Demographic Study of Texas Lottery Players

December 2005

Data compiled by the School of Urban and Public Affairs
The University of Texas at Arlington

Executive Summary

- Approximately 51% of adult Texans report playing a Texas Lottery game within the past year. This figure is up slightly from the percent so responding in 2004 (47%).

- The rates of participation do not vary significantly when considering the various income, racial, ethnic, and age groups.

- Participation varies significantly by education. Those with "some college" report playing at a rate higher than any other education category, and those with "college degrees" and "graduate degrees" report playing at rates lower than other educational categories.

- Participation also varies significantly by gender. Men report playing at a higher rate than women.

- Participation also varies significantly by employment status. Those employed (full time or part time) report playing at rates higher than those unemployed, or those retired.

- The amount of money reported to have been spent per month does not vary significantly when considering the various income, ethnic, gender, age, and employment status categories.

- However, the amount of money reported to have been spent per month does vary significantly when considering education and race. Those with lower levels of education report spending more per month than do those with higher levels of education, and Black respondents report spending more per month than do Whites or "Others."

- The most popular Lottery Game is found to be Lotto Texas, and the least popular is found to be Texas Two Step. The greatest frequency of play was found to be associated with the various scratch off games.

- Highest rates of participation are found to be in the McAllen and San Antonio districts, the lowest rates of participation are in the Irving and Tyler regions. The highest reported monthly mean amount spent per player is found to be in the Tyler and Houston regions, and the least in the Victoria and McAllen regions.

- When comparing demographic characteristics of Lottery players with the demographic characteristics of Texans in general, it is found that smaller proportions of Lottery players have less than a high school education and larger proportions have more advanced levels of education, smaller proportions of Lottery players have low income and higher proportions have high income levels, larger proportions of both employed and unemployed Texans report playing the

Lottery than is the case in the general population, and larger proportions of both "whites" and Blacks or African Americans and smaller proportions of Hispanics report playing the Lottery than is the case in the general population (see the section of this report titled "A Cautionary Note Regarding the use of Unweighted Data").

Statutory Authority

Section 466.021 of the Texas Government Code states that: "The executive director shall, every two years, employ an independent firm experienced in demographic analysis to conduct a study of lottery players. The study shall include the income, age, sex, race, education, and frequency of participation of players."

Survey Methodology

In accordance with its statutory authority, the Texas Lottery Commission contracted with the School of Urban and Public Affairs at the University of Texas at Arlington to conduct the 2005 state-wide Demographic Study of Texas Lottery Players. In conjunction with the Commission, the School developed a survey instrument to be administered to 1700 randomly selected Texas residents, aged 18 and over. The survey instrument was based closely on instruments used in previous surveys, but updated to include latest game options and also to include a few additional demographic variables. The survey was available in both English and Spanish versions, and Spanish-speaking interviewers were available for those respondents wishing to be interviewed in Spanish.

The survey was conducted by telephone during the months of October and November, 2005. The margin of error for a sample size of 1700 is approximately plus or minus 2.4%, at the 95% level of confidence.

Project Directors for this report were Richard Cole, Dean of the School of Urban and Public Affairs and Robert Wilkins, Research Assistant at the School.

The Telephone Interview

Telephone interviewing was conducted by the Survey Research Center in Denton, Texas. The conceptual population for the survey was all residents of Texas 18 years of age or older and who reside in households with telephones. Random digit dialing (RDD) was used as the method of sample generation because it offers the best coverage of active telephone numbers, and it reduces sample bias. The RDD method ensures that:

- the conceptual frame and sampling frame match;
- unlisted telephone numbers will be included, and;
- the sampling frame will be as current as possible, thus maximizing the probability that new residents will be included.

Trained telephone interviewers who had previous experience in telephone surveys were used to conduct the survey. Each interviewer completed an intensive general training session. The purposes of general training were to ensure that interviewers understood and practiced all of the basic skills needed to conduct interviews and that they were knowledgeable about standard interviewing conventions. The interviewers also attended a specific training session for the project. The project training session provided information on the background and goals of the study. Interviewers practiced

administering the questionnaire to become familiar with the questions. An experienced telephone supervisor was on duty at all times to supervise the administration of the sample, monitor for quality control, and handle any other problems.

A Note Regarding Tests of Significance

Throughout this report, we display the results of statistical tests known as "tests of statistical significance." These are statistical tests used to determine the probability or likelihood that a relationship between two variables (such as gender and lottery play) that is discovered from an analysis of the sample data does, in fact, represent a "true" relationship in the population. That is to say, what is the likelihood that a relationship found to exist among the 1700 adult Texans interviewed for this report would be found to exist among all adult Texans, if every adult Texan could be interviewed? Typically these tests are reported as the probability of making an error in concluding that a relationship found in the sample actually does represent a relationship existing in the population. When we report a relationship significant at the .05 level ("sig.=.05"), this means that in only 5 out of 100 samples of the size generated for this study would we find a relationship this large if in fact no relationship existed in the population. When we report a relationship significant at the .01 level, this means that in only 1 out of 100 such samples would we find a relationship this large if in fact no relationship existed in the population. And when we report a relationship significant at the .001 level, this means that in only 1 out of 1000 such samples would we find a relationship this large if in fact no relationship existed in the population. When we report a relationship is "not significant" or "NS," this means that the relationship is too small to conclude with any degree of confidence that a relationship exists in the population.

