

**COMPARATIVE STUDY OF PROBLEMATIC GAMBLING
BEHAVIORS BETWEEN AMERICAN INDIAN AND
NON-INDIAN ADOLESCENTS WITHIN AND NEAR A
NORTHERN PLAINS RESERVATION**

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Abstract: This study compared the gambling behaviors of American Indian adolescents with their non-Indian peers. Results indicated that perhaps due to socio-economic status, cultural issues, increased direct and vicarious exposure to gambling and gambling availability, that American Indian adolescents displayed greater frequency of gambling involvements, earlier onset of gambling experiences and greater tendency to exhibit problematic gambling behaviors.

Historically, gambling has been available to American Indians through various traditional activities, including shell games, hand games, and moccasin games. Some historical summaries have documented pow-wows and associated games of chance in the 1800s where visitors left “only with the clothing on their backs” after gambling away possessions (Mille Lacs Band Museum, 1992).

Currently many American Indian communities have greater gambling opportunities (e.g., large stakes bingo, video poker, slots, and pull-tabs), frequently with higher stakes than is available within non-Indian communities. Many reservation communities already exist with legacies of more than 20 years of gambling availability. The literature also suggests that the greater the length of exposure to gambling, the greater the potential is for developing gambling problems (Livingston, 1974). Exposure issues may be both direct or indirect (including vicarious exposure through adult family members).

The assumption persists, that compulsive gambling behaviors exist at a higher rate for American Indian adolescents in comparison with neighboring non-Indian populations. This assumption had *not* been tested and forms the basis of the present study.

Within the rural reservation involved in this study, large stakes bingo has been available for at least fifteen years. Video poker machines

have been available for five years and tribal pulltabs for six years. State-sponsored scratch tabs and lottery became available in 1990. To date, there has been no formal assessment concerning the impact of the burgeoning gambling industry on reservation youth.

In an "adolescent survey of gambling behaviors in Minnesota" abstinence from gambling was defined as "rare" among Minnesota teenagers (Winters, Stinchfield, & Fulkersen, 1990, p. 26). Nearly 90% indicated they gambled at least once in their lifetime. The most popular games for adolescents were cards for money, bingo, betting on games of personal skill, sports betting, scratch tabs, and pulltabs. The study indicated 6.3% were problem gamblers, 19.9% "at risk" gamblers, with 73.9% "no problem" gamblers. Results also indicated that problem gamblers tended to be male (86%), and resided primarily within a metro area (71%). The majority (60%) began their gambling during or before the sixth grade. Of those identified in the adolescent problem group, 72% were regular drug users; 83% admitted to engaging in illegal activities; 75% disclosed that at least one of their parents gambled. There was some concern that the Minnesota study *did not* effectively sample the rural areas of Minnesota or represent adequately American Indians as well as other minority communities within the Upper Midwest.

Jacobs (1990) suggested that until as recently as 15 years ago adolescent gambling was not perceived as a problem, despite evidence of problem gambling with adults and youth involvement with other addictive behaviors. His review of the literature revealed that from 40% to 80% of juveniles had gambled in the previous twelve months, that perhaps as many as seven million juveniles gambled with or without adult awareness in 1988, 85% to 90% of high school youth who gambled were under the legal age, and more than one million juveniles were experiencing gambling-related problems. Jacobs (1991) also felt that teenagers, by virtue of the developmental demands of adolescence, were most "at risk".

Researchers have attempted to examine the antecedents of risk for all addictions. Marston, Jacobs, Singer, Widaman, and Little (1988) focused on adolescents' lack of "addiction resistance" skills as being related to poor personal self-esteem and unhealthy parent models. They suggested universality of characteristics that may lead to addictions, including alcohol.

The literature indicates a high degree of correlation between alcoholism and the potential for gambling addiction (Roston, 1961). Jacobs (1991) discussed the similarities between alcohol and gambling addictions, and expressed special concern about the conditions and characteristics that predispose to alcohol misuse, may also exist for the problematic gambler. High rates of problematic and dependent use of alcohol among American Indians, as a minority, have been well documented by numerous studies (Midwest Regional Center, 1988). Depression, poverty, and unemployment within American Indian reservation communities also

appear to have the potential of increasing gambling problems, since they already appear to increase alcohol addictions.

