%	1.8%	n/a	2.9%
Level 3 (gambling disorder)	0.7%	0.6%	0.3%	2.6%	3.5%

In addition to distance, it is also important to consider accessibility to gambling based on number of casinos; an examination of national and state disordered gambling prevalence estimates provides such an analysis. For example, Table 1 presents past year national and Nevada prevalence rates estimated using different screening methods [e.g., South Oaks Gambling Scale (SOGS), NORC DSM Screen for Gambling Problems (NODS)]. The past-year level 3 national prevalence estimate for 1999 was actually lower than that for 1979. Further, separate estimates derived from Nevada yield both higher and lower past-year level 3 estimates for 2002 (0.3% using NODS v. 3.5% using SOGS) as compared to that of Kallick's 1979 Nevada estimate (2.6%). The NODS data suggests that Nevada has a level 3 prevalence rate that might be half that of the nation (0.3% v. 0.6%). The SOGS data from the same study suggests that the Nevada level 3 prevalence rate (3.5%) is almost 1% higher in 2002 than it was during the middle 1970s (2.6%).

As the debate over the relationship between casino accessibility and the prevalence of pathological gambling continues, several facts must be kept in mind. There will always be an element of uncertainty surrounding this issue because it is impossible to collect data from the entire population; therefore, prevalence rates are always estimates. These estimates have a margin of error. So, while rates sometimes seem different, often these differences reside within the range of measurement error (see WAGERs 7(51) and 8(3) for further information). Furthermore, while advocates on both sides of the issue place great faith in scientifically calculated prevalence rates, it must be remembered that there is no "gold standard" for the instrumentation and measurement of disordered gambling. Thus, it is difficult to make direct comparisons between

prevalence estimates derived from different screening instruments, or to designate any one value as the “correct” estimate.

So, does casino accessibility increase the prevalence of disordered gambling? As much as we would like to answer this question, to date, science cannot provide the answer. The association between disordered gambling and gambling accessibility is strong in some studies; however, there are many illustrations of gambling-related disorders long before the development of casino or electronic gaming devices. Thus, these settings and games are not necessary for the development of a gambling disorder. Similarly, most people who are exposed to casinos or electronic gambling machines never develop gambling problems. Nevertheless, opportunities to gamble are related to opportunities to develop gambling-related problems. After all, if a person never gambles, they will not develop a gambling disorder.

Comments on this article can be addressed to Tony Donato.

References

Gerstein, D., Murphy, S., Toce, M., Hoffmann, J., Palmer, A., Johnson, R., Larison, C., Chuchro, L., Bard, A., Engelman, L., Hill, M. A., Buie, T., Volberg, R., Harwood, H., Tucker, A., Christiansen, E., Cummings, W., & Sinclair, S. (1999). Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission. Chicago: National Opinion Research Center.

Kallick, M., Suits, D., Dielman, T., & Hybels, J. (1979). A survey of American gambling attitudes and behavior (Research report series, Survey Research Center, Institute for Social Research). Ann Arbor, MI: University of Michigan Press.

Shaffer, H. J., & Hall, M. N. (1996). Estimating the prevalence of adolescent gambling disorders: a quantitative synthesis and guide toward standard gambling nomenclature. Journal of Gambling Studies, 12(2), 193-214.

Shaffer, H. J., & Korn, D. A. (2002). Gambling and related mental disorders: a public health analysis, Annual Review of Public Health (Vol. 23, pp. 171-212). Palo Alto: Annual Reviews, Inc.

Shaffer, H. J., LaBrie, R., LaPlante, D., Kidman, R., & Korn, D. A. (2002). Evaluating the Iowa Gambling Treatment Program. Boston: Harvard Medical

School, Division on Addictions.

Volberg, R. A. (2002). Gambling and problem gambling in Nevada. Northampton, MA: Gemini Research Ltd.