

Association Between Income and Disordered Gambling in Adults

C. Scheele, MA¹, W. Seymour, MPH¹, L. Levy, JD, MPH², A. Monaghan, BA¹, H.M. Nichols MSW³, J.E. Swanberg, PhD³, J.K. Tracy, PhD^{1,4,5}

1. Department of Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, MD. 2. University of Maryland Law School, Baltimore, MD
3. University of Maryland School of Social Work, Baltimore, MD. 4. Maryland Center of Excellence on Problem Gambling 5. Department of Medicine, University of Maryland School of Medicine, Baltimore, MD

INTRODUCTION

- Previous research has found associations between low-income and gambling disorder (GD), noting differences in motivations for gambling and type of gambling between low-income and middle/higher income gamblers.^{1,2,3,4,5}

OBJECTIVES

- To examine the relationship between income and gambling behavior in an adult sample.
- To assess differences in type of gambling activity by income level.

METHODS

- Participants (n=893) were recruited as part of the PEGASUS (Prevalence and Etiology of Gambling and Substance Use in the US) study, an on going longitudinal cohort study of gambling behavior in Maryland residents.
- Participants completed a battery of self-administered questionnaires that included demographics, health behaviors, and gambling activity.
- Gambling behavior was assessed with two instruments:
 - South-Oaks Gambling Screen (SOGS)
 - Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-IV).
- Type of gambling included:
 - Non-strategic (e.g. lottery, bingo, or keno)
 - Strategic (e.g. card games, sports betting, or stocks)
 - Machine gambling (e.g. internet or slots)
 - Casino gambling (e.g. visiting a casino).
- Gambling disorder (lifetime) indicated by 4 or more DSM symptoms reported via the AUDADIS

RESULTS

Table 1: Demographics

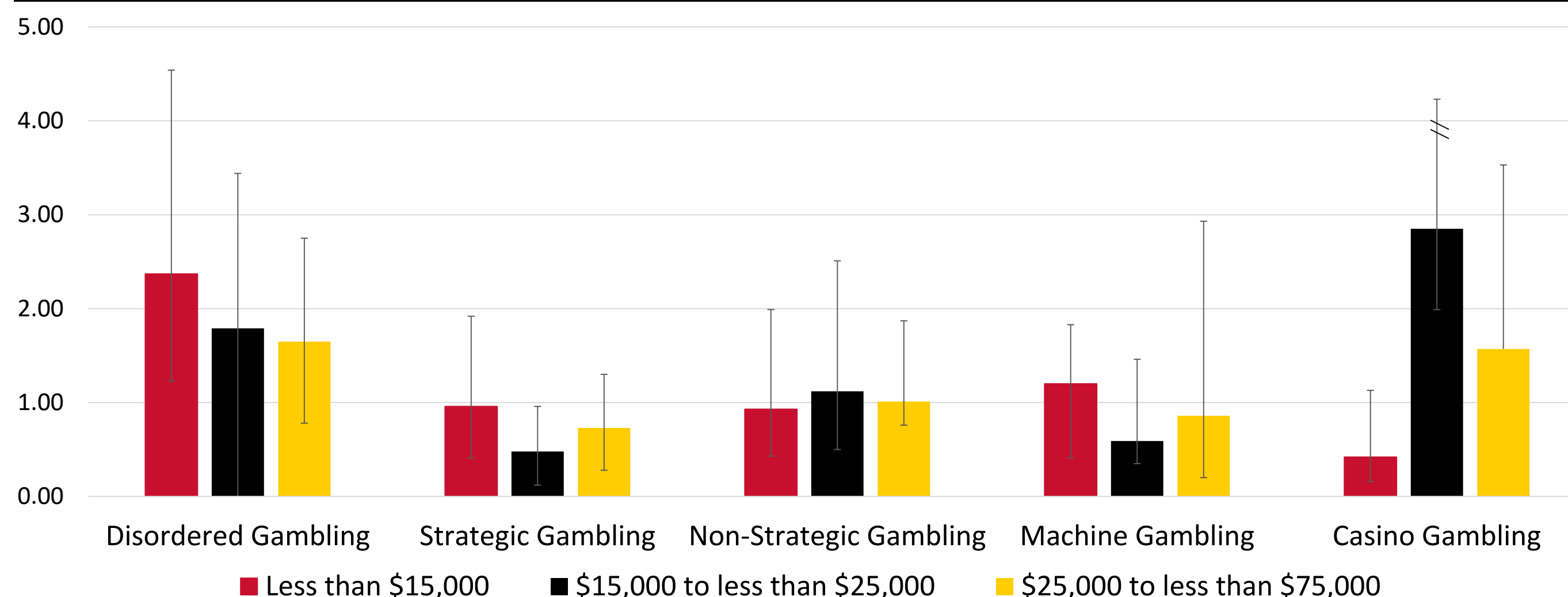
	Range	M	SD
Age (years)	18-73	43.0	13.9
	n	%	
Gender	889		
Male	414	46.6	
Female	475	53.4	
Race	887		
White	352	39.7	
African-American	446	50.3	
Other or Mixed Race	89	10.0	
Household Income (per year)	878		
Less than \$15,000	270	30.8	
\$15,000 to less than \$25,000	128	14.6	
\$25,000 to less than \$75,000	361	41.1	
more than \$75,000	119	13.6	
Disordered Gambling Status	893		
Non-Disordered Gambler	389	43.6	
Disordered Gambler	504	56.4	