Methodology

Definition of Terms

For the purposes of this study, the following terms were used:

1. *Non-bettors*: Persons who never gamble for money (or any material currency).
2. *Non-problematic gamblers*: Someone who gambles but does not appear to possess a persistent problem, dependency, or compulsion with gambling.
3. *Problematic gambling characteristics*: Gambling related attitudes and behaviors gleaned from the literature and derived from the South Oaks Gambling Screen (SOGS) (Lesieur & Blume, 1987). A *problematic gambler* is one who meets SOGS criteria for having a gambling problem (3 or 4 characteristics).
4. *Pathological/compulsive gambling*: A pathological gambler is a person who meets the criteria for pathological/compulsive gambling according to the South Oaks Gambling Screen. (5 or more characteristics).

Study Population

The reservation participating in this study includes three separate counties. The total population within the three counties is 41,234 with 3,687 or 8.9% of American Indian descent (1990 Census, P.L. 94–171). Within the reservation there are five separate and distinct villages, with primarily American Indian residents. Six separate communities border the reservation, with an average of less than 8% persons of American Indian descent.

Hypothesis

American Indian adolescents (ages 12–19) within the study community possess a significantly greater number of respondents qualifying for both problematic and pathological gambling status when compared to a control group of non-Indian peers within adjacent communities.

Development of Protocol

The Adolescent Gambling Survey protocol included items or questions drawn from the South Oaks Gambling Screen (SOGS) (Lesieur & Bloom, 1987), Diagnostic and Statistical Manual (DSM-III-R) (American Psychological Association, 1987) symptoms of pathological gambling, a section on personal feelings, a section summarizing types of gambling activities participated in, and descriptive information. (Note: All of the SOGS items regarding borrowing money for gambling were deleted in favor of a single question on borrowing activity. Pilot study results previously indicated no response to these SOG items. This was perhaps due to the fact that many of the alternatives in borrowing listed on the SOGS were not available to the rural sample population.) Items from the "20 Questions" test were also used (Gambling Anonymous 20 Questions, 1982). These measures (SOGS, 20 Questions, DSM-III) have been used primarily with adult gambling populations. As a result, they may not be sensitive to the characteristics of adolescent gamblers. Additional questions were asked as a means of focusing on adolescent-specific gambling choices. Survey items were examined and altered until they met the criterion of content validity determined by four separate mental health professionals with backgrounds in treating gambling addictions. A pilot study was completed in order to obtain maximum understandability of items. An identical item was repeated within the survey to establish a measure of respondent reliability. The majority of items were yes/no questions with some Likert-type items. Analyses for nominal/ordinal statistics were used for each comparison, but total scores were treated as ratio data.

Permission was obtained from secondary school officials within four separate communities to administer the survey to all students in grades 9–12 on a Wednesday. Students and their parents were advised about the study and given permission forms to complete, two weeks prior to survey administration. Both the students and parents were required to sign consent forms prior to administration of the survey. The survey was monitored by the author and trained associates. A stipend was given to student participants upon completion. Students in alternative education, EBD classrooms, homebound and GED/independent studies were included in the study population (less than 1% of area students had dropped out from high school education).

Within the schools, there were 307 possible participants. Of the total possible, 22 were absent during the day of protocol administration and 8 had not completed permission forms, resulting in 277 completed surveys. This represented 90.2% of the eligible population within the schools. All surveys were reviewed for accuracy and consistency in completion. All surveys were used in the analyses. No names were attached to the surveys. The surveys measured student participation in a variety of gambling alternatives including: bingo (up to \$2000 totals could be won),

scratch tabs (state-sponsored scratch-off tickets purchased from convenience stores that provide for instant winning), pull tabs (tribally sponsored pull-off tabs for instant winning), and cards for money (any game such as smear, poker, black jack for money).

Results

Table 1 describes the adolescent participants in the adolescent gambling survey. The majority of respondents (57%) were male. Respondents ranged in ages from 14 to 19, and averaged 16.5 years.

The sample is consistent with general adolescent parameters within the surrounding area. Just over one-fourth of all respondents claimed American Indian ancestry as their main ancestry. Over 41% (115 respondents) claimed some degree of American Indian blood. (Note: The following comparisons of American Indian youth contrast the 115 respondents who claimed some degree of American Indian blood with the 161 respondents who claimed no degree of American Indian blood, simply because quantum was perceived as more accurately measurable.)

Table 2 summarizes the problem gambling items that yielded no significant differences between American Indian and non-Indian adolescents. This represents nearly half (22 out of 46) of the problem gambling items presented in the study. Items most frequently endorsed by adolescents were: having at least one parent that gambled (63%), believing minors should be allowed to gamble (56%), dreaming of solving problems by winning a lot of money (52%), and felt guilty or sad over money lost when gambling (37%).

