Adolescent Gambling in Oregon:

A report to the

Oregon Gambling Addiction Treatment Foundation

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In August of 1998, the Oregon Gambling Addiction Treatment Foundation commissioned a study with the purpose of estimating the prevalence of gambling behavior and pathological gambling among Oregon youth ages thirteen to seventeen. Although this survey was conducted and carried out by Matthew Carlson and Thomas Moore, it would not have been possible without the help of many individuals and organizations who assisted with the project. The authors would like to thank Mr. Michael McCracken for his untiring assistance in making this study a reality. Without the gracious support of the Spirit Mountain Community Fund and the Oregon Lottery this study would not have been possible.

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Executive Summary

The Oregon Gambling Addiction Treatment Foundation commissioned this independent study to measure the estimated prevalence of gambling and problem gambling among Oregon youth ages 13 to 17. This telephone survey of 1000 randomly selected youth in Oregon was conducted in September and October of 1998. The Key findings of this study are as follows:

- Seventy-five percent (± 3) of the respondents surveyed reported gambling for money at least once in their lives and 66% (± 3) reported gambling last year. As with prevalence studies done in other states, this study found that boys and older adolescents were more likely to gamble than girls and younger adolescents (Volberg, 1993; Westphal, 1998; Winters, Stinchfield and Fulkerson, 1993b). This study found that between 140,777 to 154,185 adolescents gambled for money in the last 12 months.

- The rate of level 2 (in-transition) gambling is estimated by this study at 11.2% (± 2%). The rate of level 3 (problem) gambling is estimated at 4.1% (± 2). These rates appear to be slightly lower than rates of the few states which have conducted studies and used similar techniques for estimating problem gambling including Washington State, Minnesota and Louisiana.

- The study findings recommend the development of treatment opportunities for youth with problems associated with gambling. It is estimated that between 20,558 and 29,496 adolescents are level 2 gamblers while between 4,693 and 13,631 are level 3 gamblers.

- It is estimated that between 94 and 272 adolescents should access treatment each year.

- Of those adolescents who reported gambling, 4.0 percent reported daily gambling while 13.3 percent reported weekly gambling for money. Boys were more likely to be frequent gamblers than girls.

- Among 13 to 17 year-olds, 39% (± 3) have played the Oregon Lottery at least once in their life, and 30% (± 3) reported playing last year. At least 50% of the young lottery players obtain the tickets from family members, and 35% buy them illegally, primarily at grocery stores and convenience stores. This finding was similar to those in other states (Shaffer, H.J., Hall, M.N. and Vander Bilt, J., 1997)

- Approximately 19% (± 2) of the respondents reported gambling in a casino at least once in their lives, and 12% (± 2) reported gambling in a casino last year. This finding was similar to those in other states (Shaffer, H.J.,

Hall, M.N. and Vander Bilt, J., 1997). Approximately 50% of those reporting casino gambling reported doing so out of State.

- Of the other forms of gambling, purchasing raffle tickets (41%) was the most frequently cited, followed by betting on sports with friends or relatives (32%); playing cards (31%) and betting on games of skill, such as pool or bowling, (25%).

- The youth in this survey were significantly more likely to gamble and were also more likely to begin gambling earlier (in grade school) if one or both of their parents gamble.

- Age of onset may be decreasing in Oregon. Younger respondents (13 and 14 years old) were significantly more likely to report gambling in grade school than older respondents (15 to 17 years old). In addition, respondents who reported gambling in grade school were significantly more likely to be problem gamblers.

- As found in other studies, there is a moderate correlation between gambling and alcohol, drug, and tobacco use (Westphal et al., 1998).

- Less than one percent reported gambling with money on the Internet.

- Prevention efforts, targeting grade and middle school aged children, are indicated. The association of problem gambling with other risk behaviors such as smoking and alcohol and drug use would indicate these prevention efforts could be blended with existing efforts formally integrated into the private and public school curricula.

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CHAPTER ONE. INTRODUCTION

Gambling is an increasingly popular leisure activity enjoyed in the United States by a majority of adults and youth. Most adolescents gamble, and most of those who do so experience few problems associated with gambling. According to a recent review of 22 studies of adolescent gambling which were conducted in the U.S. and Canada, between 86% and 93% of youth have gambled at least once in their life, and between 3% and 8% of adolescents are problem gamblers (Shaffer, Hall and Vander Bilt, 1997). However, it is also clear that youth may have more trouble controlling their gambling behavior than adults (Derevensky and Gupta, 1996, Lesieur and Klein, 1987; Stinchfield, Cassuto, Winters and Latimer,1997). Rates of problem gambling among youth are considerably higher than the rates for adult problem gambling. The findings of this study and those of the Oregon Adult Gambling Prevalence Study (Volberg, 1997) completed in August, 1997 show this tendency to be true in Oregon.

Not only are youth at greater risk of experiencing problems associated with gambling behavior, those who do may be at greater risk of experiencing gambling related problems as adults. Recent research suggests that early onset of gambling may be associated with the development of problem gambling later in life (Volberg, 1994). Thus, not only does adolescent gambling behavior carry the potential for serious negative consequences for youth, if left unchecked, frequent gambling in adolescence may develop into problem gambling in adulthood. Because of this, understanding adolescent gambling is of crucial importance not only to reduce negative consequences associated with youth gambling, but also to arrest the development of gambling problems which may be carried into adulthood. Understanding the prevalence and risk-factors for adolescent problem gambling is an important issue which ultimately may help reduce the social cost associated with both adolescent and adult gambling problems.

Purpose of the Study

The purpose of this study is to estimate the prevalence of gambling behavior and problem gambling by analyzing a survey of 1000 Oregon adolescents ages 13 to 17 about the nature and extent of their gambling behavior. This survey is also intended to be used as a baseline from which future studies can evaluate changes in adolescent gambling over time. Additionally, this report identifies various factors that may be associated with increased risk of pathological gambling. Finally, this study was designed to estimate the number of youth that may benefit from prevention or treatment interventions.

This study addresses the following questions:

- How many of Oregon's adolescents gamble?
- In what forms of gambling do adolescents participate?
- At what age do adolescents begin gambling?
- What is the prevalence of problem gambling among adolescents in Oregon?
- Is gambling related to substance abuse?
- Does gambling by parents influence the likelihood of gambling and problem gambling in adolescents?
- Are gamblers more aware of lottery and/or casino advertising than non-gamblers?

Defining Problem Gambling

For most individuals, gambling is a social activity enjoyed in moderation. Social gambling is defined by the American Psychiatric Association as "gambling which lasts for a limited amount of time with predetermined acceptable losses" (APA, 1994, p. 617). However, for some, gambling becomes a compulsion, an activity which is carried out in the face of negative consequences. The official definition of pathological gambling, as defined in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (APA, 1994) is as follows:

> **Pathological Gambling: Persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits[1].**

For the purposes of this study we will use the term "problem gambling" rather than pathological gambling. The estimates of problem gambling derived from this survey are not based on clinical examinations, rather, they are estimates derived from surveys. Thus, we will use non-clinical terminology to describe persistent gambling behavior which results in self-reported problems such as truancy or conflict with family and friends.

Current research suggests that youth gambling occurs on a continuum of involvement from no gambling at all to occasional gambling, to over-involvement (Stinchfield and Winters, 1998). In order to describe the range of problems associated with gambling we use the South Oaks Gambling Screen Revised for

[1] The diagnosis is not made if the gambling behavior is better accounted for by a manic episode.

Adolescents (SOGS-RA) developed at the University of Minnesota (Winters, Stinchfield and Fulkerson, 1993a). We then classify adolescents based on their SOGS-RA score using the level system as proposed by Shaffer and Hall (1996).

We use the level system for at least two reasons. First, the level system offers a common sense approach to describing the continuum of gambling pathology. Historically, there has been no consensus about how to define pathological gambling in adolescents. However, since the publication of Shaffer and Hall's proposed level system, other researchers have begun to adopt this approach to classifying problem gambling (Westphal, Rush, Stevens, Horswell & Johnson, 1998). Second, the level system is the only classification scheme which directly links various degrees of problem gambling with levels of intervention. Thus, the level system not only provides a straight forward approach to classifying gambling behavior, but links various levels of gambling with appropriate intervention. Table 1.1, below, describes the level system.

Because youth experience a wide range of problems associated with gambling, it is not useful to simply describe young gamblers as "problem gamblers" or "non-problem gamblers." The level system used in this report classifies young gamblers in terms of the degree of problems associated with gambling. As described in Table 1.1 below, level 1 gambling is "social gambling" or gambling which is not associated with any problems.

Level two gambling, or in-transition gambling, refers to gambling behavior which does not meet the diagnostic criteria for pathological gambling, but which does, nonetheless, appear to be somewhat problematic. Because the adult rates of problem gambling are lower than the adolescent rates, there is reason to believe that many adolescents who are classified as problem gamblers may not go on to become adult problem gamblers. Thus, a youth described as an in-transition gambler may be moving toward problem gambling, or may be moving away from problem gambling (Shaffer, Hall and Vander Bilt, 1997).

Finally, level three gambling refers to problem gambling. Adolescents described as level three gamblers report heavy gambling in the face of adverse consequences. This population is the target population for which treatment for pathological gambling may be necessary. Because the survey used for this report did not ask respondents to identify whether or not they wanted treatment we do not use the level 4 classification in the report.

