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Gambling-Related Attitudes and Behaviors in Adolescents Having Received Instant (Scratch) Lottery Tickets as Gifts

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A B S T R A C T

Objective: Instant (scratch) lottery ticket gambling is popular among adolescents. Prior research has not determined whether adolescents' gambling behavior and attitudes toward gambling are influenced by the receipt of scratch lottery tickets as gifts.
Method: Cross-sectional survey data from 2,002 Connecticut high school students with past-year gambling were analyzed using bivariate approaches and logistic regression analyses. Interactions between gambling-problem severity and lottery-gift status were examined in relation to multiple outcomes.
Results: Adolescents who received a scratch lottery ticket as a gift compared with those who did not were more likely to report features of problem gambling, buy scratch lottery tickets for themselves, and buy and receive other types of lottery tickets; they were also less likely to report parental disapproval of gambling and to see gambling prevention efforts as important. Later (≥15 years) age-at-gambling-onset was inversely linked to gambling-problem severity in the lottery gift group (odds ratio [OR] = .38) but not in the nongift group (OR = .91), yielding a significant severity by gift status interaction. Other academic, health, and gambling-related correlates of gambling-problem severity were similar in the gift and nongift groups.
Conclusions: For adolescents, the receipt of scratch lottery tickets as gifts during childhood or adolescence was associated with risky/problematic gambling and with gambling-related attitudes, behaviors, and views suggesting greater gambling acceptability. The extent to which the receipt of scratch lottery tickets may promote gambling behaviors and the development of gambling problems warrants consideration. Education, prevention, and treatment strategies should incorporate findings relating to receipt of gambling products by underage individuals.

IMPLICATIONS AND CONTRIBUTION

Lottery-ticket-gift receipt by adolescent gamblers is associated with permissive attitudes towards gambling, early age of gambling onset, and differential associations between age-at-gambling-onset and problem-gambling severity. These findings suggest that gifting lottery tickets to youths may impact adolescent gambling attitudes and behaviors and that prevention efforts consider these relationships.

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High rates of adolescent gambling exist worldwide [1,2]. In North America, more than 15 million adolescents (ages 12–17 years) have gambled, and over two million have experienced gambling problems [1,3]. Many youths gamble on lotteries despite age restrictions prohibiting their participation [3,4]. Although the sale of lottery tickets to minors is illegal [4,5], parents often buy lottery tickets for their children. Minors who receive lottery tickets as gifts may be more likely to participate in lotteries and possibly other forms of gambling. The receipt of lottery tickets as gifts may also influence adolescents' perceptions of the acceptability of gambling [4,6], including their views of problem gambling prevention efforts, parental attitudes toward gambling, and underage participation in gambling.

Data suggest that 4% to 8% of adolescents exhibit gambling problems, with another 10% to 15% at significant risk [1,7]. Problem gambling is characterized by interfering or excessive patterns of gambling, and pathologic gambling is a formal psychiatric condition [8]. Given that gambling during adolescence, particularly problem and pathological gambling, has been linked to poorer functioning (e.g., higher rates of depression and substance use, abuse, and dependence) both during adolescence and later in life, it is important to understand the factors that may contribute to gambling behaviors among youth [1,9–13]. Furthermore, inasmuch as risky patterns of gambling not meeting the threshold of pathologic gambling are relevant to youth, recent studies of youth gambling have investigated at-risk/problem gambling (ARPG) [12,14].

In this study, we examined the gambling attitudes and behaviors of high school students according to their status as recipients of gifted lottery tickets. We hypothesized that ticket-gifted adolescents would be more likely to report ARPG, have family members with gambling problems, purchase lottery tickets, perceive their parents as being more approving of gambling, view problem-gambling-prevention efforts as less important, and have an earlier age at gambling onset, compared with non-ticket-gifted adolescents. We also examined the correlates of ARPG in the adolescents who did and did not receive lottery scratch tickets as gifts, as understanding the features related to ARPG might help parents, teachers, administrators, and clinicians identify youth who might be exhibiting risky or problematic gambling, thus facilitating early intervention. We hypothesized that gambling-problem severity as indexed by ARPG would be more strongly associated with adverse health measures (dysphoria/depression and substance use) and participation in forms of gambling related to lotteries (i.e., nonstrategic forms) among adolescents who received scratch tickets as gifts compared with those who did not.