Table 3 summarizes 24 items where significant differences existed in problem gambling behaviors using Chi Square or t-score tests. More American Indian adolescents (94%) indicated at least one experience with gambling than did non-Indian adolescents (86%). American Indian students also started gambling at an earlier age and grade level (12 years and 6.7 grade) as compared to non-Indians (13.27 years and 7.7 grade). American Indians also tended to have higher single wins and losses (average most *won* = \$124, average most *lost* = \$24) than non-Indians (average most *won* = \$29, average most *lost* = \$24). (Note: Several American Indian adolescents reported single wins as high as \$1000 at a single time, when playing bingo.) Indian adolescents admitted to 24 out of 46 problem gambling behaviors more frequently ($p < .01$ to $p < .05$), than non-Indian adolescents. Multivariate analyses yielded similar support for the same items, suggesting the noted differences were *not* due to chance. (Correlations ranged from $r = .28$ to $.83$.)

American Indian adolescents reported more problematic behaviors and attitudes associated with gambling, including: lying about what they won or lost; got into arguments with others because of gambling; borrowed money or pawned to pay for gambling; used money they were

Table 1
Descriptive Data (N = 227)

	N	%
SEX		
Male	159	57
Female	118	43
AGE		
14	12	4.4
15	46	16.8
16	74	27.0
17	83	30.3
18	54	19.7
19	4	1.5
Average age: 16.5 yrs		
ANCESTRY		
Norwegian	60	26.3
German	93	35.0
Italian	2	.8
French	2	.8
English	14	5.3
American Indian	71	26.7
Swedish	3	1.1
Other	11	4.0
N/A	11	
BLOOD QUANTUM		
None	161	58.3
Less than 1/8	30	10.9
1/8 to 1/4	24	8.7
Over 1/4 to 1/2	16	5.8
Over 1/2	17	6.2
Don't know	28	10.1
N/A	1	

not supposed to for gambling; chased previous gambling losses; and tried to cut down or stop gambling, but could not.

American Indian adolescents were more likely to believe that gambling was a fast and easy way to earn money (Indians, 55% and

Table 2
Problem Gambling Items With No Difference Between
Ethnic Groups (N=277)

Item #	N	%
I try to hide my gambling from my family or friends.	6	2.2%
I often daydream about gambling.	19	6.9%
I often dream of solving my problems by winning a lot of money.	143	51.6%
I feel people look up to you when you win at gambling.	51	18.4%
I have taken money from my family, without their permission, for gambling.	8	2.9%
I get nervous or irritable if I can't gamble.	6	2.2%
I have felt guilty or sad over the money I lost when gambling.	101	36.5%
My involvement with gambling makes it hard for me to concentrate on my school work.	5	1.8%
I believe that minors should be allowed to participate in gambling.	156	56.3%
My relationship with my family has suffered because of my gambling.	2	.7%
Recently, it seems, I can't resist the urge to gamble.	6	2.2%
I have difficulty sleeping because of my gambling.	2	.7%
I have used gambling to escape worries or troubles.	7	2.5%
I owe people money for gambling debts I haven't paid yet.	10	3.6%
Gambling is on my mind much of the time.	2	.7%
I keep a special amount (stash) just for gambling.	28	10.1%
I keep gambling even though I don't have money to pay for it.	11	4.0%
Sometimes I feel I have a problem with gambling.	6	2.2%
I feel getting lucky with gambling is the only way I'll ever get ahead.	43	15.5%
I have borrowed money from others to cover my gambling losses.	10	3.6%
I feel worried/desperate over gambling losses.	8	2.9%
At least one of my parents gambles.	175	63.2%

non-Indians, 27%). They also felt some of their happiest memories were of winning at gambling (Indians, 32% and non-Indians, 8%).

American Indian adolescents reported significantly greater frequency of gambling involvements ($p < .05$) in 6 of the 13 gambling alternatives provided (e.g., state scratch tabs, tribal pulltabs, state lottery, casino blackjack, cards/poker for money, and bingo) than did non-Indian adolescents. There were no significant differences among the adolescent groups regarding frequency of participation in local sports pools, track betting, sports betting, games of skill, casino roulettes, and casino craps.