Table 1.1. Classification of Adolescent Gambling[2]

Levels of Gambling Involvement	Definition	Possible Education, Prevention, Treatment Interventions	SOGS-RA Score (narrow criteria)
Level 0: Non-Gambling	Has never gambled	➢ Educational awareness ➢ Primary prevention	0
Level 1: Non-Problem Gambling	Gambles recreationally and does not experience any signs or symptoms of gambling-related disorder	➢ Secondary Prevention	≤ 1
Level 2: In-Transition Gambling	Gambler who experiences subclinical symptoms or displays signs of gambling problems, may be progressing either toward more serious symptoms (i.e., progression) or away from these symptoms (i.e., during recovery)	➢ Tertiary prevention ➢ Early treatment to arrest progression ➢ Relapse prevention activities to facilitate and sustain recovery	2-3
Level 3: Gambling-Related Disorder with Impairment	Gambler who meets diagnostic criteria as assessed by the SOGS-RA as impaired in psychological or sociological domains.	➢ Tertiary prevention to minimize harm ➢ Treatment	≥ 4
Level 4: Impaired Gambler who Displays Willingness to Enter Treatment	Gambler who satisfies level 3 requirements and, in addition, displays interest in entering treatment	➢ Treatment	N/A

For the reader not familiar with the prevention literature, primary prevention is defined as those efforts that delay or prevent the onset of activities that can lead to harmful gambling (Shaffer, H.J. & Hall, M.N., 1996, p. 207). Secondary prevention is defined as efforts aimed at minimizing the likelihood that level 1 gamblers will develop problems related to gambling (Shaffer, H.J. & Hall, M.N., 1996, p. 209). Tertiary prevention is then defined as those efforts that are taken with youth in order to minimize problems that exist with level 2 and level 3 gambling. This level of prevention could be associated with early treatment for level 2 and treatment for level 3 gamblers and defined as relapse prevention (Shaffer, J.J. & Hall, M.N., 1996, p. 209-210). Treatment would be defined as those activities associated with arresting the problem gambling behavior and minimizing the harm caused by that behavior.

[2] Adapted from Shaffer & Hall, 1996.

Estimating Problem Gambling

In this study we estimate the prevalence of problem gambling using the SOGS-RA for several reasons. First, it allows comparison with several other states including Washington, Minnesota, and Louisiana. Second, it has been found to be a valid and reliable instrument which is based on extensive testing (see Winters et al., 1993a). Finally, the SOGS-RA has been tested using telephone interviews, which is the methodology employed in the current study.

Both the SOGS-RA and the adult version on which it is based, the SOGS (Lesieur and Blume, 1987) were created using the DSM-IIIR classification for pathological gambling (APA, 1987). In order to develop the adolescent version of the SOGS, a research team at the University of Minnesota revised the original SOGS items, with the help of an adolescent focus group, in order to "accommodate adolescent experiences and reading levels" (Winters et al., 1993a, p. 67). A psychometric evaluation of the instrument reported that the SOGS-RA was both a reliable and valid measure of problem gambling for adolescents.

The SOGS-RA consists of a two-part questionnaire which measures *a)* the frequency and type of gambling activities engaged in by respondents and *b)* a checklist of 12 signs and symptoms of pathological gambling as described in the DSM-IIIR. In order to estimate the prevalence of pathological gambling, the number of symptoms that a respondent reports are summed to create an overall score which can range from 0 (no symptoms at all) to 12 (respondent experiences all 12 symptoms).

There is not currently a single agreed-upon method for defining level three gambling, no gold standard so to speak. In order to accommodate reasonable variation in definitions of problem gambling and comparisons to other studies, we provide two different estimates of problem gambling. Nonetheless, because the broad method combines frequency of gambling with number of symptoms, we feel it is better than the narrow method for planning preventative and treatment interventions. Both of these classification techniques have been previously used by the developers of the SOGS-RA instrument, and both are reasonably valid and reliable (Winters et al., 1993b; Winters, Stinchfield and Kim, 1995).

The first estimate based on "narrow criteria," uses only the score on the SOGS-RA items to estimate problem gambling. Using this method results in a relatively low estimate primarily because it does not include the frequency of gambling as a criteria. In this method, a SOGS-RA score of four or more identifies an adolescent as a problem gambler. While this ensures a conservative estimate of problem gambling, it is possible that it underreports the number of youth that many would consider problem gamblers. For example, a

respondent with a SOGS score of three will not be classified as a problem gambler, even if she gambles every day and reports having trouble in school and with her parents (scored two) as a result of gambling using the narrow criteria.

Estimates reported based on "broad criteria" include measures of gambling frequency in the criteria of problem gambling. Thus, a respondent who gambles every day, and has experienced some problems, is defined as a problem gambler. The broad method is perhaps more instructive in identifying problem gambling because it would identify a heavy gambler who is experiencing some difficulty as a problem gambler, even if the number of symptoms experienced is fewer than four (Winters et al., 1995). This report provides both estimates in order to acknowledge the current variability in defining level three gambling in gambling research. Scoring rules for both narrow and broad criteria are included in Appendix 1.

Data and Methods

Data for this report come from surveys gathered from a random sample of 1000 adolescents between the ages of 13 to 17 who were selected from a targeted list of households. The list of eligible households was created by examining drivers license applications and voter registration lists which indicate households with a higher than usual likelihood of containing an adolescent in the target age group. Although respondents are randomly selected, the sampling frame is not, strictly speaking, a random sample. Nevertheless, in previous research this sampling methodology yielded representative samples which are generalizable to the target population (Volberg, 1993; Winters et al., 1995).

Sample characteristics for the current study are listed below in Table 1.2. For most characteristics, the sample is representative. Some caution should be exercised when generalizing the results of this sample to the non-white population. The proportion of this sample which is Anglo matches census estimates almost exactly. However, the study sample underrepresents certain minority groups, and overrepresents the “other" category. For this reason, and because the percentages of various minority groups are rather small, analyses in this report compare Anglos with non-Anglos (including the “other” category) and should be considered as tentative for the non-Anglos.

Table 1.2. Sample Characteristics

(In Percent)

	Sample Characteristics (n=997)	Oregon Census
Age[3]		
14	24.3	25.4
15	26.1	25.2
16	26.0	24.6
17	23.6	24.8
Total	100.0	100.0
Race[4]		
White	90.1	90.7
Hispanic	1.7	NA
Native American	2.0	2.0
Asian	1.6	2.9
Black	0.2	2.1
Other	3.7	2.3
Total	99.1	100.0
Gender		
Female	46.0	48.5
Male	54.0	51.5
Total	100.0	100.0

In order to test the representativeness of the sample, t-tests for proportions were done to determine whether or not the study sample was significantly different by age, gender, and percent white, from the population estimates provided by the Center for Population Research and Census, 1996; no significant differences were found. However, because gambling was significantly different by county, and not all counties were proportionally represented in this survey, data were weighted by county in order to reflect the actual distribution of population by county. Analyses in this report are based on the weighted data. Additionally, because the rates of gambling participation were based on a

[3] Because Census Bureau estimates collapse ages 12 and 13 into one group, comparisons were based on ages 14-17.

[4] Because Census Bureau estimates use a different methodology for calculating the Hispanic population, census estimates can't be compared directly with our sample estimates. Thus, comparisons were calculated excluding the Hispanic category. Total adds up to less than 100% do to refusals.

sample, they should be considered as estimates and are subject to a margin of error of ± 3% (95% confidence level) for the population as a whole. Subgroup analyses are subject to a somewhat higher margin of error due to smaller sample sizes. Estimates of level 2 and level 3 gambling are subject to a sampling error of ± 2%.

Of the original sample of 1000 respondents, three interviews were dropped from the final sample for failing to complete all SOGS items, or for obvious exaggerations of gambling frequency. Thus, the final sample consists of 997 participants. The response rate for the sample was 38%; the refusal rate was 48%.

Survey Methodology

The survey for this report was developed in two-stages. First, a review of current literature was conducted to determine what surveys were currently being used, and what risk factors should be examined. Second, a survey was created which incorporated information about gambling (based on the SOGS-RA instrument) as well as information about other risky behaviors including drug and alcohol use, smoking, and criminal behavior as well as attitudinal information. A copy of the survey instrument is provided in Appendix 2. In order to be sure that reliable and valid estimates of problem gambling are provided by this report, there were no modifications made to the scored items of the SOGS-RA either in appearance or order. Both past-year and lifetime estimates are included in the analyses, however, the estimates of problem gambling were based on past-year gambling behavior only.

Second, the survey was reviewed by an outside reviewer and pilot-tested on approximately 40 older adolescents in an introductory course (composed almost entirely of freshman) at a medium sized university in Washington State. Results of both the outside review and pilot test indicated that the survey was of appropriate length and readability.

The telephone interviews were conducted by Gilmore Research Group of Seattle, WA. Consent was obtained both from the parents and the adolescents prior to the interview. The average length of the interview was approximately twelve minutes.

Most recently, there have been efforts to establish an instrument based on the American Psychiatric Association's diagnostic criteria for pathological gambling (American Psychiatric Association, 1994) for adolescents (Fisher, S.E, 1998; Gupta, R., & Derevensky, J.L., 1998). In an effort to contribute to the knowledge base, this study was also designed to compare the SOGS-RA with the DSM-IV-JR (See Fisher, S.E., 1998). (The findings from this analysis will be published in a forthcoming paper by the authors.)

In order to prevent any potential question order bias, the SOGS-RA and the DSM-IV-JR questions were alternated. (See Appendix 2, questions 21, 22, and 23 were alternated with question 44.) Additionally, the lottery participation questions (7, 8, and 9) were alternated with the casino questions (11 and 12) as well as the lottery advertising recall questions (32 - 37) with the casino advertising recall questions (38 - 42).

CHAPTER TWO. ADOLESCENT GAMBLING

This chapter describes the prevalence of gambling, including the differences in prevalence among various segments of the population and for various forms of gambling including the lottery, casino, and other forms of gambling. Additionally, this chapter examines factors associated with gambling including age of onset, influence of parental gambling, gambling and substance use, advertising recall, and attitudes about gambling. The overall prevalence rates for gambling presented in this chapter are estimates derived from a probability sample, and as such are subject to a margin of error of ± 3%. Some rates for subgroups may be associated with a slightly higher margin of error due to the smaller sample sizes.

The Prevalence of Gambling

The majority of adolescents gamble. Table 2.1. shows that three-quarters of Oregon adolescents have gambled at least once in their lives and 66% gambled within the last 12 months.

Table 2.1. Lifetime and One-year Gambling Prevalence Rates

(In Percent)

Group (N)	Gambled Lifetime	Gambled Past 12 Months
Total (997)	75.9	66.0
Gender [5]		
Boys (539)	81.3	74.0
Girls (459)	73.7	57.1
Age [6]		
13 (151)	69.3	58.9
14 (205)	74.6	65.4
15 (221)	76.9	66.1
16 (220)	76.4	69.1
17 (200)	80.4	68.5
Race		
Anglo (898)	76.7	66.9
Non-Anglo (99)	68.7	58.2

Boys are significantly more likely to gamble than girls, and older youth are significantly more likely to gamble than younger youth. Percentages reported are row percentages. Thus,

[5] One-year: chi-square=30.36, df=1, p.<.001; lifetime: chi-square=18.75 df=1, p.<.001.
[6] One-year: chi-square (Mantel-Haenszel)=5.32, df=1, p.<.05.