A Cautionary Note Regarding the use of Unweighted Data

All data are presented in "unweighted" format. This means that we have not attempted to adjust the proportions of respondents to match specific proportional demographics of the population. All previous reports have followed this same procedure, and reporting the data in this manner permits direct comparison of the result reported for the 2005 survey with all others. Interpreting the results of unweighted data should present no problem when making comparisons by group (such as comparing participation rates of men and women). However, when using unweighted data projections of sample results to the population (such as projecting participation rates of the sample to the population) should be interpreted with appropriate caution.

Results

Demographics of the Sample

Table 1 presents the demographic characteristics of the sample. The sample is approximately 47% male, and 53% female. About 11% of the sample record their race as "Black," or "African American," and about 69% record their race as "White." About 20% indicate they are of Hispanic origin. Other characteristics of the sample are shown in Table 1.

Table 1. Demographic Characteristics of Sample*

Demographic Variables	Number and Percent
Income	
Under $20,000	291 (20.4%)
$20,000 to $29,999	177 (12.4%)
$30,000 to $39,999	159 (11.2%)
$40,000 to $49,999	148 (10.4%)
$50,000 to $59,999	116 (8.1%)
$60,000 to $74,999	122 (8.6%)
$75,000 to $100,000	176 (12.3%)
Over $100,000	237 (16.6%)
Education	
Less than High School	166 (9.9%)
High School Degree	454 (27.0%)
Some College, No Degree	371 (22.1%)
College Degree	470 (28.0%)
Graduate/Professional Degree	219 (13.0%)
Race	
White	1147 (69.1%)
Black	181 (10.9%)
Other	70 (4.2%)
Hispanic [a]	261 (15.7%)
Hispanic Origin	
Yes	327 (19.7%)
No	1333 (80.3%)
Gender	
Female	908 (53.4%)
Male	792 (46.6%)
Age	
18 to 24	103 (6.3%)

25 to 34	258 (15.7%)
35 to 44	305 (18.5%)
45 to 54	385 (23.4%)
55 to 64	274 (16.6%)
65 and over	321 (19.5%)
Employment Status	
Employed full or part time	981 (58.0%)
Unemployed/looking	324 (19.1%)
Retired	385 (22.8%)

---

[a]Self identified. For the race variable, respondents were asked to select from "White," "Black," "Asian," "Native American," or "Other." Some respondents self-identified as "Hispanic" and were recorded as such.

*Note, here and throughout this report frequencies may not total 1,700 due to respondents declining to answer particular questions, or saying they "don't know," or "have no answer."

Demographics of Lottery Players and Non-Players, 2005

Table 2 compares the demographic characteristics of Texas Lottery players and non-players. First, it can be seen that approximately 51% of the 2005 sample say they played any of the Texas Lottery games in the past year. As will be seen in Figure 1, this is a slight increase over the percent so responding in the 2004 study.

Table 2 shows those factors related to playing or not playing the Texas Lottery to be education, gender, and employment status. A higher percentage of those with "some college" (56.8%) reported playing any Texas Lottery games than those in other educational categories. Males reported participating at higher rates than females (54% to 48%), and those employed (56.6%) reported playing Texas Lottery games at higher rates than those unemployed (37.4%) or retired (47.1%). Participation did not vary significantly by race, income, ethnicity, or age.

Table 2. Demographic Characteristics of Players and Non-Players

Demographic Variables	Players 859 (50.8%)	Non-Players 832 (49.2%)
Income		
Under $20,000	133 (46.0%)	156 (54.0%)
$20,000 to $29,999	106 (60.2%)	70 (39.8%)
$30,000 to $39,999	80 (50.3%)	79 (49.7%)
$40,000 to $49,999	80 (54.1%)	68 (45.9%)
$50,000 to $59,999	60 (51.7%)	56 (48.3%)
$60,000 to $74,999	68 (56.7%)	52 (43.3%)
$75,000 to $100,000	89 (50.9%)	86 (49.1%)
Over $100,000	126 (53.8%)	108 (46.2%)
Education **		
Less than High School	87 (52.4%)	79 (47.6%)
High School Degree	240 (53.0%)	213 (47.0%)
Some College, No Degree	210 (56.8%)	160 (43.2%)
College Degree	230 (49.5%)	235 (50.5%)
Graduate/Professional Degree	87 (40.1%)	130 (59.9%)
Race		
White	566 (49.6%)	575 (50.4%)
Black	105 (58.0%)	76 (42.0%)
Other	34 (49.3%)	35 (50.7%)
Hispanic [a]	133 (51.2%)	127 (48.8%)
Hispanic Origin		
Yes	169 (51.8%)	157 (48.2%)
No	670 (50.6%)	655 (49.4%)

Gender *		
Female	436 (48.2%)	468 (51.8%)
Male	423 (53.7%)	364 (46.3%)
Age		
18 to 24	40 (40.0%)	60 (60.0%)
25 to 34	132 (51.2%)	126 (48.8%)
35 to 44	158 (52.0%)	146 (48.0%)
45 to 54	201 (52.3%)	183 (47.7%)
55 to 64	149 (54.6%)	124 (45.4%)
65 and over	150 (47.2%)	168 (52.8%)
Employment Status ***		
Employed	554 (56.6%)	424 (43.4%)
Unemployed	120 (37.4%)	201 (62.6%)
Retired	180 (47.1%)	202 (52.9%)

Notes: [a] Self identified

* = sig. at the .05 level
** = sig. at the .01 level
*** = sig. at the .001 level, or lower

A Comparison of Lottery Players with Texas Demographics

In addition to comparing the characteristics of Lottery players with non-players, and keeping in mind the cautionary note regarding the use of unweighted data discussed above, some insight might be gained by comparing the demographics of Lottery players with the demographics of Texas residents, in general. Data from the 2000 U.S. Census show that about 25% of adult Texans above age 18 had less than a high school diploma, about 25% had a high school diploma, about 24% had some college, about 19% had a college degree, and about 6.5% had a graduate degree. Results from the present survey of lottery players show that about 10% of all players have less than a high school diploma, about 28% of players have a high school degree, about 25% have some college, about 27% have a college degree, and about 10% have a graduate degree. So, by comparison, smaller proportions of Lottery players have less than a high school education and larger proportions have more advanced levels of education than the Texas adult population in general.