Method

The present study examined gambling and other risk behaviors among high school students in Connecticut, focusing on lottery-gift status as defined by responses (yes/no) indicating whether participants had "ever received a lottery scratch ticket as a gift in the past year." Inasmuch as details of study design, recruitment, and measures used have been published previously [11,12,15–18], and given the space limitations in the journal, a detailed description of these methods is provided in Supplemental materials.

Data analysis

Data were entered from paper into an electronic system. Data cleaning procedures and spot checks of completed surveys were performed to ensure that data were accurate and within range. All statistical analyses were conducted using the SAS system (SAS Institute, Cary, NC). We examined the bivariate relationship between lottery-gift status and demographic characteristics, as well as the bivariate relationship between lottery-gift status and gambling measures. We also examined the bivariate relationship between gambling-problem severity and demographic characteristics, stratified by lottery-gift status. Statistical significance was determined with Pearson χ^2 tests. A Bonferroni correction was applied such that p values $<.0025$ were considered statistically significant.

We next constructed logistic regression models for binary dependent variables and multinomial logistic regression models for categoric dependent variables and ran separate models according to lottery-gift status to determine the lottery-gift-status-specific effect of gambling-problem severity. To determine whether the effect of gambling-problem severity differed according to lottery-gift status, we constructed a model that included the main effects of gambling-problem severity and lottery-gift status, as well as the interaction term (gambling-problem severity*lottery-gift status). We present the stratum-specific odds ratios (ORs) and 95% confidence intervals (CIs), as well as the interaction OR and 95% CI. The interaction OR is the ratio of the stratum-specific effects; CIs that excluded 1.0 indicated a statistically significant interaction. All models were adjusted for gender, race/ethnicity, grade level, and family structure. Post-hoc analyses separating the ARPG group into at-risk gambling (ARG; those acknowledging one to two inclusionary criteria for PG) and problem/pathologic gambling (PPG; those acknowledging three or more inclusionary criteria for PG) groups were performed to investigate whether the relationships between health, functioning, and gambling measures differed across gift and nongift groups according to this gambling-problem-severity stratification.

Results

Instant-lottery-gift status and gambling-problem severity

Of the 2,022 reported adolescent gamblers, 1,052 (52.5%) reported having received lottery scratch tickets as gifts. Among those who received lottery scratch tickets as gifts, 78.4% (n = 825), 14.5% (n = 152), 3.1% (n = 33), and 4.0% (n = 42) received tickets less than monthly, monthly, weekly, and daily, respectively. Lottery gift status was associated with greater gambling-problem severity ($\chi^2 = 13.83$; $p = .0002$). Among adolescents receiving lottery tickets as gifts, the prevalence of ARPG was 38.7%; the prevalence of ARPG was 29.9% among adolescents who did not receive lottery tickets as gifts.

Lottery-gift status and sociodemographic characteristics

Lottery gift status was associated with Caucasian, African-American, Hispanic, and Other race/ethnicity (all $p < .0001$) and family structure ($p < .0041$) but not with age, grade level, or gender (Table 1).

Table 1
Sociodemographic characteristics of the sample by lottery ticket gift status