74% of the 539 boys in the sample reported gambling last year compared to 57.1% of the 459 girls in the sample [7]. Although previous studies have shown a relationship between race and gambling (Wallisch, 1996) our sample does not bear this out.

Prevalence of Lottery Gambling

Although most youth gamble, only one-third of the sample reported gambling on the lottery in the 12 months prior to the survey. Table 2.2 shows the rates of lottery playing. The patterns of lottery play are similar to gambling overall: Boys and older adolescents are more likely to play the lottery than are girls and younger adolescents.

Table 2.2. Lottery Gambling

(In Percent)

Group (N)	Gambled Lifetime	Gambled Past 12 Months
Total (997)	38.9	29.6
Gender [8]		
Boys (539)	42.3	33.3
Girls (459)	34.9	25.3
Age [9]		
13 (151)	35.1	25.8
14 (205)	38.5	27.3
15 (221)	39.5	29.5
16 (220)	37.3	27.3
17 (200)	43.2	37.7
Race		
Anglo (898)	39.5	30.1
Non-Anglo (99)	32.7	25.3

Table 2.3 identifies the most popular lottery games for 13 to 17 year olds. Nearly 23% of the sample reported playing scratch-off tickets; Sports Action and Keno, respectively, are the next most popular lottery games, however, less the 10% of the sampled played either of these games.

Table 2.3. Lottery Gambling by Game

(In Percent)

Lottery Game	Percent
Scratch-its	22.6
Sports Action	7.8
Keno	5.3
Pull-tabs	4.6

[7] Proportions add up to 998 due to weighting..
[8] One-year: chi-square=6.06, df=1, p.<.01; lifetime: chi-square=5.37 df=1, p.<.05.
[9] One-year: chi-square (Mantel-Haenszel)=4.91, df=1, p.<.05.

Powerball	4.6
Video Poker	4.3
Megabucks	3.3
Daily four	0.8

Although minors are not legally allowed to purchase lottery tickets, approximately 35% of those who had gambled on the lottery indicated they had done so in the 12 months preceding the survey (see Table 2.4). Most of the illegally purchased lottery tickets were purchased in grocery stores. The majority of young lottery players, however, obtain the tickets from family members (50%).

Table 2.4. Where Lottery Tickets are Obtained

(In Percent)

Access Type	Percent
Buy them myself at a convenience store	12.9
Buy them myself at a grocery store	18.6
Buy them myself at a vending machine	1.3
Buy them myself at a deli, restaurant, tavern, or bar	2.4
A parent, sibling, or other relative buys them for me	50.0
Other	15.0
Total (379)	100.0

Prevalence of Casino Gambling

Table 2.5 shows the rates of reported illegal casino gambling. Approximately 19% of the sample reported betting money at a casino at least once in their life and approximately 12% (± 2) of the sample did so last year.

Table 2.5. Casino Gambling

(In Percent)

Group (N)	Gambled Lifetime	Gambled Past 12 Months
Total (997)	18.6	12.1
Gender		
Boys (539)	18.6	13.4
Girls (459)	18.6	10.5
Age		
13 (151)	13.9	7.3

14 (205)	19.0	11.7
15 (221)	22.7	15.0
16 (220)	14.5	10.5
17 (200)	21.6	15.0
Race[10]		
Anglo (898)	17.6	11.8
Non-Anglo (99)	28.3	15.2

The pattern of casino gambling is somewhat different than other forms of gambling. For example, teenage girls reported gambling in casinos as often as did boys. Although there is a trend towards older youth gambling in casinos more often that their younger counterparts, it is not statistically significant. Non-Anglos were significantly more likely to have gambled at a casino at least once in their lives, however, the one-year rates were not significantly higher. Surprisingly, about half of the casino gambling is done outside of Oregon. Of those who reported gambling in a casino at least once in the last 12 months, 51% reported doing so outside Oregon. The remaining 49% reported gambling in a casino in Oregon.

Prevalence of Other Gambling Activities

Other gambling activities in which adolescents commonly engaged included purchasing raffle tickets, betting on sports with friends or relatives, and playing cards for money (see Table 2.7). In fact, as Table 2.6 indicates, youth were more likely to participate in these other forms of gambling than play the lottery or gamble in a casino.

Table 2.6. Other Gambling Activities

(In Percent)

Group (N)	Gambled Lifetime	Gambled Past 12 Months
Total (997)	73.2	62.9
Gender [11]		
Boys (539)	79.7	71.2
Girls (459)	65.6	53.2
Age [12]		
13 (151)	66.2	56.0
14 (205)	72.2	59.7
15 (221)	74.5	65.0
16 (220)	73.2	66.4
17 (200)	77.9	65.3
Race		
Anglo (898)	73.8	63.6

[10] Lifetime: chi-square=5.37, df=1, p.<.01.
[11] Lifetime: chi-square=25.33, df=1, p.<.001; past-year: chi-square=34.5, df=1, p.<.001.
[12] Lifetime: chi-square (Mantel-Haenszel)=4.9, df=1 p.<.05; past-year chi-square (Mantel-Haenszel) =4.6, df=1, p.<.05.

Non-Anglo (99)	67.7	56.6

As table 2.7 shows, purchasing raffle tickets, betting on sports teams with friends and relatives, and playing cards are the most popular forms of gambling among those respondents that reported gambling in the 12 months prior to the survey.

Table 2.7 Prevalence Rates for Other Forms of Gambling

(In Percent)

Forms of Gambling	Percent
Purchased raffle tickets for a charitable organization	40.5
Bet on sports teams with friends/relatives	31.6
Played cards at someplace other than a casino	30.9
Bet on games of skill	25.4
Played bingo other than at a casino	14.8
Played dice games not at a casino	10.1
Flipped coins for money	6.9
Bet on horse or dogs	3.3
Bet on sports teams with bookies	3.3
Gambled on the Internet	0.3
Other	4.0

Participants in the survey were allowed to respond to more than one answer for this question.

Internet gambling is the least common form of gambling with less than 1% of the sample reporting gambling with money on the internet in the 12 months prior to the survey.

Prevalence of Gambling for Select Counties

In order to examine the geographic distribution of gambling, the five largest counties were analyzed separately. As stated above, the data were weighted to accurately reflect the proportion of the population residing in each county as reported by the Center For Population Research 1996 population estimates. Table 2.8 shows that there are significant differences in the prevalence of gambling by county.

Table 2.8. Gambling Prevalence by County

(In Percent)

County (N)	Any Gambling	Casino Gambling	Lottery Gambling
Multnomah (198)	67.7	8.1	38.2

Washington (120)	66.7	10.8	20.8
Clackamas (99)	70.7	6.1	32.3
Lane (95)	66.7	18.9	31.3
Marion (83)	53.7	12.0	30.1
All Others (402)	66.4	14.4	26.9

Marion county's prevalence rates, for all gambling activities combined, are significantly lower than for Multnomah County, Washington County, and the Other Counties group, which is composed of all other counties [13]. As for casino gambling, respondents from Lane County appeared to report higher levels of casino gambling than respondents from any of the other counties, although the differences are not statistically significant. Multnomah County had the highest rates of lottery gambling. Rates in Multnomah County were significantly higher than for Washington and the Other counties[14].

Gambling Frequency

Most youth gamble very infrequently. As Table 2.9 shows, more than half of the 658 adolescents who reported gambling in the last 12 months, did so less than monthly (55%). Not only are boys more likely to gamble than girls, but boys are also more frequent gamblers than girls. Although the differences are not statistically significant, it appears that the older respondents are less likely to report gambling "less than monthly" and more likely to report gambling on a monthly basis. However, the youngest age groups appear just as likely as their older counterparts to gamble on a daily or weekly basis. Non-Anglos appear to be more likely to gamble daily and weekly and less likely to gamble "less than monthly" than their Anglo counterparts, but the differences are not statistically significant.

Table 2.9. Frequency of Gambling

(In Percent)

Group (N)	Daily	Weekly	Monthly	Less Than Monthly
Total (658)	4.0	13.3	28.1	54.5
Gender [15]				
Boys (396)	5.1	16.7	29.8	48.5
Girls (262)	2.7	8.4	25.6	63.4
Age				
13 (89)	3.4	13.5	18.0	65.2
14 (133)	0.8	19.5	30.8	48.9

[13] In two-tailed t-tests, $p<.05$.
[14] In two-tailed t-tests, $p<.01$.
[15] Boys are more likely to be frequent gambles (chi-square=17.7, df=1, $p<.001$).

15 (147)	7.5	12.9	25.9	53.7
16 (152)	3.9	10.5	27.0	58.6
17 (137)	3.6	10.9	35.8	49.6
Race				
Anglo (600)	3.7	13.0	28.3	55.2
Non-Anglo (57)	7.0	15.8	28.1	49.1

Average Monthly Expenditures

Not only do most youth gamble infrequently, youth report spending very little money gambling. Most of the respondents who gambled last year reported spending less than $10.00 per month. However, the expenditure figures reported in Table 2.10 should be considered only with caution. In analyses not shown here, approximately 80% of the respondents who reported spending no money last year also reported that they gambled at least once in the previous year and 20% reported gambling more than monthly. One possible explanation of this is that these adolescents considered the amount so trivial that they simply reported spending nothing. Nonetheless, it is still instructive to examine expenditures to get some sense of the overall spending patterns which confirm other measures of gambling. On average, older youth and boys tend to spend more than the younger adolescents and girls.

It appears that boys spend significantly more than girls despite the fact that they do not make significantly more. Table 2.11 shows the reported incomes. By comparing Tables 2.10 and 2.11, one can see that boys report spending more on gambling than girls, despite the fact they do not report significantly higher incomes. By the same token, older adolescents report spending more (though the differences are not statistically significant) but they also report higher incomes than their younger counterparts.

Table 2.10 Average Monthly Gambling Expenditures

(In Percent)

Group (N)	$0.00-$9.00	$10.00-$49.00	More Than $49.00
Total (647)	87.9	8.6	1.9
Gender [16]			
Boys (393)	76.3	11.3	2.3
Girls (254)	94.5	4.3	1.2
Age			
13 (84)	91.6	8.3	0.0
14 (134)	91.8	6.7	1.5
15 (143)	86.1	11.2	2.8
16 (153)	92.8	5.3	2.0
17 (136)	84.6	12.5	2.9
Race			
Anglo (593)	90.3	8.1	1.7
Non-Anglo (54)	79.6	14.8	5.6

[16] Chi-square=13.07, df=1, p.<.01.