Similarly, the Census Bureau shows that about 24% of adult Texans had annual household incomes under $20,000; the 2005 survey shows that about 18% of Lottery players have incomes under $20,000. For other income categories, the proportions of Lottery players generally match the proportions in the general population with the exception of those earning more than $100,000. Census Bureau data show that about 11.5% of Texas households reported incomes exceeding $100,000, while the 2005 survey shows that about 17% of players' households report earning this level of income. So, by comparison, smaller proportions of Lottery players have low income and higher

proportions of Lottery players have very high income than is the case in the general household population.

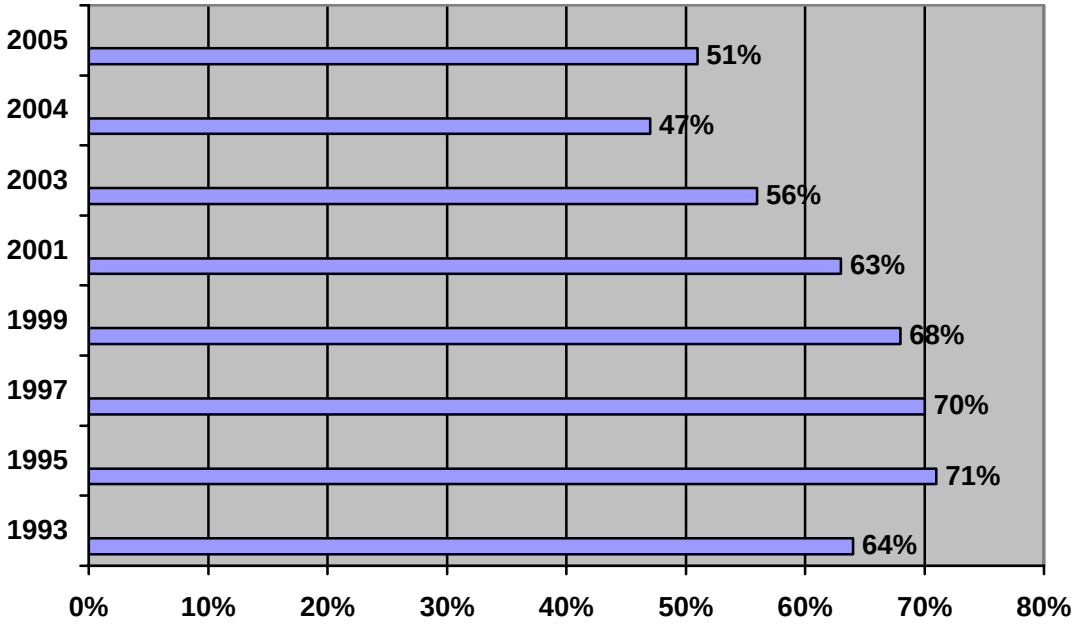
The Census Bureau also permits comparisons related to employment status. According to the Census Bureau, about 59% of adult Texans were employed, about 4% were unemployed, and about 36% were retired or not looking for work. The 2005 survey shows that about 65% of Lottery players are employed, about 14% are unemployed and about 21% are retired. So, by comparison, larger proportions of both employed and unemployed Texans report playing the Lottery than is the case in the general population, however smaller proportions of Lottery players are retired or are not looking for work than is the case in the general population (it should be noted that Census employment data include those 16 and above and that Census figures do not include military personnel).

Considering race and ethnicity, the Census Bureau reports about 75% of adult Texans to be "white," about 11% to be Black or African American, and about 14% to be "all others." The 2005 survey shows that about 80% of Lottery players are "white," about 15% are Black or African American, and about 5% are "all others." So in comparison with all adult Texas residents larger proportions of Lottery players are "white" and Black or African American, smaller proportions are "other" (most of these report their race as "Asian"). The Census Bureau reports that just over 28% of adult Texans are of Hispanic or Latino origin. The 2005 survey shows that just over 20% of Lottery players are Hispanic or Latino. So, by comparison, smaller proportions of Hispanics or Latinos report playing the Lottery than is the case in the general population.

Comparison of Rates of Play Over Time

Figure 1 presents a comparison of the rates of those playing any of the Texas Lottery games during the past year from its inception in 1993 to the present.

Figure 1: Percent of Adult Texans Playing Any Lottery Games



Source: 2005 survey and surveys 1993-2004, *passim.*

As can be seen in Figure 1, the percent of Texans playing any of the Texas Lottery games has generally declined over the years (from a high of 71% in 1995 to a low of 47% in 2004). The 2005 survey results indicate that this decline may have leveled off, and that in fact for the first time in many years a higher percent (51%) report playing this year than the previous year.