Variable/category	Received scratch tickets as gift [n (%)]	Did not receive scratch tickets as gift [n (%)]	χ^2 Statistics	
			χ^2	p
Gender			.02	.8989
Male	631 (61.0)	582 (60.7)		
Female	404 (39.0)	377 (39.3)		
Race/ethnicity				
Caucasian			140.12	<.0001
Yes	876 (83.3)	578 (59.6)		
No	176 (16.7)	392 (40.4)		
African-American			76.23	<.0001
Yes	59 (5.6)	175 (18.0)		
No	993 (94.4)	795 (82.0)		
Asian			3.21	.0732
Yes	39 (3.7)	52 (5.4)		
No	1013 (96.3)	918 (94.6)		
Hispanic			17.20	<.0001
Yes	134 (13.2)	185 (20.3)		
No	879 (86.8)	728 (79.7)		
Other			34.07	<.0001
Yes	126 (12.0)	210 (21.7)		
No	926 (88.0)	760 (78.4)		
Grade			5.03	.1697
9	314 (30.0)	293 (30.3)		
10	260 (24.8)	271 (28.0)		
11	266 (25.4)	244 (25.2)		
12	207 (19.8)	159 (16.4)		
Family structure			11.00	.0041
One parent	217 (21.0)	259 (27.3)		
Two parents	741 (71.5)	627 (66.1)		
Other	78 (7.5)	63 (6.6)		
Current age			2.02	.3641
≤14	131 (15.7)	121 (16.8)		
15–17	566 (67.8)	500 (69.3)		
18+	138 (16.5)	101 (14.0)		

Values indicate sample size (n) with column percentage in parentheses.

Lottery-gift status and gambling measures

Lottery-ticket-gifted as compared to lottery-ticket-non-gifted adolescents were more likely to report earlier ages at gambling onset, buy instant lottery tickets for themselves, buy other types of lottery tickets, and receive as gifts other types of lottery tickets (all $p < .0001$ to $p < .0007$; Table 2). Perceived parental perception of gambling was associated with the lottery-gift status ($p < .0001$), with parental disapproval of gambling less prevalent among lottery gift recipients. The lottery-gift group was less likely than the nongift group to acknowledge as important hanging out with nongambling friends ($p < .0001$), participating in nongambling fun activities ($p = .0010$), receiving warnings about gambling from adults in the family ($p = .0016$) or peers ($p = .0014$), having nongambling parents ($p < .0001$), learning about gambling-related risks from parents ($p < .0001$) or at school ($p < .0008$), and having parents who did not permit card games for money at home ($p < .0019$). Overall, compared with non-ticket-gifted youth, ticket-gifted adolescents were less likely to see gambling prevention efforts as important. Another variable approached significance at the Bonferroni-corrected p-value threshold (parental strictness about gambling; $p = .0029$) and others were significant at $p < .05$ but not at the Bonferroni-corrected threshold: checking identification when purchasing lottery tickets ($p = .0069$), advertisements about problem gambling ($p = .016$), learning about the risks of gambling from peers ($p = .0099$), and adults not involving children in gambling ($p = .042$).

Gambling-problem severity and sociodemographics

Among ticket-gifted adolescents, gender, Caucasian, African-American, Asian, and Hispanic race/ethnicity, and family structure were associated with problem gambling severity (all $p < .05$), with ARPG respondents less likely than low-risk gambling (LRG) respondents to be Caucasian, and more likely to be male, African-American, Asian, and Hispanic and report their family structure as "other." Among non-ticket-gifted adolescents, gender, Caucasian and African-American race/ethnicity were associated with problem-gambling severity (all $p < .05$; Table 3), with ARPG respondents less likely than LRG respondents to be Caucasian and more likely to be male, African-American, Asian, and Hispanic.

Gambling-problem severity correlates

Among ticket-gifted adolescents, ARPG versus LRG youth were more likely to report grades of D or lower (OR = 2.02; $p < .0001$), occasional or regular tobacco use (ORs = 1.44 and 1.95, respectively; $p = .001$), marijuana use (OR = 1.79; $p < .0001$), heavy alcohol use (OR = 2.77; $p = .079$), other drug use (OR = 2.77; $p < .0001$), dysphoria/depression (OR = 2.16; $p < .0001$), involvement in a serious fight (OR = 3.00; $p < .001$), and carrying a weapon (OR = 2.16; $p < .0001$).

Among non-ticket-gifted adolescents, ARPG versus LRG youth were more likely to report occasional or regular tobacco use (ORs = 1.80 and 2.34, respectively; $p = .002$), marijuana use (OR = 1.45; $p = .012$), other drug use (OR = 1.79; $p = .034$), involvement in a serious fight (OR = 1.33; $p < .0001$), and carrying a weapon (OR = 1.06; $p < .0001$). No interactions were statistically significant, suggesting that the relationships between gambling-problem severity and health/functioning measures were similar in ticket-gifted and non-ticket-gifted groups (Table 4).

