

## **Effect of Requiring Life Impairment Items for SOGS-RA & DSM IV-J Scoring**

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Two recent meta-analyses of gambling disorder prevalence rates<sup>1,2</sup> report that surveys of adolescent gambling behavior in Canada and United States consistently find higher rates of gambling disorders in adolescents than adults. Paradoxically, gambling disorder treatment specialists find that very few adolescents seek treatment for gambling problems. The scientific literature supports the clinical experience. In surveys of gambling disorder treatment populations in six states, Volberg<sup>3</sup> found a predominantly middle-aged population in gambling disorder treatment.

There are several plausible explanations for this phenomenon. Lack of public awareness about adolescent gambling problems and the availability of adolescent gambling treatment could be a factor. A long latency period for problem gambling to develop to clinical proportions and trigger treatment seeking could also contribute to this phenomenon. Adolescent or family denial of the consequences of gambling problems may also contribute. Lack of acceptable treatment approaches for adolescents or unique accessibility barriers for adolescents may also decrease treatment seeking in this population.

Methodological problems in the epidemiological assessment of adolescent gambling disorders could also be an underlying factor in this phenomenon. This paper will explore only one of the possible methodological factors, the definition of threshold criteria for adolescent gambling disorders. This paper will focus on one commonly used instrument for assessing adolescent gambling disorders, the South Oaks Gambling Screen-Revised for Adolescents<sup>4</sup> (SOGS-RA) and one relatively unused criteria set, the

Diagnostic and Statistical Manual, Version IV, Juvenile Criteria (DSM IV-J) set by Fisher<sup>5</sup>. The SOGS-RA is based mainly on the DSM III-R, while Fisher's criteria are based on the DSM IV criteria. Our analyses both varied the number of positive criteria necessary for the epidemiological assessment of pathological gambling, and also attempted to develop a proxy for life impairment. The DSM IV criteria for pathological gambling require five of the ten symptom criteria to be met, and have a separate criterion for life impairment resulting from symptoms of pathological gambling. Both the DSM IV-J criteria and the SOGS-RA (narrow criteria) require four symptom criteria to be met for a possible assessment of pathological gambling and do not assess life impairment directly.

Methods: The methods used to collect data used for the analysis and the basic results of this survey have been reported<sup>7</sup> previously. These analyses used data (N=11,736) from a statewide school survey of 12,003 students from 6<sup>th</sup> grade to 12<sup>th</sup> grade in Louisiana in 1997. Students' responses were scored by the published DSM IV-J and SOGS-RA (narrow) criteria. Four questions from the DSM IV-J were used to measure the percentage of students with life impairment problems whose DSM IV-J diagnosis was pathological:

- 7b. Have you ever stolen money from outside your family to gamble?
- 8a. Have you had a "falling out" with family members or close friends because of your gambling?
- 8b. Have you skipped school more than 5 times to gamble in the past year?
- 9. Have you sought help for serious money problems caused by gambling?

Six questions from the SOGS-RA were used to measure the percentage of students with life impairment problems whose SOGS-RA classification was Level 3, at risk for pathological gambling disorder:

- Have you had arguments about money with family or friends centered on gambling?
- Have you ever skipped or been absent from school or work due to betting activities?
- If you have borrowed money or stolen something in order to bet or to cover gambling debts, from whom or where did you get the money or goods (mark all that apply):
  - Shop lifted
  - Loan sharks
  - You passed a bad check on your checking account
  - You stole from someone

Positive responses to any one of the four questions from the DSM IV-J, or any one of the six questions from the SOGS-RA, that sampled life impairment, placed the student in the life impairment category for purpose of analysis. Cross-tabulation of life impairment status against SOGS-RA classification and DSM IV-J diagnosis (in SPSS 9) yielded the percentage of students with life impairment indicators who were captured, or not captured, within the assessment instruments' diagnostic criteria. Criteria were then varied for the DSM IV-J and SOGS-RA assessments. Variations in DSM IV-J criteria were straightforward increases in minimum number of positive responses to any of 9 criteria. The narrow criteria scoring for the SOGS-RA is as follows:

Not at Risk = 0-1; At Risk for Problem Gambling =2-3; At Risk for Pathological Gambling = 4-20. SOGS-RA variations were as follows:

- SOGS-RA in 3 criteria Not at Risk = 0; At Risk/ Problem =1-2; At Risk for Pathological = 3-20.
- SOGS-RA in 5 criteria Not at Risk = 0-2; At Risk/ Problem =3-4; At Risk for Pathological = 5-20.
- SOGS-RA in 6 criteria Not at Risk = 0-3; At Risk/Problem =4-5; At Risk for Pathological = 6-20.