Participation in Various Lottery Games, 2005

Table 3 presents the rates of participation in each of the various Texas Lottery games as well as the amount reportedly spent by players on each game in 2005. Table 3 shows the average (mean) amount reported spent per play and per month. Because the mean (also known as the arithmetic average) can be skewed by very low or very high scores and thus may present information that may be misleading, the median amount of money reported spent per month is shown as well. The median is that number dividing a distribution in half so that 50% of respondents report spending that amount or more, and 50% report spending that amount or less. As such, the median serves as a "correction" for scores that are very high or very low (sometimes called "outliers").

As shown in Table 3, Lotto Texas is the most popular Texas Lottery game (played by 84% of those participating in any of the lottery games). Next in terms of popularity are the various scratch off ticket games (played by 66.1% of participants), followed by Mega Millions (played by 55.7% of participants). Least popular was found to be Pick 3 Night (played by 18.5% of participants) and Texas Two Step (played by 14.8%). In terms of amount of money spent per game, the highest reported monthly expenditure was found to be on the Pick 3 Night game (where the mean monthly expenditure by players is $35.11), followed closely by the scratch off ticket games (where the mean monthly expenditure is $35.04). In terms of weekly, monthly, and yearly frequency of play, the scratch off games tended to be played more often than others.

Table 3. Participation in Various Lottery Games, 2005*

Played Lotto Texas**		
	Yes	No
Number:	711	135
Percent:	84%	16%
Average number of times played per week	1.76	
Average number of times played per month	1.78	
Average number of times played per year	5.39	
Average spent per play	$5.51	
Average spent per month (mean)	$20.21	
Average spent per month (median)	$10.00	
Played Pick 3 Day		
	Yes	No
Number:	285	572
Percent:	33.3%	66.7%
Average number of times played per week	2.38	
Average number of times played per month	1.64	
Average number of times played per year	4.19	
Average spent per play	$5.42	
Average spent per month (mean)	$29.75	
Average spent per month (median)	$15.50	

Played Pick 3 Night		
	Yes	No
Number:	156	687
Percent:	18.5%	81.5%
Average number of times played per week	2.59	
Average number of times played per month	1.58	
Average number of times played per year	3.75	
Average spent per play	$6.12	
Average spent per month (mean)	$35.11	
Average spent per month (median)	$18.00	

Played Cash 5		
	Yes	No
Number:	305	547
Percent:	35.8%	64.2%
Average number of times played per week	2.42	
Average number of times played per month	1.47	
Average number of times played per year	4.12	
Average spent per play	$4.45	
Average spent per month (mean)	$21.09	
Average spent per month (median)	$10.00	

Played Texas Lottery Scratch Off Tickets		
	Yes	No
Number:	562	288
Percent:	66.1%	33.9%
Average number of times played per week	2.58	
Average number of times played per month	1.82	
Average number of times played per year	5.92	
Average spent per play	$7.47	
Average spent per month (mean)	$35.04	
Average spent per month (median)	$20.00	

Played Texas Two Step		
	Yes	No
Number:	126	727
Percent:	14.8%	85.2%
Average number of times played per week	1.70	
Average number of times played per month	1.73	
Average number of times played per year	3.43	
Average spent per play	$5.23	
Average spent per month (mean)	$22.42	
Average spent per month (median)	$11.00	

Played Mega Millions

	Yes	No
Number:	468	372
Percent:	55.7%	44.3%
Average number of times played per week	1.59	
Average number of times played per month	1.66	
Average number of times played per year	4.11	
Average spent per play	$5.17	
Average spent per month (mean)	$20.84	
Average spent per month (median)	$10.00	

Played Megaplier

	Yes	No
Number:	192	649
Percent:	22.8%	77.2%
Average number of times played per week	1.73	
Average number of times played per month	2.00	
Average number of times played per year	3.73	
Average spent per play	$6.24	
Average spent per month (mean)	$19.53	
Average spent per month (median)	$15.00	

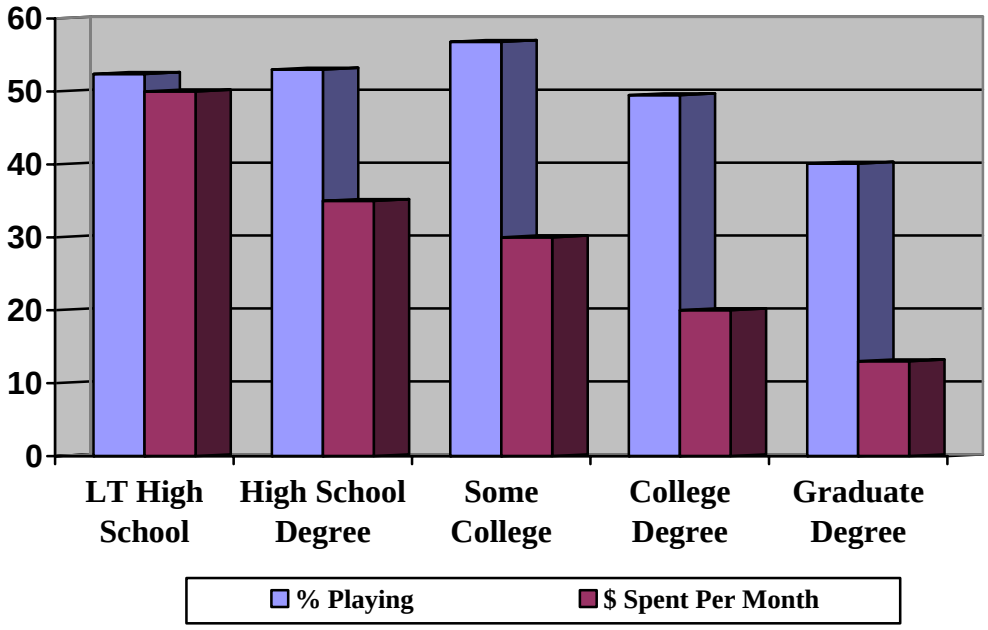
* As reported by those respondents saying they played any Texas Lottery games
**Because of questionnaire wording, the frequency of play (per week, per month, or per year) variables are treated as discrete variables and cannot be interpreted in an additive or cumulative manner. If the respondent reported that he/she normally played weekly, he/she was then asked "how many times per week." If the respondent reported that he/she normally played monthly, he/she was then asked "how many times per month," and so forth. Respondents who said they normally play weekly, were not asked how many times per month or per year they play, and those who said they normally play monthly were not asked how many times per week or per year they play.