Table 2.11 Average Weekly Income

(In Percent)

Group (N)	$0.00-$19.00	$20.00-$49.00	$50.00-$99.00	More Than $99.00
Total (609)	36.2	20.2	13.3	30.3
Gender				
Boys (362)	36.2	18.8	13.0	32.0
Girls (247)	36.5	22.3	13.4	27.9
Age				
13 (79)	57.0	34.2	2.5	6.3
14 (117)	70.1	19.7	5.1	5.1
15 (135)	37.8	27.4	14.1	20.7
16 (143)	19.6	16.8	24.5	39.2
17 (131)	10.7	7.6	15.3	66.4
Race				
Anglo (560)	35.4	20.5	13.8	30.4
Non-Anglo (48)	45.8	16.7	8.3	29.2

Grade of Onset

Younger gamblers are significantly more likely to have begun gambling in grade school (compared to junior or high school) than their older counterparts. The left-hand column in Table 2.12 reveals that only 25% of 17 year olds reported gambling in grade school compared to nearly 77% of 13 year olds. However, many respondents did not report a specific grade at which they began gambling--only 632 of the 757 respondents answered the question "In what age grade did you first gamble." Several analyses were undertaken to be sure that the differences in grade of onset weren't affected by the missing data. The analyses of missing data revealed that nearly all of the respondents who failed to specify the grade in which they began gambling were those that gambled infrequently and were primarily younger gamblers. In order to provide a better estimate for group differences in age of onset, only youth who reported gambling at least monthly were compared to reduce the number of missing responses.

The right-hand column in Table 2.12 shows that when excluding infrequent gamblers, the estimated relationship between age and grade of onset is still significant. These two analyses, taken together, strongly suggest that, compared to their older counterparts, the youngest adolescents in the sample began their gambling at a younger age.

Table 2.12. Grade of Onset

(In Percent)

Group	Beginning in Grade School: All Gamblers (n=632)	Beginning in Grade School: At least Monthly Gambling (n=265)
Total	43.5	47.5

Gender [17]		
Boys	46.4	51.4
Girls	38.6	39.0
Age [18]		
13	76.6	73.1
14	55.2	53.6
15	43.7	54.0
16	34.2	47.4
17	24.5	26.6
Race		
Anglo	43.3	47.5
Non-Anglo	44.4	48.1

Those who started gambling in grade school are significantly more likely to gamble and are more frequent gamblers than those who abstain until after grade school. Table 2.13 shows the significant estimated relationship between grade of onset and frequency of gambling. Of the 276 respondents who began gambling in grade school, slightly less than 15% abstained from gambling in the last 12 months, compared to a little more than 20% of those who waited until high school to begin gambling. Furthermore, slightly more than 20% of those who began gambling in grade school do so on at least a weekly basis compared to only 11% of those who didn't gamble in grade school.

[17] Chi-square=8.2, df=1, p.<.017.

[18] All gamblers: chi-square (Mantel-Haenszel)=104.5, df=1, p<.001; at least monthly gamblers chi-square (Mantel-Haenszel)=31.1, df=1, p.<.001.

Table 2.13. Grade of Onset and Frequency of Gambling

(In Percent)

Grade of Onset [19]	Not Gambled	Less Than Monthly or Monthly	Weekly or Daily
1-6 (276)	14.5	65.2	20.3
7-8 (241)	18.3	70.4	11.3
9-12 (116)	19.8	69.0	11.2

It is interesting to note the authors found an increasing age of onset for adults presenting at treatment and indicating video poker machines as their primary choice of gambling (Moore, T.L. and Carlson, M.J., 1998)

Youth Gambling and Parental Gambling

Previous research suggests that children are more likely to gamble if their parents gamble (Lesieur, forthcoming). Evidence from the current study supports this finding. Table 2.14 shows that the children of parents who gamble are more likely to gamble. They are also likely to gamble more frequently than children of parents who do not gamble. Children of parents who gamble are nearly twice as likely to be weekly or daily gamblers than children whose parents do not gamble. In analyses not shown, it was found that older adolescents are not more likely than their younger counterparts to have parents who gamble. Thus, it is not likely that the relationship between parents' and children's gambling is spurious.

[19] Chi-square=10.75, df=4, p.<.05)

Table 2.14. Youth Gambling and Parental Gambling

(In Percent)

Frequency of Youth Gambling [20]	Parents Gamble (425)	Parents Don't Gamble (559)
Never	23.0	41.9
Less than monthly	35.8	36.3
Monthly	25.6	13.2
Weekly/Daily	15.6	8.6
Total	100.0	100.0

Not only do children of gambling parents appear to be more likely to gamble, but they also appear to begin gambling sooner. Table 2.15 describes the relationship between grade on onset and parental gambling among children who gamble at least monthly (to reduce bias associated with missing data).

Adolescents whose parents gamble appear to be more likely to have started in grade school than children of non-gambling parents. Conversely, respondents who report that their parents don't gamble are more likely to abstain from gambling until high school.

Table 2.15. Grade of Onset and Parental Gambling

(In Percent)

Grade of Onset [21]	Parents Gamble (161)	Parents Don't Gamble (101)
Grades 1-6	52.2	41.6
Grades 7-8	36.6	36.6
Grades 9-12	11.2	21.8
Total	100.0	100.0

[20] Chi-square (Mantel-Haenszel)=48.3, df=1, p.<.001.
[21] Chi-square (Mantel-Haenszel)=5.3, df=1, p.<.05.

Gambling Prevalence/Frequency and Substance Use

Previous studies have suggested that teen gambling is part of a larger set of risky behaviors including smoking, drinking, and drug use (Westphal, 1998). The current study indicates this is true in Oregon. Youth in this study who gambled were also more likely to smoke, drink alcohol, and use drugs. Additionally, the frequency of youth gambling was also related to the frequency of substance use.

Tables 2.16 and 2.17 show the patterns of tobacco use (smoking and chewing tobacco), drinking alcohol, and using marijuana and other drugs (including cocaine, heroin, and LSD). As expected, older youth are more likely to use tobacco, alcohol, and other drugs.

Table 2.16. Drug Use and Gambling

(In Percent)

	% Using Tobacco		% Drinking		% Using Other Drugs	
	Less Than Monthly/ Monthly	At Least Weekly	Less Than Monthly/ Monthly	At Least Weekly	Less Than Monthly/ Monthly	At Least Weekly
Total (997)	8.8	9.0	19.9	3.1	9.3	2.2
Gender						
Boys (538)	9.3	9.4	18.5	3.9	9.1	2.8
Girls (459)	8.3	8.3	21.7	1.9	9.6	1.6
Age [22]						
13 (151)	5.3	3.3	4.7	1.4	0.7	0.7
14 (206)	6.8	4.4	9.8	1.0	8.7	2.0
15 (220)	7.7	9.0	21.7	3.2	7.7	3.6
16 (220)	10.5	10.0	26.8	3.6	11.8	1.4
17 (200)	13.5	17.0	32.0	6.0	15.5	3.5
Race [23]						
Anglo (898)	8.8	9.4	19.7	3.7	9.6	1.9
Non-Anglo (98)	9.1	6.0	18.3	3.1	5.1	5.1

[22] Drugs: chi-square, (Mantel-Haenszel)=13.1, df=1, p.<.001. Alcohol chi-square (Mantel-Haenszel)=58.6, df=1, p.<.001. Smoking: chi-square (Mantel-Haenszel) =36.4, df=1, p.<.001

[23] Drugs: chi-square=11.3, df=4, p.<.05.

Table 2.17 reports the correlation coefficients for gambling and substance use. The significant coefficients show that there is a modest but significant correlation between gambling and all forms of substance use.

Table 2.17. Correlation Between Frequency of Gambling and Frequency of Substance Use.

(In Percent)

Substance Used	Gambling Frequency
Smoking	.224**
Drinking	.207**
Drug Use	.199**

Note: ** = p<.01 (Spearman's rho, 2-tailed)

As discussed, gambling, for many adolescents, is one part of a larger set of risky behaviors including smoking, alcohol, and drug use. Part of this is due to the fact that older adolescents, as they near adulthood, are more likely to experiment with a wide range of adult behaviors. Although it is also true that boys are significantly more likely to gamble than girls are, they are not significantly more likely to smoke, drink, or use drugs.

Advertising Awareness and Gambling

As would be expected, youth who gamble on the lottery are much more likely to recall seeing advertising than non-players. The percentages in Table 2.18 report the number of respondents who report seeing advertising "always" or "often" (compared to sometimes, rarely, or never) when asked questions such as the following: “Think about the television programs you like to watch. In the last month, how often have you seen TV advertising for the lottery?” (see appendix 2 for a complete list of advertising questions). Obviously, this is not meant to show a causal relationship, which cannot be done with cross-sectional data. However, what the relationship between advertising recall and frequency of lottery play does suggest is that youth who play the lottery more frequently are, in fact, more aware of the advertising than youth who play less frequently.

Table 2.18. Frequency of Lottery Gambling and Advertising Recall

(In Percent)

Gambling Frequency	Recall Seeing Advertisements Always or Often [24]
Never (702)	66.8
Less than monthly/monthly (252)	71.4
Weekly/daily (42)	85.7

Table 2.19 indicates the proportion of youth who report seeing casino advertising. There is no significant difference in advertising recall between the different levels of casino gamblers.

[24] Chi-square (Mantel-Haenszel)=6.26, p.<.01.

Although the percentage of weekly/daily casino gamblers appears much higher, because there are so few (n=10) the difference is not statistically significant.

Table 2.19. Frequency of Casino Gambling and Advertising Recall

(In Percent)

Gambling Frequency	Recall Seeing Advertisements Always or Often
Never (880)	34.2
Less than monthly/monthly (107)	33.6
Weekly/daily (10)	60.0

The rates of recall for each form of advertising are broken down in the following Table 2.20. Percentages reported are row percentages.