## Results

The following figures illustrate the percentage of students within the DSM IV-J (Figure 1) and SOGS-RA (Figure 2) pathological diagnostic categories that captured or did not capture those who indicated some form of life impairment. As indicated in Table

1, tendency of capture of students with life impairment problems within diagnosis increases as number of diagnostic criteria increase. However, when viewed from the perspective of life impairment, Figures 3 and 4 show that as criteria increase with DSM IV-J (Figure 3) and SOGS-RA (Figure 4), the percentages of those classified as pathological (and at risk for problems, in the case of SOGS-RA), decreases.

**Table 1 Percentages of Total Sample Diagnosed as Pathological Who Indicated At Least One Life Impairment Problem When Based on Varied Diagnostic Criteria**

Diagnostic Tool	Number of Criteria				
	3	4*	5	6	7
<b>DSM IV-J</b>	<b>3</b>	<b>4*</b>	<b>5</b>	<b>6</b>	<b>7</b>
% Patho	7.5	4.2	2.5	1.4	.7
% Life Impair	4.0	3.0	2.0	1.3	.7
<b>SOGS-RA</b>	<b>3</b>	<b>4*</b>	<b>5</b>	<b>6</b>	
% Patho	10.0	6.0	3.8	2.3	
% Life Impair	6.2	4.4	3.1	1.9	

\* Asterisk indicates conventional diagnostic criterion.