Among ticket-gifted adolescents, ARPG versus LRG youth were less likely to have an age at gambling onset of 15 years or older (OR = .38; $p < .0001$) and more likely to have gambled online, at school, or at a casino (ORs = 3.08, 4.37, and 3.52, respectively; $p < .0001$ for all), experienced gambling-related pressure and anxiety (ORs = 4.30 and 12.68, respectively; $p < .0001$ for both), and gambled with peers (OR = 1.50; $p = .0006$), family members (OR = 1.49; $p = 0002$), other adults (OR = 2.20; $p < .0001$), and strangers (OR = 5.27; $p < .0001$) and alone (OR = 3.12; $p < .0001$), and have an age at gambling onset of 14 years or younger (OR = .38; $p < .0001$).

Among non-ticket-gifted adolescents, ARPG versus LRG youth were more likely to have experienced gambling-related pressure and anxiety (pressure OR = 3.51; $p < .0001$; anxiety OR = 16.95; $p < .0001$) and have gambled at school (OR = 3.51; $p < .0001$), with family members (OR = 1.24; $p < .0001$), friends (OR = 2.01; $p < .0001$), other adults (OR = 2.08; $p < .0005$), and strangers (OR = 3.19; $p < .0001$) and alone (OR = 3.32; $p < .0001$). A significant interaction effect (OR = .39; $p = .0099$) was observed for age-at-gambling-onset of 15 years or older among the gift group: ARPG was associated with lower odds in the gift group, whereas there was no relationship in the nongift group. No other interactions were statistically significant, suggesting that the relationship between gambling-problem severity and gambling measures were similar in the gift and nongift groups (Table 5).

Post-hoc analyses of problem/pathologic gambling

To examine further, we separated ARPG respondents (n = 687) into ARG (62.6%; n = 430) and PPG (37.4%; n = 257)

Table 2
χ^2 analyses of gambling attitudes and behaviors by scratch ticket gift status