Table 3
Differences Between Adolescent American Indian (N=115)
and Non-Indians (N=161)

Item #	Non-Indian	American Indian	t-score	
			χ^2 Prob	Greater for
I would be happier, if I just had more money.	42%	61%	$p < .01$	Am. Indian
People who gamble generally make money at it.	4%	24%	$p < .01$	Am. Indian
I feel my childhood years with my family were not very happy ones.	6%	13%	$p < .05$	Am. Indian
Gambling money makes games more fun and interesting for me.	37%	51%	$p < .01$	Am. Indian
I have gambled for money at least once in my life.	86%	94%	$p < .05$	Am. Indian
The grade level I was in the 1st time I gambled.	7.7 grade	6.7 grade	$p < .01$	Am. Indian younger
The age I was the 1st time I gambled for money.	13.27 years	12 years	$p < .05$	Am. Indian younger
The largest amount of money I ever won gambling at one time was.	\$29	\$124	$p < .01$	Am. Indian
The largest amount of money I ever lost gambling at one time was.	\$14	\$24	$p < .05$	Am. Indian
I often spend my free time gambling.	4%	10%	$p < .08$	Am. Indian
I sometimes don't complete things because of my gambling.	2%	8%	$p < .05$	Am. Indian
I have lied about what I won or lost gambling when I talk to friends or family.	9%	21%	$p < .02$	Am. Indian
I've gotten into arguments with others when I bet for money.	24%	49%	$p < .01$	Am. Indian
I've borrowed money from others so I could gamble.	18%	41%	$p < .01$	Am. Indian
I have pawned, sold or traded something of my own to pay for gambling.	1%	9%	$p < .01$	Am. Indian

Table 3 (Continued)
Differences Between Adolescent American Indian (N=115)
and Non-Indians (N=161)

Item #	Non-Indian	American Indian	t-score χ^2 Prob	Greater for
I have sometimes used money I wasn't supposed to in order to pay for gambling.	7%	27%	$p < .01$	Am. Indian
I have done something illegal (or thought of it) in order to get money for gambling.	2%	9%	$p < .03$	Am. Indian
I believe gambling is a fast and easy way to earn money.	27%	55%	$p < .01$	Am. Indian
It's hard for me to stop gambling when I'm losing money.	9%	27%	$p < .01$	Am. Indian
I have gambled more money than I planned on gambling.	17%	28%	$p < .05$	Am. Indian
I go back to gambling sometimes and try to win back money I lost earlier when gambling.	24%	47%	$p < .01$	Am. Indian
I have tried to stop or cut down on my gambling but couldn't.	1%	9%	$p < .01$	Am. Indian
Some of my happiest memories are of winning at gambling.	8%	32%	$p < .01$	Am. Indian
It seems I have to keep betting with larger amounts of money than when I first started to gamble money.	3%	8%	$p < .04$	Am. Indian

The most popular gambling activities participated in by the combined adolescent population in order of preference were: (a) cards/poker for money, (b) local sports pools, (c) bingo, (d) betting on games of skill, (e) state scratch tabs, and (f) slot video machines. These gambling preferences were largely consistent with the previous studies of Winters et al. (1990), and Jacobs (1991). At least 34% reported being *under legal age* for participation in a gambling activity. Of all the adult gambling activities, adolescents tended to violate scratch tabs prohibitions the most (29%).

Table 4 depicts the prevalence of overall gambling behaviors and compares non-problematic to pathological gambling behaviors for American Indian and non-Indian adolescents. American Indian adolescents reported greater overall frequency of gambling activities than their

Table 4
Comparison of Aggregate Gambling Behaviors Between
Indian and Non-Indian Adolescents

	Non-Indian		American Indian		Total	t-score
	N	%	N	%	%	
*No problem gambling	91	56.5%	61	53.0%	54.8%	no
*Some problem gambling (3, 4 char)	17	10.5%	17	14.8%	12.3%	<i>p</i> <.01
*Pathological gambling (5 or more char)	9	5.6%	11	9.6%	7.2%	<i>p</i> <.01
*Non-bettors	44	27.3%	26	22.6%	25.3%	<i>p</i> <.04
TOTAL	166		115		277	

*Using South Oaks Gambling Screen criterion (less SOGS items on borrowing).

non-Indian counterparts. Pathological gambling characteristics were exhibited by 9.6% of the American Indian respondents compared to 5.6% of the non-Indian respondents.

Of the American Indian adolescents, 14.8% reported some problem gambling characteristics (3–4 characteristics) as compared to 10.5% of the non-Indian adolescents. The number of non-problem bettors and non-gamblers were slightly greater for non-Indian adolescents.