Participation in Various Texas Lottery Games and Amount Spent by Various Demographic Characteristics

Figures 2 through 10 show the participation rates and average monthly amount spent on various Texas Lottery games, accounting for the various demographic characteristics examined in this study. The monthly average amount of expenditures shown on each figure is reported as the median of each relevant distribution. The median is reported because in some cases "outliers"--those reporting extraordinarily high levels of monthly expenditures--skew the distributions in misleading directions.

Lottery Play and Dollars Spent by Education

Figure 2. Lottery Play and Median Dollars Spent Per Month By Education

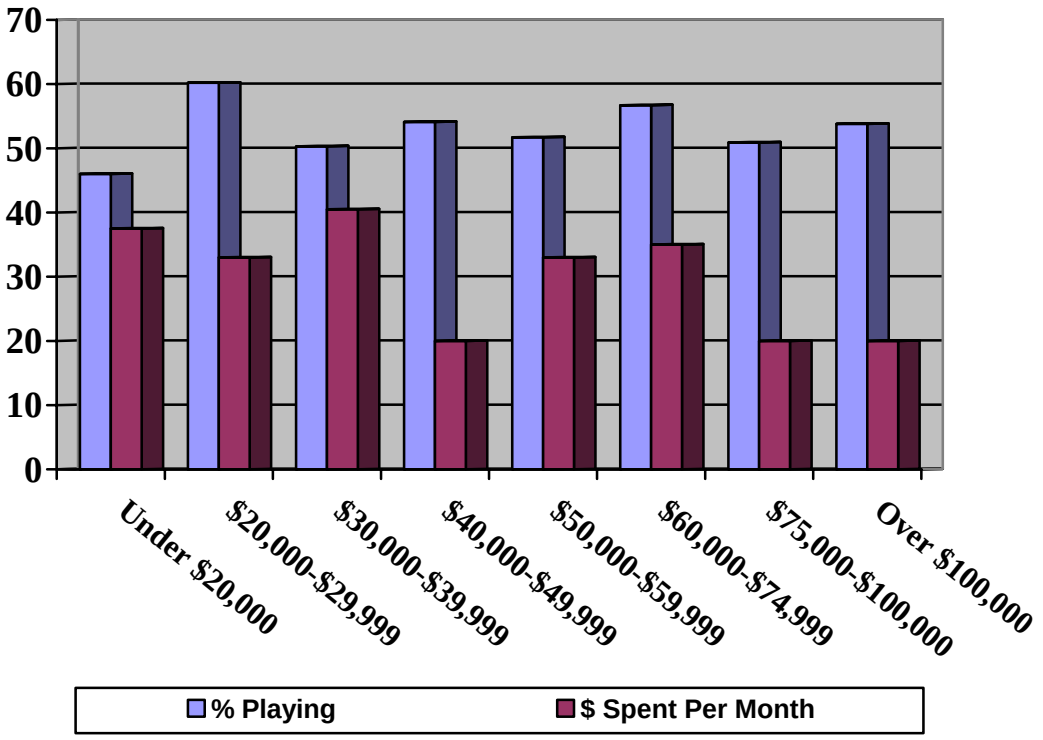


- Respondents with college degrees (49.5%) and graduate degrees (40.1%) report playing Texas Lottery games at somewhat lower rates than others. The highest rates of participation are reported by those with "some college" (56.8%) (sig.=.01).

- Amount of money spent per month on Texas Lottery games declines consistently with levels of education from a high for those with less than a high school education ($50) to a low for those with a graduate degree ($13) (sig.=.01).