Table 2.20. Frequency of Advertising Recall by Type

(In Percent)

	Lottery Advertising			Casino Advertising		
Advertising Type	Always/ Often	Some-times	Rarely/ Never	Always/ Often	Some-times	Rarely/ Never
Billboards	27.0	31.2	41.8	15.8	25.9	58.3
Radio	20.1	32.8	47.1	16.9	26.7	56.4
Television	26.9	32.1	41.0	15.8	32.0	52.2
Magazines/Papers	11.1	20.3	69.6	7.5	13.7	78.8

Adolescents' Attitudes

Nearly all the adolescents in the sample believed that hard work is more important than luck, and that gambling is not a good way to make money. However, this study found that gambling is associated with certain attitudes about money and work. Tables 2.21 and 2.22 report the distribution of responses to two attitudinal questions. Gamblers were, not surprisingly, significantly more likely to believe that gambling is a "somewhat" or "very good" way to make money ($p < .001$). Additionally, when asked whether luck or hard work is most important for getting ahead in life, young gamblers were significantly less likely to say that hard work is most important compared to non-gamblers ($p < .01$).

Table 2.21. Responses to the question: To what extent, in general, do you feel gambling is a good way to make money?

(In Percent)

Response	Total (n=997)	Non-gamblers (n=338)	Gamblers (n=658)

Very good	0.7	0.3	0.9
Somewhat good	11.2	6.2	13.8
Not good	88.1	93.5	85.3

Table 2.22. Responses to the question: Some say that people get ahead by their own hard work; others say that lucky breaks or help from other people are more important. Which do you think is most important?

(In Percent)

Response	Total (n=997)	Non-gamblers (n=338)	Gamblers (n=658)
Lucky breaks are most important	5.0	2.7	6.1
Hard work is most important	85.9	90.6	82.5
Hard work and luck are equally important	9.1	6.7	10.4

Chapter Summary

Most teenagers in Oregon gamble. In fact, three-quarters of the respondents in this survey reported gambling at least once in their life, and two-thirds reported gambling in the last 12 months. When these results are generalized to the 223,456 youth in Oregon who are 13 to 17 years old (Center for Population Research and Census, 1996) this study suggests that between 162,899 and 176,307 youth have gambled for money at least once in their life, and between 140,777 and 154,185 gambled in the last 12 months.[25] As would be expected, based on previous research, males and older adolescents are significantly more likely to gamble than females and younger adolescents. There were no significant racial differences in gambling behavior.

It is illegal for minors to purchase lottery tickets or gamble in casinos; however, in the 12 months prior to this survey approximately 30% of youth reported gambling on the lottery and 12% reported gambling in casinos. Nearly half of those reporting casino gambling indicated they had gambled in casinos outside Oregon. Of those reporting gambling on the lottery, approximately 50% said they obtained the tickets from a parent or family member and 35% indicated that had illegally purchased the tickets themselves, typically at a grocery or convenience store.

Two findings which should be considered very carefully are that the younger adolescents were significantly more likely to report gambling in grade school than their older counterparts, which suggests that age of onset for gambling may be decreasing over time. It is possible that older respondents are less likely to remember when they started gambling than the younger respondents. Nonetheless, other prevalence studies done in Minnesota and Louisiana dating back to 1991 also show that grade, or age, of onset may be lower in younger respondents (Winters, et al., 1993b; Westphal et al., 1998). Taken together, there is reason to believe that in the last few years, as gambling has increased in availability, young people across the country are being exposed to gambling at an earlier age.

[25] The census estimates group 12 and 13 year-olds together. Therefore an estimation was made for the number of 13 year-olds. Range estimates are based on a margin of error of ±3 %, 95% confidence level.

Another finding which should be carefully considered is the relationship between parental gambling and youth gambling. Not only are children of gambling parents more likely to start gambling earlier themselves, but they are also more frequent gamblers than children of non-gamblers.

Gambling, for many adolescents, is one part of a larger set of risky behaviors including smoking, alcohol, and other drug use. Part of this is due to the fact that older adolescents, as they near adulthood, are more likely to experiment with a wide range of adult behaviors. Although this study found that boys are significantly more likely to gamble than girls it also found boys are not significantly more likely to smoke, drink, or use drugs than are girls.

Understanding the distribution of gambling behaviors is important. However, gambling constitutes a wide range of behavior from occasionally playing a scratch-off lottery ticket with family members, to gambling on a daily basis in the face of social and financial consequences. In the following chapter, the rates of level 2 and level 3 gambling among Oregon youth are assessed.

CHAPTER THREE. LEVEL 2 AND LEVEL 3 GAMBLING

In the introduction, the range of gambling experiences was described in terms of levels of gambling. Level 1 gambling, or social gambling, is the sort of harmless gambling in which the majority of people engage. Level 2, or in- transition gambling, is gambling which is accompanied by some familial, social or financial difficulty, but perhaps not enough difficulty to be considered a serious problem. However, if a person gambles to excess, that is to say frequently and in the face of familial, social, or financial problems, then that would be described as Level 3, or problem gambling.

In this chapter the prevalence of problem gambling is described. It should be noted again that because these estimates are derived from a probability sample, the overall estimates of problem gambling have a ± 2% margin of error, based on a 95% confidence interval.

Prevalence of Level 2 and Level 3 Gambling

Tables 3.1 and 3.2 report the estimated prevalence of problem gambling. As discussed earlier, two different estimates are given. The estimates based on a broad definition of problem gambling include both the frequency of gambling and the number of symptoms of problem gambling as indicated by the SOGS-RA. Estimates based on the narrow definition are based only on the SOGS-RA score. Depending on the method of estimation, the prevalence of level 2 gambling ranges from 5% to 11.2% and level 3 gambling ranges from 1.4% to 4.1%. Level 1 gamblers are those who gambled in the last 12 months, but did so infrequently and with no problems. Level 0 gamblers are those that did not gamble at all in the 12 months prior to the survey.

Table 3.1. Prevalence of Level 2 and Level 3 Gambling (N=997)

(In Percent)

Level	**Broad**	Narrow
0	34.0	34.0
1	50.7	50.7
2	11.2	5.0
3	4.1	1.4

The estimates given in Table 3.1 report the rates of level 2 and level 3 gambling among all the respondents in the sample. However, of the 997 respondents, only 658 gambled in the 12 months prior to the survey. Another way to describe the rate of level 2 and level 3 gambling is to describe the rates only among those who gambled, and thus were at risk of developing a gambling problem. The estimates for the at-risk population are described in Table 3.2. The smaller denominator results in slightly higher estimates of problem gambling, from 7.6% to 17% for level 2 gambling and from 2.1% to 6.2% for level 3.

Table 3.2. Prevalence of Level 2 and Level 3 Gambling for At-Risk Population (N=658)

(In Percent)

Level	**Broad**	Narrow
0	-----	-----
1	76.8	90.3
2	17.0	7.6
3	6.2	2.1

As described in Chapter 2, boys and older youth are more likely to gamble. Thus, we might expect that these groups are also more likely to be problem gamblers. Table 3.3 describes the distribution of problem gambling among various subgroups. For consistency, all the calculations for problem gambling in this chapter are based on broad criteria. Boys were, as expected, more likely to be level 2 and level 3 gamblers, however, older respondents were not significantly more likely to be level 2 or level 3 gamblers.

Table 3.3. Gender, Age, Race Distribution of At-Risk Level 2 and 3 Gamblers (Broad Criteria)

(In Percent)

Group (N)	Level 2 Gamblers	Level 3 Gamblers
Total (658)	17.0	6.2
Gender[25]		
Boys (396)	19.9	7.8
Girls (262)	12.6	3.8
Age		
13 (89)	19.1	6.7
14 (133)	19.5	4.5
15 (147)	17.7	10.2
16 (152)	12.5	4.6
17 (137)	17.5	5.1
Race		

[25] Chi-square=11.6, df=2, p.<.01

Anglo (601)	16.8	5.8
Non-Anglo (58)	19.0	10.3

Grade of Onset, Parental Gambling and Problem Gambling

If grade of onset is related to frequency of gambling, it is reasonable to expect that earlier gambling is also related to problem gambling. Youth of all ages who have gambled longer have had more time to develop problem gambling. Table 3.4 describes the relationship between grade of onset and level 2 and 3 gambling (broad criteria). There is a significant estimated relationship between grade of onset and problem gambling. Of the 237 respondents who began gambling in grade school, 23.6% are level 2 gamblers and 8% are level 3 gamblers. These rates are significantly higher than rates of in-transition and problem gambling among those who abstained until high school, which are 16.8% and 3.2% respectively.

Table 3.4. Grade of Onset and Problem Gambling

(In Percent)

Level[26]	Percent Starting in Grade School (n=237)	Percent Starting in grades 7-8 (n=198)	Percent Starting in Grades 9-12 (n=95)
1	68.4	81.3	80.0
2	23.6	13.1	16.8
3	8.0	5.6	3.2

Adolescents whose parents gamble are also more likely to be level 2 or level 3 gamblers than are the children of non-gambling parents. Table 3.5 below illustrates the relationship between parental gambling and problem gambling. Of the 324 youth whose parents were abstainers, 14.5% were level 2 and 4.9% were level 3 gamblers, which is lower, but not significantly, than for children of gamblers whose rates were 18.5% and 6.6% respectively.[27]

[26] Chi-square(linear by linear)=7.91, df=1, p.<.01.

[27] Total numbers of boys/girls as well as Anglo/Non-Anglo add up to 659 due to weighting. Analyses not shown suggests that unweighted data underestimate the number of level 2 and level 3 gamblers.

Table 3.5. Parental Gambling and Problem Gambling

(In Percent)

Level	Parents Do Not Gamble (n=324)	Parents Gamble (n=335)
1	80.6	74.9
2	14.5	18.5
3	4.9	6.6

Because youth whose parents gamble may be more likely to start gambling in grade school, and those who started gambling in grade school may be more likely to be problem gamblers there is reason to believe that parental gambling is related to problem gambling, even if not directly so. Although rates of problem gambling among youth with gambling parents are not significantly higher than for their non-gambling counterparts, it may be instructive to further analyze the complex relationship between parental gambling, grade of onset, and problem gambling.

Comparing Table 3.6a with Tables 3.6b and 3.6c provides a more complete explanation of the relationship between parental gambling, grade of onset, and problem gambling. Observe in Table 3.6a, that youth who began gambling in grade school are roughly twice as likely to be level 2 or 3 gamblers than those who abstained until after grade school. However, this relationship between age of onset and the development of risky gambling behavior may be affected by whether or not the parents gambler.