Figure 1

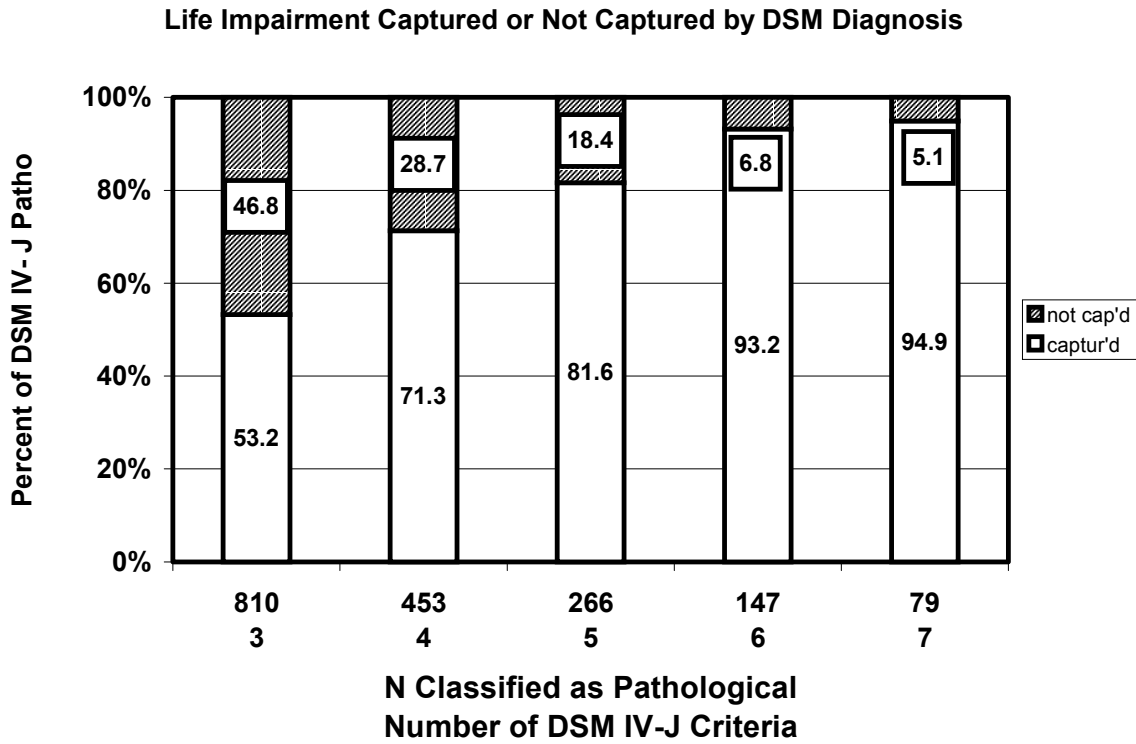


Figure 2

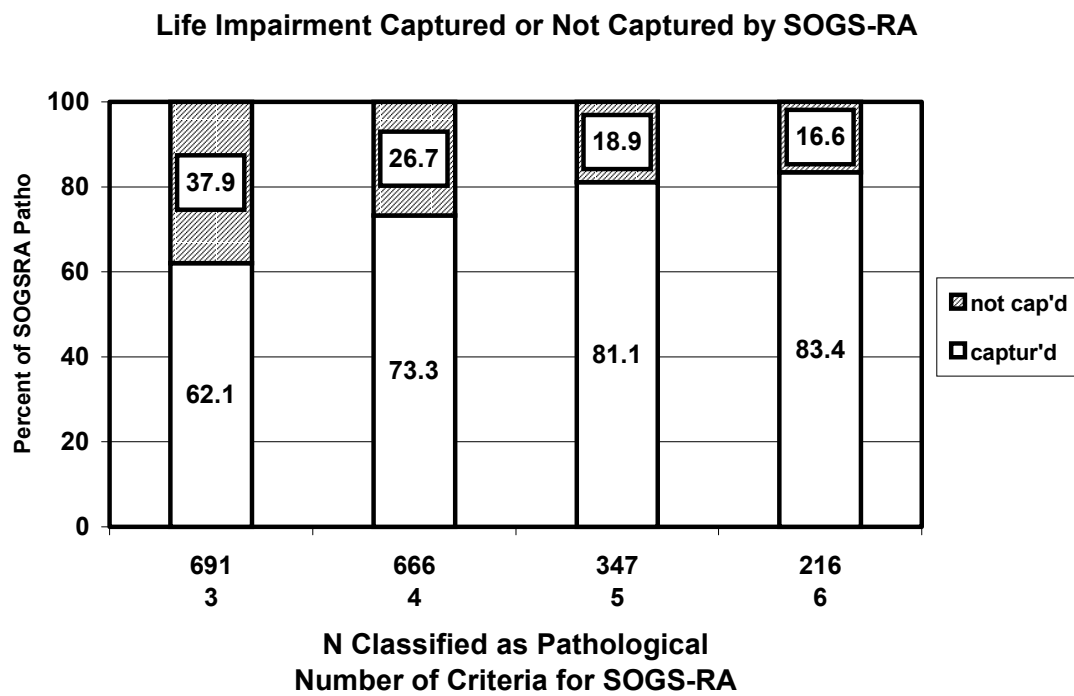


Figure 3

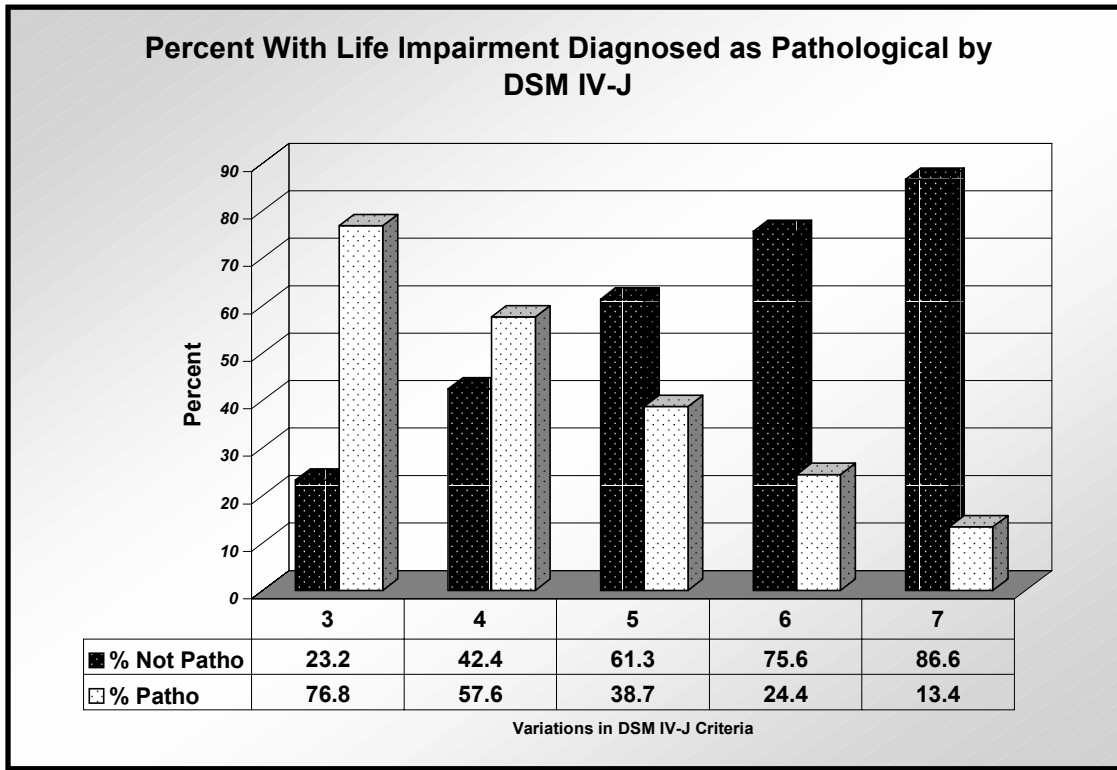
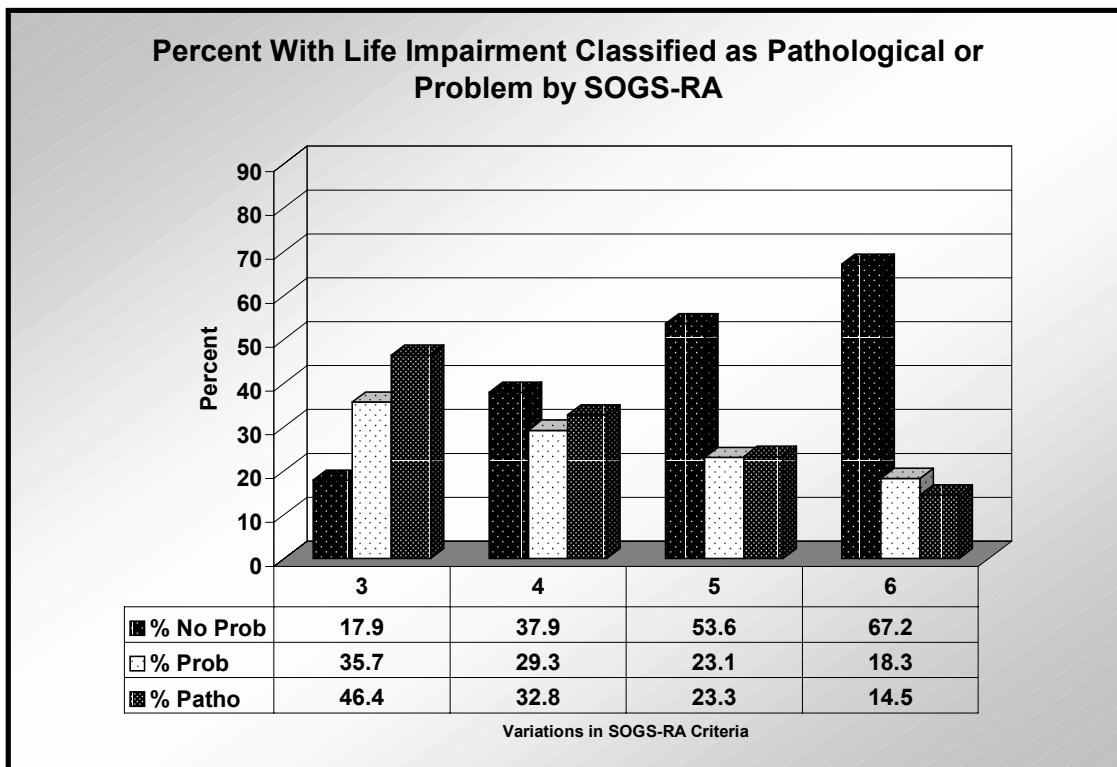


Figure 4



## Discussion

Our analysis found that as number of positive criteria are increased, percentage of the identified sample that acknowledges life impairment increases with both instruments. In addition, if DSM IV criteria requirement of five symptoms or more plus life impairment are used as a threshold, the prevalence of pathological gambling in adolescent populations more closely resembles the adult prevalence of pathological gambling. Although the percentages of those with life impairment issues increase among those classified as pathological as thresholds increase, the percentage of those with life impairment who are not captured by diagnosis also increases.

## Conclusions:

Increasing the threshold to five self-acknowledged symptoms in adolescents and the development of a separate life impairment assessment for epidemiological surveys may help identify the population of adolescents whose gambling adversely affects their lives. The increase in threshold may also identify the extent of the adolescent population who would be appropriate for clinical or preventive interventions. However, merely increasing the number of criteria for diagnoses may not be the most efficient method to employ. Future research should identify criteria that more effectively capture those with life impairment issues for intervention purposes.

## References

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