Lottery Play and Dollars Spent by Income

Figure 3. Lottery Play and Median Dollars Spent Per Month By Income

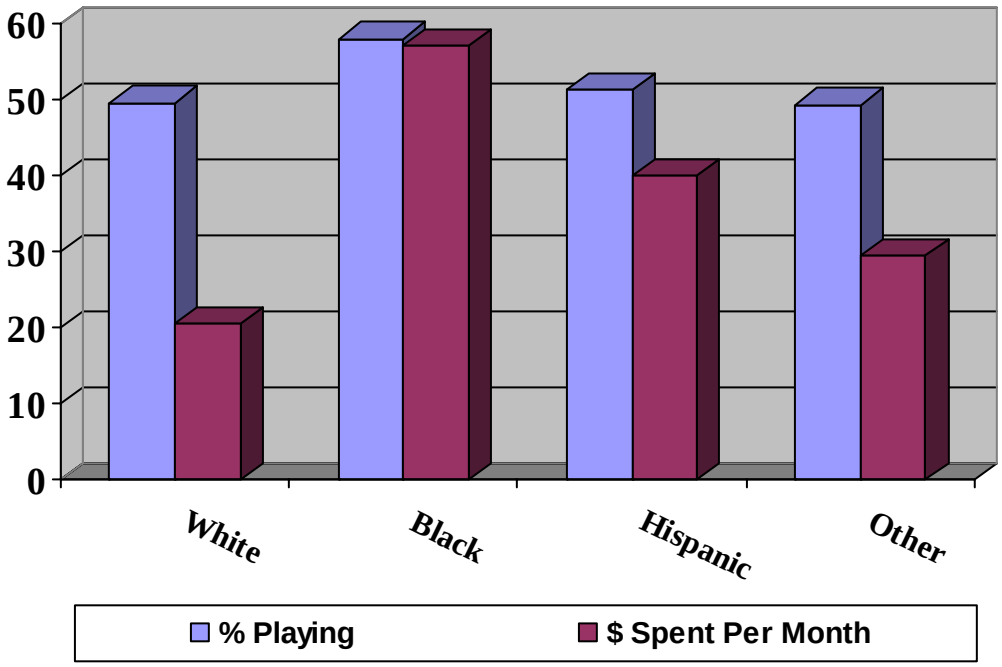


- Percent playing Texas Lottery games tends to rise as income increases from those in the lowest income category (46.0%) to those in the $20,000 to $29,000 category (60.2%), after which play levels off for all income groups at about 50% (sig.= NS).

- Amount spent per month varies from an average high of about $40.00 for those in the $30,000 to $39,999 category to a low of about $20 per month for those in the $40,000 to $49,999, $75,000 to $100,000, and over $100,000 categories (sig. = NS).

Lottery Play and Dollars Spent by Race*

Figure 4. Lottery Play and Median Dollars Spent Per Month By Race

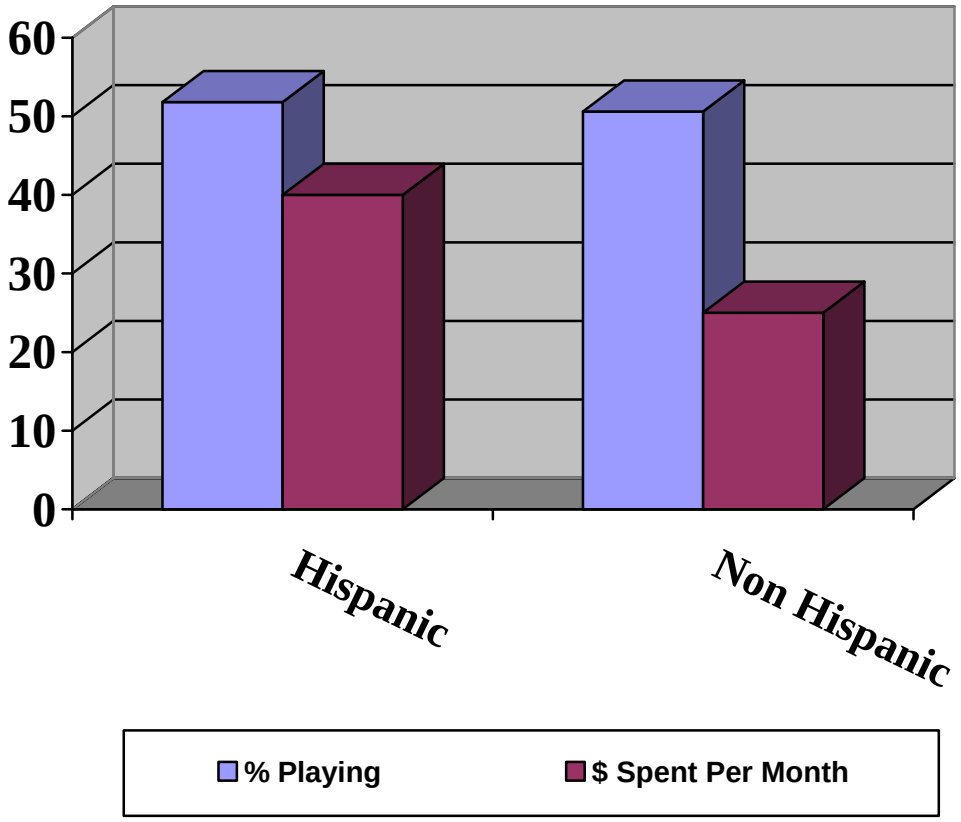


- Rates of participation are highest for Blacks (58.0%) and lowest for "other" (including Asian and Native American) (49.3%) (sig. = NS).

- Black respondents report spending the largest average amount of money per month ($57), and white respondents report spending the least ($20.50) (sig. = .001).

*Note: For the race variable, respondents were asked to select from "White," "Black or African American," "Asian," "Native American," or "Other." Some respondents self-identified as "Hispanic," and those respondents are shown separately in this figure.