Table 3.6a. Grade of Onset and Problem Gambling

(In Percent)

Grade[28]	Level 1 Gambling	Level 2/3 Gambling
Began in Grade School (237)	68.4	31.6
Began After Grade School (428)	83.2	16.8

In order to further illustrate the estimated influence of parental gambling two different tables were created. The first examines the relation between grade of onset and problem gambling for children of gambling parents; the second examines the same relation for children of non-gambling parents. Comparing Table 3.6b with Table 3.6c indicates that early grade of onset may be more likely to influence the development of problem gambling in youth whose parents gamble than in youth whose parents do not. For example, in Table 3.6b we see that among children of gambling parents, of the 133 youth who began gambling in grade school 37.6% were estimated to be level 2 or 3 gamblers. This is significantly higher than those who started later (16.8%).

However, this is not the case among children of non-gambling parents. Among children of non-gambling parents, youth who started in grade school have rates of gambling only 7% higher that later-starting youth. In fact, while the relationship between grade of onset and

[28] Chi-square=18.26,df=1,p.<.001.

problem gambling is statistically significant among children of gamblers; it is not significant for children of non-gamblers[29]

Table 3.6b. Children of Gambling Parents

(In Percent)

Grade[30]	Level 1 Gambling	Level 2/3 Gambling
Began in Grade School (133)	62.4	37.6
Began After Grade School (202)	83.2	16.8

Table 3.6c. Children of Non-Gambling Parents

(In Percent)

Grade	Level 1 Gambling	Level 2/3 Gambling
Began in Grade School (103)	75.7	24.3
Began After Grade School (221)	82.8	17.2

This study's cross-sectional data, strictly speaking, cannot indicate a causal relationship between parental gambling, grade of onset, and level 2 or 3 gambling. Nevertheless, it is still possible that the findings do indicate that a causal relationship does, in fact, exist if at least three things are true. First, that the relationship between parental gambling, grade of onset, and level 2 or 3 gambling is not spurious, that is, that all three are not affected by some other unmeasured factor (or factors). Second, parental gambling must occur prior in time to the onset of children's gambling. Finally, grade of onset must be prior to level 2 or 3 gambling.

The latter is an easy assumption to make, clearly, grade of onset occurs prior in time to the severity of gambling. Likewise, it is also very probable that parental gambling occurs prior in time to children's gambling. However, the first point, that the relationship not be spurious, is an important factor to consider. It may be that the same factors which influence parental gambling may also exert independent influence on grade of onset and the severity of gambling behavior. This is an important matter for future research to examine more closely.

Substance Abuse and Problem Gambling

In Chapter Two, the relationship between substance use and gambling was illustrated. The evidence presented below suggests that not only is substance use correlated with likelihood of gambling, but the frequency of substance use may be positively related to problem gambling. The modest but significant correlation coefficients in Table 3.7 below suggest that level 2 and 3 gambling (using broad criteria) is more prevalent among more frequent users than among less frequent users.

Table 3.7. Correlation of Substance Use and Level of Gambling.

	Level of Gambling	**Drinking Frequency**	**Drug Use Frequency**
Drinking	.170**		
Drug Use	.231**	.502**	

[29] Additional analyses, not shown, support this finding. Using multivariate logistic regression, a dichotomous variable indicating grade of onset was regressed on a dichotomous variable indicating level 2 or level 3 gambling while holding sex constant. When this model was applied only to the group for which parents gambled, grade of onset was significant (p.<.001, odds ratio=2.65). When the same model was applied to the group for which parents abstained, grade of onset was no longer significant.

[30] Chi-square=15.17,df=1,p.<.001.

Smoking	.145**	.540**	.543**

Note:** p.<.01(Spearman's rho, 2-tailed).

Comparing Oregon's Rates with Other States

Although several other states have estimated prevalence rates of gambling for adolescents, the variety of measures used makes inter-state comparisons difficult. As was clearly shown above, the rates of problem gambling can vary significantly depending on the definitions and measurement of problem gambling. Nonetheless, in order to make some sense of the prevalence rates estimated in this study, some comparison with other states is necessary. Table 3.8, below, shows how Oregon's prevalence rates compare with other states' rates of gambling among youth. In order to ensure the most accurate comparison possible, only studies which used methods similar to this study are included. Three states use both the same instrument, the SOGS-RA and similar scoring techniques, Washington, (Volberg, 1993), Minnesota (Winters et al., 1993a, 1993b), and Louisiana (Westphal et al., 1998). Additionally, national estimates which are derived from a meta-analysis of studies which use the SOGS-RA are included (Shaffer, Hall and Vander Bilt, 1997).

The national prevalence rates for gambling and problem gambling, reported in Table 3.8, indicate that Oregon teens are less likely to gamble than teens in the few other states studied. Even assuming a margin of error of ± 3% for each of the studies, the estimated lifetime rates of gambling for Oregon are lower than for all the comparison states, including the national prevalence estimates. Additionally, past-year gambling rates appear to be lower than the national estimates.

Table 3.8. Comparing Oregon with Other States

(In Percent)

	SOGS Method	OR (n=997)	WA (n=1054)	MN[31] (n=262)	LA (n=11,637)	U.S. Rates
	Lifetime prevalence	75.9	83.0	85.8	86.0	89.59-93.25
Broad	Past Year prevalence	66.0				75.59-89.03
	Level 2	11.2	20.0	17.1		
	Level 3	4.1	3.0	8.7		
Narrow	Level 2	5.0		9.2	10.1	5.69-11.47
	Level 3	1.4		3.3	5.7	1.91-6.59

It also appears that Oregon has slightly lower rates of level 2 and level 3 gambling than other states as well as the national average. However, it should be noted that because these estimated rates are subject to a margin of error, the rates of problem gambling in Oregon may not be significantly lower than in other states. For example, assuming the margin of error for level 3

[31] The prevalence and broad rates come from Winter et al., 1993b, and the narrow rates come from Winters et al., 1993a (underage sample).

gambling using broad criteria is ± 2%, the range for level 3 gambling is from 2.1% to 6.1%. This range overlaps with Washington's rates (1% to 5%) and nearly does so with Minnesota's (6.7% to 10.7%). However, even accounting for the margin of error, Oregon's level 2 rates are lower than for both Washington and Minnesota using the broad criteria.

Chapter Summary

The majority of youth in Oregon gamble. Using the broad method, the rate of level 2 gambling is estimated at 11.2%. The rate of level 3 gambling is estimated at 4.1%. When these estimates are generalized to the 223,456 adolescents in Oregon who are between 13 and 17 years-old (Center for Population Research and Census, 1996) the estimated number of level 2 gamblers ranges from 20,558 to 29,496. The estimated number of level 3 gamblers ranges from 4,693 to 13,631. These estimates may suggest treatment opportunities may need to be developed for between 94 and 272 youth per year[32]

The patterns of problem gambling are similar to the patterns of gambling behavior. Boys are significantly more likely to gamble, and are also significantly more likely to be level 2 or 3 gamblers. As with gambling in general, problem gambling is associated with substance use, suggesting that not only are youth who gamble more likely to smoke, drink, or use drugs, but youth who gamble to excess, are also more likely to use substances in excess.

Age does not appear to be associated with problem gambling. The older respondents in this sample were not significantly more likely to be problem gamblers. Grade of onset was related to problem gambling, however, which suggests that it is length of exposure which influences the development of problem gambling rather than a person's age. This finding replicates the findings of prevalence studies done in Minnesota and Texas, which also found that early grade of onset and problem gambling are correlated (Winters et al., 1993b; Wallisch, 1996)

Although youth who begin gambling in grade school may be at more risk of developing gambling problems, this risk may be mediated by their family environment. In the analysis presented it was found that youth who started gambling in grade school, but whose parents did not gamble, were not significantly more likely to become problem gamblers than youth who didn't begin until after grade school. However, in families where one or both parents gambled, children who started earlier were significantly more likely to become level 2 or 3 gamblers. Because these findings are based on a single, relatively small sample, they must be replicated before making any firm conclusions.

CHAPTER FOUR. CONCLUSIONS AND IMPLICATIONS OF THE STUDY

Prevalence of Gambling and Problem Gambling

This study examined the prevalence of gambling and problem gambling among adolescents ages 13 to 17 in Oregon. Seventy-five percent of the 997

[32] Although there are no firm estimates for the number of youth that should be accessing treatment for the state, adolescent alcohol and drug treatment providers informally estimate a penetration rate of about 2%. This would be consistent with the 3% estimated rate utilized for the adult gambling population (Volberg, 1997) and the expectation that youth accessing treatment will be a lower frequency than adults.

respondents surveyed reported gambling at least once in their lives and 66% reported gambling last year suggesting that between 140,777 to 154,185 adolescents gambled in the last 12 months preceding this study.

As with prevalence studies done in other states, this study found that boys and older adolescents were significantly more likely to gamble than girls and younger adolescents (Volberg, 1993; Winters et al., 1993a; Westphal et al., 1998).

The Oregon Lottery is fairly popular among 13 to 17 year-olds; approximately 39% have played at least once in their life, and 30% reported playing last year. According to these estimates, between 60,333 and 73,740 adolescents ages 13 to 17 played the lottery last year. At least 50% of the young lottery players obtain the tickets from family members, and 35% report buying them illegally, primarily at grocery stores and convenience stores. These prevalence rates for lottery playing are consistent with national estimates which indicate that the national average is approximately 30% (Shaffer et al., 1997).

Gambling in casinos is also fairly popular, though less so than playing the lottery. Approximately 19% of the respondents reported gambling in a casino at least once in their lives, and 12%, or an estimated 22,346 to 31,284, reported gambling in a casino last year. Approximately half of those who gambled in casinos reporting doing so outside of Oregon. Whether these rates are considered significant, or problematic, is a matter of interpretation. National estimates suggest that approximately 12% of adolescents nationwide have past-year rates of gambling in a casino (Shaffer et al., 1997).

There are many other forms of gambling that Oregon adolescents participated in besides lottery and casino gambling. The most popular activities included purchasing raffle tickets (41%), betting on sports with friends or relatives (32%), playing cards (31%) and betting on games of skill, such as pool or bowling, (25%). As with lottery playing and gambling in casinos, these rates are right in line with national averages which range from 31% for sports gambling to 40% for card playing (Shaffer et al., 1997).