Table 2: Adjusted Association Between Low Income, Disordered Gambling, and Gambling Preference

	Odds Ratio	95% CI	p value
Disordered Gambling	1.14	[0.78 to 1.66]	0.500
Type of Gambling			
Casino (n=707)	1.34	[0.86 to 2.07]	0.194
Strategic (n=631)	1.44	[0.90 to 2.31]	0.126
Non-strategic (n=715)	1.21	[0.79 to 1.84]	0.383
Machine (n=643)	1.34	[0.84 to 2.13]	0.214

*Separate models controlling for age, gender, race, education, and employment were conducted for each association presented above

Adjusted Odds Ratios of Income Predicting Disordered Gambling and Gambling Preference



*Separate models controlling for age, gender, race, education, and employment were conducted for each association presented above

**Reference group for OR was income "more than \$75,000 per year"

RESULTS

Bivariate Analyses

- Low income was significantly associated with:
 - Gambling disorder
 - Race (African American)
 - Employment (unemployed)
 - Education (high school or less)
- Gambling disorder was significantly associated with:
 - Age
 - Race (African American)
 - Education (high school or less)
 - Income (less than \$25K per year)
 - Employment (unemployed)
 - Type of gambling (non-strategic, strategic, machine and casino gambling)

Multivariate regression analysis

- Low income participants were 1.14 times more likely to be disordered gamblers, after controlling for age, education, employment, race and sex.
- Strategic gambling and visiting a casino were also significant indicators of disordered gambling.

CONCLUSIONS

- After controlling for several factors, including type of gambling, low income was a significant correlate of disordered gambling.

REFERENCES

1. Barry DT, Maciejewski PK, Desai RA, Potenza MN. Income differences and recreational gambling. *Journal of Addiction Medicine*. 2007;1:145-153.
2. Bol T, Lancee B, Steijn S. Income Inequality and Gambling: A Panel Study in the United States (1980–1997). *Sociological Spectrum*. 2014;34:61-75.
3. Potenza MN, Steinberg MA, McLaughlin SD, Wu R, Rounsaville BJ, O'Malley SS. Gender-related differences in the characteristics of problem gamblers using a gambling helpline. *Am J Psychiatry*. 2001;158:1500-1505.
4. Stevens M, Young M. Who Plays What? Participation Profiles in Chance Versus Skill-based Gambling. *JOURNAL OF GAMBLING STUDIES*. 2010;26:89-103.
5. Welte JW, Barnes GM, Wieczorek WF, Tidwell M, Parker J. Gambling participation in the U.S.--Results from a national survey. *J Gambl Stud*. 2002;18:313-337.

FUNDING

Funding for this project was provided by the Maryland Department of Health and Mental Hygiene, Behavioral Health Administration [#M00B4400404; PI: JK Tracy].