Validity/Reliability

All items were reviewed for face validity by professionals trained in gambling therapy. Item analysis of individual items and group scores were completed. Individual item analyses, using Pearson *r*, ranged from .08 to .83; item-to-group analyses ranged from .19 to .67. These correlations suggest variation from item to item with a stronger correlation between items and their combined subtest scores. Concurrent validity estimates are reported in Table 5.

Table 5
Pearson *r* Correlations Between Subtest Scores

	Neg. Feelings	DSM III-R	SOGS	Gambling Frequency
Negative Feelings	1.00	.38	.28	.04
DSM III-R Items	.38	1.00	.83	.45
South Oak Items	.28	.83	1.00	.59
Gambling Frequency	.04	.45	.59	1.00

Another way of measuring validity is to relate individual DSM III-R responses to a construct. The construct "Sometimes I feel I have a problem with gambling" was used for this purpose. DSM III-R items correlated from .47 to .82 with the individual responses to "I feel I have a problem with gambling." Finally, as a measure of reliability and internal consistency, the item "I have had someone die who was very important to me" yielded a response consistency ratio of 85%.

Discussion

Adolescents have been labeled by the gambling literature as "high risk" for developing problematic gambling behaviors (Winters et al., 1990; Jacobs, 1991). Those same observations apply in this study. Adolescents may be at risk because of the negative feelings typical for adolescent development. Adolescence appears fraught with possible inducements of present and future gambling behaviors.

Adolescents, in general, may be at greater risk for developing problematic or addictive gambling behaviors perhaps because of frustration or helplessness often present during adolescence (e.g., "due for a lucky break", "chasing a big win"); the lure of personal power of winning when one feels powerless; boredom with social/recreational alternatives (e.g., the stimulation and challenge of gambling is more attractive than other alternatives), and immediate need gratification (e.g., winning provides immediate feedback to many adolescents unable to delay immediate gratification of their needs). Adolescents are still developing values and internal controls. By virtue of this developmental process, they may have fewer resources to assist them in resisting the seduction or excitement that gambling can offer.

The majority of adolescents within both groups indicated they have gambled at least once in their lives. This is similar to results found by Winters et al. (1990). Over half reported that at least one of their parents gambled. Adolescence appears to present a number of lures in regard to present and future gambling behaviors; 52% reporting dreaming of solving problems by winning, 18% felt others looked up to you when you won, and 35% felt gambling was a fast and easy way to earn money.

American Indian adolescents in this study presented with more serious problem gambling behaviors, earlier onset of gambling activity, and greater frequency of gambling involvement than their non-Indian peers. American Indian adolescents may also be at greater risk because of more recent extended and direct or indirect exposure (vicariously through adult family members) to gambling opportunities, lower socioeconomic status (impoverishment appears to magnify the importance of winning), cultural acceptance of the beliefs of mysticism or magical thinking that allows greater ease of generalization to trying one's luck or belief in fate, and minority status and perceived prejudice (the lack of control over personal destiny).

Length of exposure to gambling, and its role in promoting problem gambling, as discussed by Livingston (1974), appears to already be felt within this rural reservation population. The recent introduction of a large stakes casino within this reservation community *may not* be the most significant event in promoting gambling or availing gambling alternatives to the reservation community. The most significant events appear to already have occurred within the last 15 years due to the onset of bingo, pulltabs, state-supported scratch tabs, and the state lottery.

The adolescent problem gambling behaviors found in this study are substantial. Adolescent gambling in this country perhaps is one of our best kept secrets (Jacobs, 1991). The assessment of problem gambling in adolescent populations require further refinement. Long term developmental studies that compare adolescent behaviors to later adult gambling are crucial. A continued series of studies is needed, across this country, in order to accomplish the important task of assessing adolescent problem gambling behaviors and more specifically, minority adolescent gambling. Gambling behaviors should be measured in tandem with other adolescent problems (i.e., school problems, alcohol/drug abuse, depression, and family dysfunction). Further study of the unique correlations evidenced in American Indian reservations and believed to be predictive of adolescent problem gambling requires development.

Schools, social work agencies, and mental health systems will benefit from specialized training in the identification, diagnosis, and assessment of problem gambling as well as gambling treatment alternatives. A pro-active campaign in regard to gambling is needed, similar to current efforts aimed at stopping unwanted pregnancies, reducing child abuse, and protecting adolescents from the spread of AIDS. Reservation tribes, especially those with casinos or gambling alternatives, should consider launching public education efforts to inform, identify, and refer adolescents with current or potential problem gambling behaviors.

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Author Note

The information and opinions expressed within this study are the author's and do *not* necessarily reflect the opinions and sentiments of the Indian Health Service.