Figure 5. Lottery Play and Median Dollars Spent Per Month By Hispanic Origin

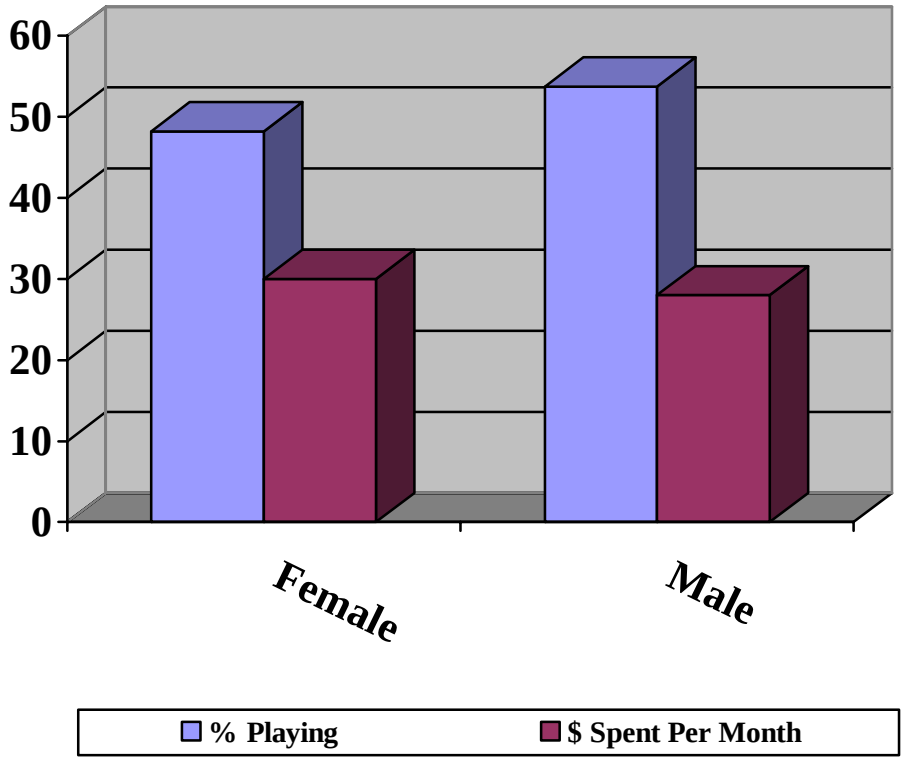


- Virtually no difference exists between the rates of play for Hispanic (51.8%) or non-Hispanic (50.6%) populations (sig. = NS).

- On average, Hispanic players spend larger amounts per month than non-Hispanic players ($40 compared with $25) (sig. = NS).

Lottery Play and Dollars Spent by Gender

Figure 6. Lottery Play and Median Dollars Spent Per Month By Gender

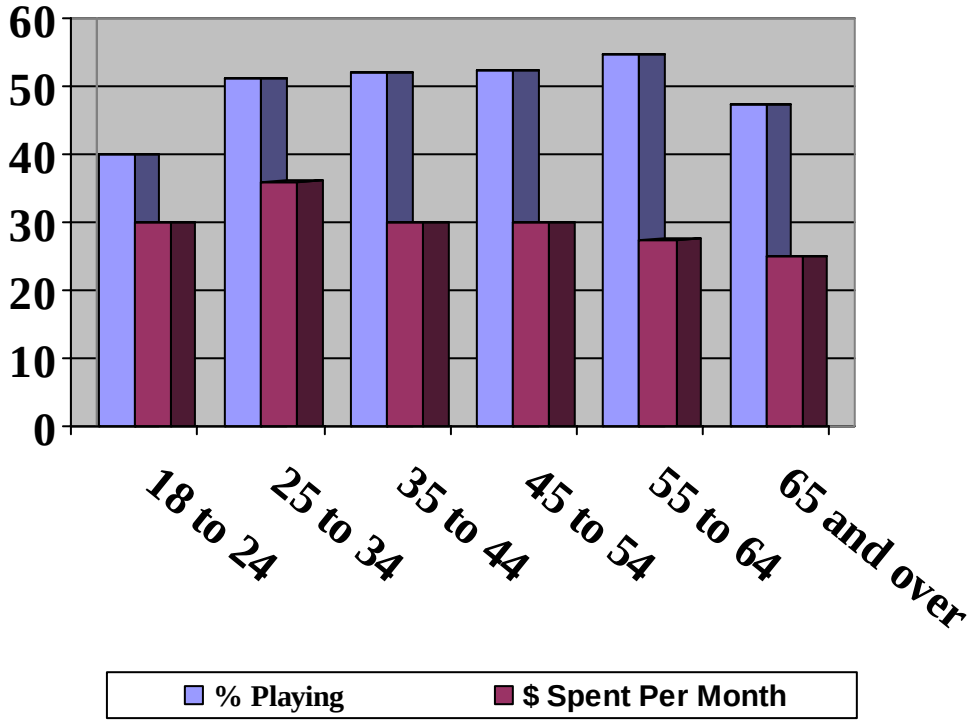


- Participation rates are somewhat higher among men (53.7%) than women (48.2%) (sig. = .05)

- Women report spending somewhat more on average per month than men ($30.00 compared with $28.00) (sig. = NS).