Just as other studies have found (Govoni, Rupcich and Frisch, 1996; Wallish, 1995; Winters et al., 1993), the youth in this survey were significantly more likely to gamble and were also more likely to begin gambling in grade school if one or both of their parents gamble. In fact, not only was grade of onset and parental gambling related to the probability of gambling, but both appeared to be associated with the development of problem gambling.

The prevalence of level 2 and level 3 gambling among Oregon youth appears to be lower than that of other states which used similar methods to estimate problem gambling. Using the broad method, the rate of level 2 gambling is estimated at 11.2% and the rate of level 3 gambling is estimated at 4.1%. These rates appear to be slightly lower than rates of the few other states

that have recently conducted studies using similar techniques for estimating problem gambling including Minnesota, and Louisiana. Oregon's rate of level 3 gambling is similar to Washington States' rate, which is 3%.

Risk Factors Associated With Problem Gambling

Problem gambling, as with gambling in general, is associated with familial and social factors. Youth who were level 2 or level 3 gamblers were much more likely to be boys, to have begun in grade school and to have parents who gamble. These findings are similar to findings of similar studies done in other states as well as Canada (Govoni, Rupcich and Frisch, 1996; Wallish, 1995; Winters et al., 1993b). Since grade of onset appears to influence the development of problem gambling, the possibility that grade of onset has been decreasing over time may be of some concern. That is to say that the older respondents in this sample were significantly less likely to report gambling in grade school than the younger respondents. This finding is not unique to the Oregon population but has also been found in studies in Louisiana (Westphal et al., 1998) and Minnesota (Stinchfield et al.,1993b). Thus, it appears likely that, compared to a few years ago, adolescents are beginning to gamble at an earlier age. If this is the case, and if age of onset is associated with the development of problem gambling, then it is very possible that the rates of problem gambling will increase over time. However, future research using larger sample sizes and a prospective research design are needed to confirm this.

It may also be the case that rates of adolescent problem gambling will move in tandem with rates of adult problem gambling. In this study, there was a significant relationship between grade of onset and problem gambling for children whose parents gambled, but not for children of abstainers. This suggests that gamblers who began early in life may be more likely to develop into problem gamblers if their parents gamble than if they don't. This finding must be supported by further research before any definitive conclusions can be made.

Another risk factor associated with problem gambling is substance use. In the current study, youth who smoked, drank, or used drugs were more likely to gamble, and were also more likely to be level 2 or level 3 gamblers. This finding is supported by previous research done in other states. Westphal et al.'s (1998) survey of Louisiana adolescents also found a modest but significant correlation between drinking, drug use and SOGS-RA score.

Implications for Policy

There are three major implications this study provides for the development of policy.

The first is the clear need for the development of treatment opportunities within the State for youth who are problem gamblers. With that said, it must be noted that the authors were only able to identify three adolescent gambling

treatment programs in the US and Canada, thus suggesting a dearth of examples upon which to build a program. Along with this lack of collective experience comes an inability to accurately estimate the numbers of adolescents that might access treatment if it were available. For the Oregon adult prevalence study, Volberg (1997) utilized a projected penetration rate of 3% to determine estimated numbers of problem gamblers that should be expected to be seen in treatment. The numbers of adults accessing treatment in Oregon currently fall within that range (Moore, 1998) suggesting this estimated penetration rate, based primarily on penetration rates for alcohol and drug treatment as appropriate. Experience would suggest that penetration of adolescents to treatment is lower, (possibly around 2% comparing alcohol and drug treatment) than that for adults, suggesting a somewhat lower benchmark for gambling youth accessing treatment.

It should be noted that these estimates should be considered in light of the following caveats. Because these estimates are derived from survey and not clinical data there is no practical way to estimate how many of the level 3 gamblers in this study are subject to the exclusionary criteria suggested in the DSM IV. In the case of pathological gambling, a manic episode might better account for problematic gambling behavior in at least some of the youth (APA, 1994).

There is also no agreed upon clinical or theoretical basis to calculate false positive and negative classification of problem gamblers. “In order to determine a false assignment, scientists must invoke a standard against which we judge the classification system” (Shaffer, Hall and Vander Bilt, 1997, p. 70). As suggested in the introduction, there is currently no gold standard by which to judge the validity of survey estimates. The SOGS-RA has, however, been shown to be a reasonably valid and reliable instrument for assessing gambling behavior (Winters et al.,1993a) and as such is likely to balance false positive and negative classifications (Shaffer et al., 1997). Thus, although the SOGS-RA might not meet the high standards of accuracy required for a clinical screen, it certainly provides adequate population estimates of level 2 and level 3 gambling.

The second implication from this study is the need to develop prevention activities aimed at early intervention into problem gambling. The findings of this, and similar studies, suggest a relationship between the age of first gambling and the development of level 2 and level 3 problem gambling. Primary and secondary prevention may well be appropriate at the grade, middle, and high school levels. Primary prevention, for parents who gamble, may also hold some value in reducing future problems.

Finally, findings from this study, consistent with other studies, also suggests an association among high risk behaviors pointing towards a prevention message that is blended with existing prevention efforts for other high risk behaviors. Although this study suggests that Oregon's experience with under-

aged gambling activities associated with Lottery and Casino gambling is quite similar to other states, policy makers may wish to explore if these reported rates of illegal gambling activity are acceptable.

Implications for Future Research

This survey has provided an important baseline from which future research can compare rates of change in the prevalence of gambling and problem gambling among youth in Oregon. Several shortcomings of this research should be taken into consideration for future research.

First, because the minority population in Oregon is relatively small, future research should over-sample minorities in order to more accurately gauge the level of gambling and problem gambling among non-Anglos.

Second, future research should utilize a larger sample size in order to provide more precise measures of problem gambling. Because problem gambling is a low probability event, accurately gauging the level of problem gambling will require a very large sample size. Additionally, a larger sample size will allow for more accurate analyses of various subgroups, such as age groups, as well as allow for more precise estimates of the affect of grade of onset and parental gambling on problem gambling.

Finally, a longitudinal, prospective research design is the best way to measure the change in gambling behavior over time. A recent study which reviewed all of the prevalence studies conducted over the last twenty years in the U.S. concluded that "researchers have conducted virtually no incidence studies in the field of disordered gambling"(Shaffer, Hall and Vander Bilt, 1997, p.6). Only by following a very large sample of youth over time can certain important and difficult questions about the development of problem gambling, such as the influence of parental gambling and age of onset on problem gambling, be answered.

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APPENDIX 1. SOGS-RA AND SCORING RULES

SOGS-RA SCORED ITEMS

The 12 scored items for the SOGS-RA from Winters, K.C., Stinchfield R.D. and Fulkerson, J. (1993a) are listed below .

a. How often have you gone back another day to try and win back money you lost gambling?

   Every time/Most of the time/Some of the time/Never

b. When you were betting, have you ever told others you were winning money when you weren't?

Yes/No

c. Has your betting money ever caused any problems for you such as arguments with family and friends, or problems at school or work?

Yes/No

d. Have you ever gambled more than you had planned to?

Yes/No

e. Has anyone criticized your betting, or told you that you had a gambling problem whether you thought it true or not?

Yes/No

f. Have you ever felt bad about the amount of money you bet, or about what happens when you bet money?

Yes/No

g. Have you ever felt like you would like to stop betting, but didn't think you could?

Yes/No

h. Have you ever hidden from family or friends any betting slips, IOUs, lottery tickets, money that you won, or any signs of gambling?

Yes/No

i. Have you had money arguments with family or friends that centered on gambling?

Yes/No

j. Have you borrowed money to bet and not paid it back?

Yes/No

k. Have you ever skipped or been absent from school or work due to betting activities?

Yes/No

l. Have you borrowed money or stolen something in order to bet or to cover gambling activities?

Yes/No

Scoring Rules

Each item is scored either 1 (affirmative) or 0 (nonaffirmative). Item "a" is scored 1 if respondent indicates "every time" or "most of the time" and is scored 0 otherwise. Calculations for broad and narrow rates come from Winters, Stinchfield and Kim, 1995.

Calculation of Narrow Rates	Calculation of Broad Rates
Level 0 = No past year gambling.	Level 0 = No past year gambling
Level 1= SOGS-RA score of ≤ 1	Level 1 = Gambling less than daily and SOGS-RA score = 0, OR, less than weekly gambling and SOGS-RA score ≤ 1.
Level 2 = SOGS-RA score of 2 or 3	Level 2 = At least weekly gambling and SOGS-RA score ≥ 1 OR gambling less than weekly and SOGS-RA score ≥ 2.
Level 3 = SOGS-RA score of ≥ 4	Level 3= At least weekly gambling + SOGS-RA score ≥ 2 OR daily gambling

APPENDIX 2. SURVEY INSTRUMENT

Note: This is the written version of the instrument. The interview format, including interviewer instructions and all skip order instructions for the automated interview is in excess of 100 pages printed and is not included for purposes of convenience. Requests for the complete format should be forwarded to the Foundation at the address found in the Acknowledgements sections of this report.

1. How old are you? ☐

PLEASE PUT AN "X" IN THE APPROPRIATE BOXES BELOW

2. Are you male or female?

- ☐ Male
- ☐ Female

3. What is your ethnicity or race?

- ☐ Asian
- ☐ Black/African American
- ☐ White/Caucasian (Non-Hispanic)
- ☐ Hispanic
- ☐ Native American
- ☐ Other Race or Ethnicity _____

4. What grade are you in?

- ☐ 8th Grade
- ☐ 9th Grade
- ☐ 10th Grade
- ☐ 11th Grade
- ☐ 12th Grade
- ☐ Not in School

5. With whom do you live?

- ☐ Two biological or two adoptive parents
- ☐ Two parents (with one stepparent)
- ☐ Mother only
- ☐ Father only
- ☐ Other family member
- ☐ Foster family
- ☐ Other _____

6. If you have ever gambled for money, what grade were you in the first time you did so?

- ☐ Grade 1 – 6
- ☐ 7th Grade
- ☐ 8th Grade
- ☐ 9th Grade
- ☐ 10th Grade
- ☐ 11th Grade
- ☐ 12th Grade
- ☐ I have never gambled
- ☐ Not in School
- ☐ Other

7. Have you ever played any of the following lottery games, and if yes, how often have you played them in the last 12 months?