Variable/category	Received scratch tickets as gift [N (%)]	Did not receive scratch tickets as gift [N (%)]	χ^2 Statistics	
			χ^2	p
Age at gambling onset			16.9	.0007
≤8 years	156 (17.2)	85 (12.0)		
9–11 years	163 (17.9)	101 (14.3)		
12–14 years	332 (36.5)	273 (38.5)		
≥15 years	258 (28.4)	250 (35.3)		
Bought scratch ticket for self			221.53	<.0001
Yes	465 (44.5)	137 (14.1)		
No	580 (55.5)	833 (85.9)		
Bought other type of lottery ticket			100.06	<.0001
Yes	224 (21.7)	58 (6.1)		
No	809 (78.3)	901 (94.0)		
Received other lottery ticket			539.31	<.0001
Yes	552 (52.8)	52 (5.37)		
No	493 (47.2)	917 (94.6)		
Parent perception about gambling			82.17	<.0001
Disapprove	243 (27.4)	387 (47.6)		
Neither approve nor disapprove	507 (57.2)	366 (45.0)		
Approve	136 (15.4)	60 (7.38)		
Importance for preventing gambling problems in teens				
Checking identification for purchasing lottery tickets			7.29	.0069
Important	745 (76.2)	738 (81.3)		
Not important	233 (23.8)	170 (18.7)		
Hanging out with friends who don't gamble			19.11	<.0001
Important	632 (65.3)	672 (74.6)		
Not important	336 (34.7)	229 (25.4)		
Participating in activities that are fun and free of gambling			10.8	.0010
Important	735 (75.8)	738 (82.0)		
Not important	235 (24.2)	162 (18.0)		
Fear of losing valuable possessions, close friends, and relatives			2.93	.0872
Important	824 (84.8)	785 (87.5)		
Not important	148 (15.2)	112 (12.5)		
Advertisements that show the problems associated with gambling			5.81	.0159
Important	694 (71.6)	676 (76.5)		
Not important	276 (28.5)	208 (23.5)		
Not having access to internet gambling at home			3.30	.0695
Important	579 (59.8)	567 (63.9)		
Not important	390 (40.3)	321 (36.2)		
Parent/guardian strictness about gambling			8.86	.0029
Important	715 (73.8)	708 (79.6)		
Not important	254 (26.2)	181 (20.4)		
Warnings from adults in family			9.94	.0016
Important	713 (73.7)	706 (79.9)		
Not important	255 (26.3)	178 (20.1)		
Warnings from, or listening to, peers			10.26	.0014
Important	725 (74.9)	716 (81.1)		
Not important	243 (25.1)	167 (18.9)		
Having parents who don't gamble			18.01	<.0001
Important	688 (71.2)	708 (79.7)		
Not important	278 (28.8)	180 (20.3)		
Learning about the risks of gambling in school			16.52	<.0001
Important	664 (69.7)	683 (77.1)		
Not important	303 (31.3)	203 (22.9)		
Learning about the risks of gambling from parents			11.16	.0008
Important	725 (74.9)	723 (81.3)		
Not important	243 (25.1)	166 (18.7)		
Learning about the risks of gambling from peers			6.65	.0099
Important	697 (72.0)	685 (77.2)		
Not important	271 (28.0)	202 (22.8)		
Adults not involving kids in gambling			4.13	.0422
Important	741 (76.7)	714 (80.6)		
Not important	225 (23.3)	172 (19.4)		
Parent/guardian not permitting card games (for money) at home			9.67	.0019
Important	562 (58.1)	578 (65.1)		
Not important	406 (41.9)	310 (34.9)		
Family concern			.51	.4778
Yes	133 (13.9)	113 (12.8)		
No	821 (86.1)	769 (87.2)		

Values indicate sample size (n) with column percentage in parentheses.

Table 3
Sociodemographic characteristics of the sample, by scratch ticket status and problem-gambling severity

Variable/category	Received scratch tickets as gift		χ^2 Statistics		Did not receive scratch tickets as gift		χ^2 Statistics	
	Low-risk gambling [n (%)]	At risk/problem gambling [n (%)]	χ^2	p	Low-risk gambling [n (%)]	At risk/problem gambling [n (%)]	χ^2	p
Gender			72.77	<.0001			46.67	<.0001
Male	329 (50.9)	302 (77.6)			360 (53.6)	222 (77.4)		
Female	317 (49.1)	87 (22.4)			312 (46.4)	65 (22.7)		
Race/ethnicity								
Caucasian			11.14	.0008			8.01	.0046
Yes	565 (86.3)	311 (78.3)			425 (62.5)	153 (52.8)		
No	90 (13.7)	86 (21.7)			255 (37.5)	137 (47.2)		
African-American			26.82	<.0001			9.26	.0023
Yes	18 (2.8)	41 (10.3)			106 (15.6)	69 (23.8)		
No	637 (97.3)	356 (89.7)			574 (84.4)	221 (76.2)		
Asian			4.47	.0344			0.10	.8877
Yes	18 (2.7)	21 (5.3)			36 (5.3)	16 (5.5)		
No	637 (97.3)	376 (94.7)			644 (24.7)	274 (94.4)		
Hispanic			7.06	.0079			3.31	.0691
Yes	70 (11.0)	64 (16.9)			120 (12.7)	65 (24)		
No	564 (89.0)	315 (83.1)			522 (81.3)	206 (76.8)		
Other			.01	.9297			1.12	.2898
Yes	78 (11.9)	48 (12.1)			141 (20.7)	69 (23.8)		
No	577 (88.1)	349 (87.9)			539 (79.3)	221 (76.2)		
Grade			2.72	.4370			2.73	.4352
9	187 (28.6)	127 (32.2)			197 (29.1)	96 (33.1)		
10	162 (24.8)	98 (24.9)			194 (28.7)	77 (26.6)		
11	176 (27.0)	90 (22.8)			178 (26.3)	66 (22.8)		
12	128 (19.6)	79 (20.1)			108 (16.0)	51 (17.6)		
Family structure			20.97	<.0001			2.45	.2938
One parent	143 (22.1)	74 (19)			186 (27.8)	73 (26)		
Two parents	474 (73.3)	267 (62.6)			443 (66.3)	184 (65.4)		
Other	30 (4.64)	48 (12.3)			39 (5.84)	24 (8.5)		
Current age			.23	.8901			3.60	.1650
<14	81 (15.7)	50 (15.7)			89 (17.6)	32 (14.8)		
15–17	353 (68.3)	213 (66.9)			253 (69.9)	147 (67.7)		
18+	83 (16.1)	55 (17.3)			63 (12.5)	38 (17.5)		