Lottery Play and Dollars Spent by Age

Figure 7. Lottery Play and Median Dollars Spent Per Month By Age

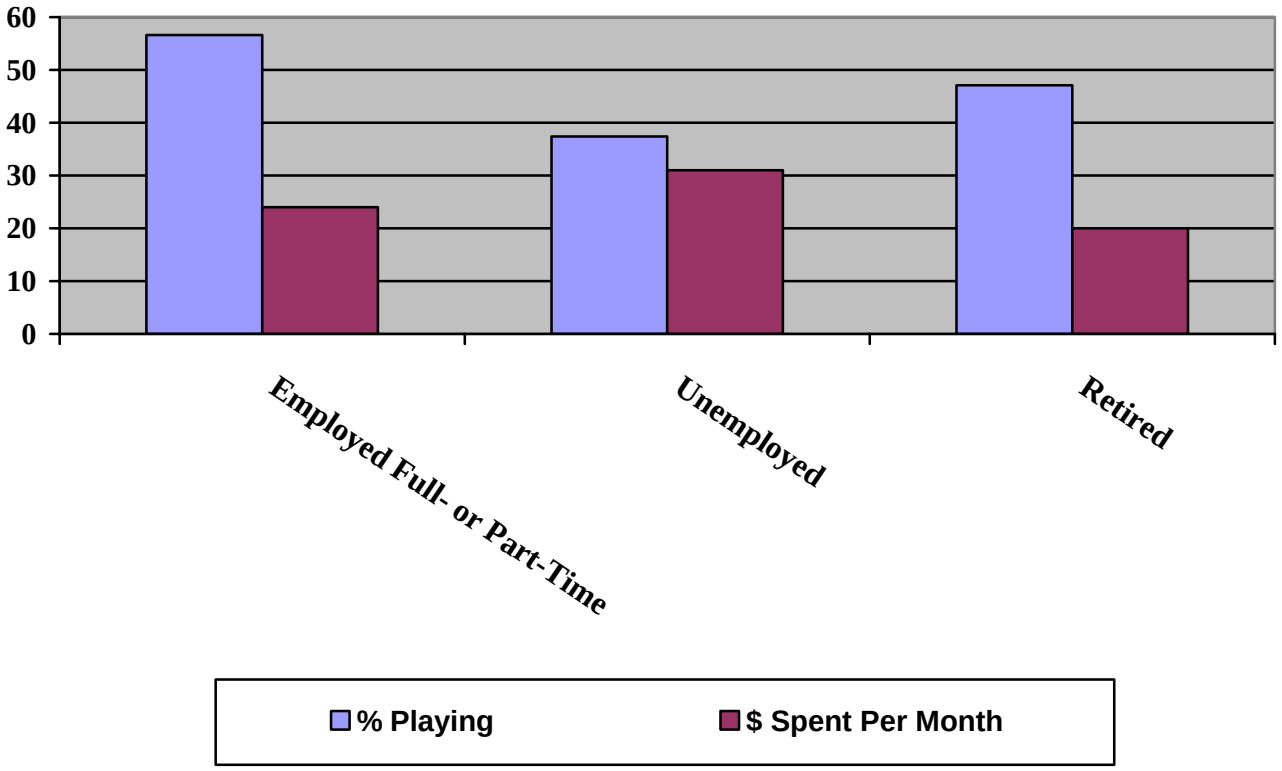


- Rates of participation are lowest in the 18 to 24 age category (40.0%) and in the 65 and over category (47.2%) (sig. = NS).

- Average spending per month is highest in 25 to 34 age category and declines with each age category thereafter (sig. = NS).

Lottery Play and Dollars Spent by Employment Status

Figure 8. Lottery Play and Median Dollars Spent Per Month By Employment Status



- Participation rates of those employed (56.6%) are significantly higher than participation rates of those unemployed (37.4%), or those retired (47.1%) (sig. = .001).

- Those unemployed reported spending more per month ($31.00) than those employed ($24.00) or those retired ($20.00) (sig. = NS).

Lottery Play by Lottery District

Table 4 reports the rates of participation in any Texas Lottery games by lottery district, as well as the overall average amount spent per month by lottery players, reported as both the mean and the median.

As shown in Table 4, highest rates of participation are in the McAllen (56.90%), San Antonio (55.2%), and Abilene (54.6%) regions; lowest rates of participation are in the Irving (49.7%) and Tyler (42.5%) regions. The average monthly amount spent per player is shown to be highest in the Tyler region ($89.69 mean, and $30.00 median), and lowest in the Victoria ($41.39 mean, and $20.00 median) and McAllen ($31.96 mean, and $25.00 median) regions.

Table 4. Lottery Play by Lottery District

District	Percent Playing Any Game	Mean Amount Spent Per Month Among Lottery Players	Median Amount Spent Per Month Among Lottery Players
Abilene	54.6	$64.41	$20.00
Austin	54.1	$54.78	$24.00
El Paso	51.1	$49.10	$28.00
Houston	52.0	$68.35	$30.00
Irving	49.7	$48.25	$25.00
Lubbock	51.3	$54.50	$20.00
McAllen	56.9	$31.96	$25.00
San Antonio	55.2	$42.63	$26.00
Tyler	42.5	$89.69	$30.00
Victoria	54.3	$41.39	$20.00

Conclusion

The percent of Texas adults participating in Texas Lottery play appears to have stabilized in 2005 and perhaps even increased a bit. This year, 51% of the sample report playing any of the Texas Lottery games, compared with 47% so reporting in 2004. This year, the demographic characteristics of education, gender, and employment status were found to be significantly related to participation. In general, males, those with "some college," and those employed, played at rates higher than others.

The most popular Lottery Game was found to be Texas Lottery (played by 84% of those participating in any of the lottery games), and the least popular was found to be Texas Two Step (played by 14.8%). The highest reported monthly expenditure was found to be associated with the Pick 3 Night Game and the greatest frequency of play was found to be associated with the various scratch off games.

When examining play by Lottery District, it was found that the highest rates of participation are in the McAllen and San Antonio districts, and the lowest rates of participation are in the Irving and Tyler regions. The highest reported monthly amount spent per player is found to be in the Tyler and Houston regions, and the least in the Victoria and McAllen regions.