	Ever Played?		How often in last 12 months ?			
	NO	YES	Daily	Weekly	Monthly	Less than Monthly
Scratch-Its						
Video Poker						
Daily Four						
Keno						
Powerball						
Sports Action						
Megabucks Drawing						
Pulltabs or Breakopens						

8. If you play the <u>lottery</u>, where do you usually get the Scratch-Its, Pulltabs, or other tickets?

I do not play the lottery at all	
Buy them myself at a convenience store	
Buy them myself at a grocery store	
Buy them myself at a vending machine	
Buy them myself at a deli, restaurant, tavern, or bar	
A parent, sibling, or other relative buys them for me	
Other	

9. If you play video poker, where do you usually do so?

I do not play video poker at all	
At a tavern or bar	
At a casino or Indian Gaming Center in Oregon	
Somewhere else	

10. Have you ever done any of the following, if yes, how often have you done so in the last 12 months?

	Ever Played?		How often in last 12 months?			
	NO	YES	Daily	Weekly	Monthly	Less than Monthly
Played cards for money someplace other than a casino						
Flipped coins for money						
Bet money on games of skill like pool, golf, or arcade games						
Bet money on sports teams with friends or relatives						
Bet money on sports teams with a bookie						
Bet money on dog or horse races at the track or off-track						
Played bingo for money someplace other than a casino						
Played dice games for money someplace other than a casino						
Gambled with money on the internet						
Purchased raffle tickets from a						

charitable organization							
Participated in any other gambling activity outside of a casino							

11. Have you placed bets on the following games in a <u>casino or Indian Gaming Center</u>, and if so, how often have you done so in the last 12 months?

	Ever Played?		How often in the last 12 months?			
	NO	YES	Daily	Weekly	Monthly	Less than Monthly
Slot or Poker Machine						
Card Games						
Bingo						
Keno						
Roulette						
Craps						
Any Other Games						

12. If you gambled money in a <u>casino or Indian Gaming Center</u> in the last twelve months, where did you go?

I have never gambled in a casino or Indian Gaming Center	
A casino or Indian Gaming Center in Oregon	
A casino or Indian Gaming Center outside of Oregon	

13. What are the main reasons why you gamble?

I have never gambled	
In order to socialize	
For excitement or as a challenge	
As a hobby	
To win money	
To support worthy causes	
Out of curiosity	
For entertainment or fun	
To distract myself from everyday problems	
For some other reason	

14. Have you worked at a job in the last 12 months?

Yes	
No	

15. Do you get an allowance?

Yes	
No	

16. During the last 12 months, what is your income in an average <u>week</u> (from both work and allowance)?

$ 0	
$ 1 - $ 9	
$10 - $19	
$20 - $49	
$50 - $99	
$100 - $199	
$200, or more, per week	
Don’t know or not sure	

17. How much money do you spend on gambling in a typical month?

$ 0	
$ 1 - $ 9	
$10 - $19	
$20 - $49	
$50 - $99	
$100 - $199	
$200, or more, per month	
Don't know or not sure	

18. During the last 12 months, what is the largest amount of money you have gambled in a single day?

$ 0	
$ 1 - $ 9	
$10 - $19	
$20 - $49	
$50 - $99	
$100 - $199	
$200, or more, per day	
Don't know or not sure	

19. Do either of your parents gamble (play the lottery, go to casinos or bingo halls, buy raffle tickets, etc.)?

Father only	
Mother only	
Both parents	
Neither parent	
I don't know	

20. Have you felt that either of your parents gamble too much?

Father only	
Mother only	
Both parents	
Neither parent	
I don't know	

21. How often in the last 12 months have you gone back another day to try and win back money you lost gambling?

Every time	
Most of the Time	
Some of the Time	
Never	

22. In the last 12 months have you done any of the following?

	NO	YES
When you were betting, have you ever told others you were winning money when you weren't?		
Has your betting money ever caused any problems for you such as arguments with family and friends, or problems at school or work?		
Have you ever gambled more than you had planned to?		
Has anyone criticized your betting, or told you that you had a gambling problem whether you thought it was true or not?		

Have you ever felt bad about the amount of money you bet, or about what happens when you bet money?		
Have you ever felt like you would like to stop betting, but didn't think you could?		
Have you ever hidden from family or friends any betting slips, IOUs, lottery tickets, money that you won, or any signs of gambling?		
Have you had money arguments with family or friends that centered on gambling?		
Have you borrowed money to bet and not paid it back?		
Have you ever skipped or been absent from school or work due to betting activities?		
Have you borrowed money or stolen something in order to bet or to cover gambling activities?		

23. If you have borrowed money or stolen something, in the last 12 months, in order to bet or to cover gambling debts, from whom or where did you get the money or goods? (mark all that apply).

	NO	YES
Borrowed from your parents or siblings to gamble or pay gambling debts?		
Borrowed from other relatives without their knowledge to gamble or pay gambling debts?		
Borrowed from friends to gamble or pay gambling debts?		
Borrowed from a loan shark to gamble or pay gambling debts?		
Stolen something from your parents, siblings, other relatives, or friends in order to gamble or pay gambling debts?		
Sold personal property to gamble or pay gambling debts?		
Shoplifted in order to gamble or pay gambling debts?		
Passed bad checks to gamble or pay gambling debts?		
Bought or sold stolen property to gamble or pay gambling debts?		
Sold drugs in order to get money to gamble or pay gambling debts?		
Have you done anything illegal to get money to gamble or pay gambling debts?		

24. Do you play sports for the school?

Yes	
No	

25. Who are you <u>most</u> likely to spend free time with after school, work, or on weekends?

Mostly with parents or other relatives	
Mostly with friends	
With parents/relatives and friends equally	

26. How important is spending time with your family?

Very Important	
Somewhat important	
Not very important	

27. Some say that people get ahead by their own hard work; others say that lucky breaks or help from other people are more important. Which do you think is most important?

Lucky breaks are most important	
Hard work is most important	
Hard work and luck are equally important	

28. How happy or satisfied have you been in general with your personal life during the last month?

Very happy	
Happy	
Unhappy	

Very unhappy	

29. How often have you felt worried, anxious, or upset in the last month?

Always	
Often	
Sometimes	
Rarely	
Never	

30. How important is religion in your life?

Very important	
Somewhat important	
Not very important	

31. In the last 12 months, how often have you done any of the following? (Put an "X" in the box that describes how often you do each of the following.)

	Daily	Weekly	Monthly	Less Than Monthly	Never
Used cigarettes, chewing tobacco, or snuff?					
Used alcohol?					
Gotten into difficulties with friends or family over your drinking?					
Gotten into trouble with the police because of your drinking?					
Driven a car after drinking?					
Used marijuana?					
Used crack, cocaine, or speed?					
Used hallucinogens such as LSD, PCP, or designer drugs?					
Used inhalants such as paint thinner, gas, or rush?					
Used any downers not prescribed by a doctor?					
Been criticized by your parents or friends because of your drug use?					
Gotten into trouble with the police because of your drug use?					
Driven a car while you felt high?					

32. Think about the streets you generally travel on to get to school, work, or a friend's or family member's house. In the last month, how often have you seen billboards advertising the lottery?

Always	
Often	
Sometimes	
Rarely	
Never	

33. Think about the radio stations you listen to regularly, either in the car, at work, or while at home or a friend's house. In the last month, how often have you heard radio commercials advertising the lottery?

I don't listen to the radio	
Always	
Often	

Sometimes	
Rarely	
Never	

34. Think about the television programs you like to watch. In the last month, how often have you seen TV advertising for the lottery?

I don't watch television	
Always	
Often	
Sometimes	
Rarely	
Never	

35. Think about the magazines and newspapers you like to read. In the last month, how often have you seen advertising for the lottery in magazines or newspapers?

I don't read magazines or newspapers	
Always	
Often	
Sometimes	
Rarely	
Never	

36. Think about the stores you have been in recently, either convenience stores or grocery stores. In the last month, how often have you seen posters or other advertising for the lottery in these stores?

I don't go into convenience or grocery stores	
Always	
Often	
Sometimes	
Rarely	
Never	

37. In general, how good of a chance do you feel a person has in winning enough money to be financially comfortable from playing the lottery?

Very good chance	
Good chance	
Some chance	
Very little chance	
No chance at all	

38. Think about the streets you generally travel on to get to school, work, or a friend's or family member's house. In the last month, how often have you seen billboards advertising Indian Gaming Centers and casinos in Oregon?

Always	
Often	
Sometimes	
Rarely	
Never	

39. Think about the radio stations you listen to regularly, either in the car, at work, or while at home or a friend's house. In the last month, how often have you heard radio commercials advertising Indian Gaming Centers and casinos in Oregon?

I don't listen to the radio	

Always	
Often	
Sometimes	
Rarely	
Never	

40. Think about the television programs you like to watch. In the last month, how often have you seen TV advertising for Indian Gaming Centers and casinos in Oregon?

I don't watch television	
Always	
Often	
Sometimes	
Rarely	
Never	

41. Think about the magazines and newspapers you like to read. In the last month, how often have you seen advertising for Indian Gaming Centers and casinos in Oregon in magazines or newspapers?

I don't read magazines or newspapers	
Always	
Often	
Sometimes	
Rarely	
Never	

42. In general, how good of a chance do you feel a person has in winning enough money to be financially comfortable from a Indian Gaming Center or casino?

Very good chance	
Good chance	
Some chance	
Very little chance	
No chance at all	

43. To what extent, in general, do you feel gambling is a good way to make money?

Very Good	
Somewhat Good	
Not Good	

44. Please mark an "X" in the box that best describes your experiences during the past 12 months	Never	Once Or Twice	Some-times	Often
How often have you found yourself thinking about gambling or planning to gamble?				
Have you ever spent much more than you planned to on gambling.				
Have you lied to your family or friends about how much you gamble?				
After losing money gambling, have you returned another day to try and win back money you lost?				
In the past year, have you spent your school lunch money,				

or money for bus fares, on gambling activities?				
Have you taken money without permission from someone you live with to gamble?				
How often have you gambled to help you escape from problems or when you are feeling bad?				
Have you needed to gamble with more and more money to get the amount of excitement you want?				
Have you taken money without permission from someone outside the family to gamble?				
Have you felt bad or fed up when trying to cut down or stop gambling?				
Have you sold things without permission for money to gamble?				
Have argued with members of your family, or close friends, because of your gambling behavior?				
In the past year, have you missed school to gamble?				
Has your gambling led to borrowing from family, friends, or others?				