Values indicate sample size (N) with column percentage in parentheses.

groups. The relationships with variables listed in Tables 4 and 5 were largely similar across gift and nongift groups with the exception of light smoking, which showed a significant interaction effect (OR = 5.41; $p = .013$), indicating a stronger association with PPG in the lottery-ticket-gifted adolescents (OR = 2.41; $p > .05$) than in the lottery-ticket-non-gifted adolescents (OR = .56; $p > .05$).

Discussion

To our knowledge, this is the first study to investigate in a large sample of adolescent gamblers who did and did not receive instant (scratch) lottery tickets as gifts (1) sociodemographic characteristics; (2) differences in gambling attitudes and behaviors; and (3) relationships between gambling-problem severity and health/functioning characteristics, risk behaviors, and gambling motivations and behaviors. Adolescents who received lottery tickets as gifts were more likely to report one or more inclusionary criteria for pathological gambling, buy lottery tickets for themselves and receive other types of lottery tickets, and report attitudes or display behaviors seemingly linked to greater gambling involvement. However, with the exception of age at gambling onset, the relationship between gambling-problem severity and health/functioning characteristics, risk behaviors, and gambling motivations and behaviors were largely similar irrespective of lottery gift receipt. Implications of the findings are described below.

Sociodemographics

Previous studies indicate that scratch lottery tickets are the most popular type of lottery among youth, particularly those with a younger age at gambling onset [19]. In a study comparing youths from North America, Europe, and Oceana, problem versus nonproblem gamblers were more likely to start gambling at a younger age [20]. The current findings linking gift-receipt status to greater gambling-problem severity, along with earlier age at gambling onset, may hold important longitudinal implications if trajectories for gambling are similar to those for drinking, inasmuch as youth who begin drinking at younger ages have an increased risk for alcoholism later in life [21]. The current findings that adolescents who received scratch-ticket gifts were more likely to be Caucasian and live in two-parent or "other" households suggest that cultural and familial factors represent important considerations in youth lottery gambling prevention efforts.

Gambling attitudes and perceptions

The gift-recipient group was more likely to endorse differences in perceived parental approval of gambling, with greater percentages of parental approval and lower percentages of disapproval. The extent to which these beliefs may be related to gift receipt (connoting approval) or may reflect other factors (e.g., parental gambling, other behaviors or comments promoting

Table 4
Adjusted odds ratios for health and well-being measures

Variable/category	Gift instant lottery ticket (%)	No gift instant lottery ticket (%)	Interaction OR: gift versus. no gift
	At risk/problem/pathologic gamblers versus low-risk gamblers	At risk/problem/pathologic gamblers versus low-risk gamblers	At risk/problem/pathologic gamblers versus low-risk gamblers
Academic/extracurricular			
Any extracurricular activities	1.00 (.72–1.39)	1.27 (.87–1.85)	.87 (.54–1.40)
Grade average			
A and B	Reference	Reference	Reference
Mostly C	1.08 (.79–1.48)	1.22 (.87–1.73)	.89 (.57–1.39)
D or lower	2.02 (1.33–3.05)	1.23 (.79–1.93)	1.40 (.78–2.51)
Substance use			
Smoking, lifetime			
Never	Reference	Reference	Reference
Occasionally	1.44 (1.03–2.01)	1.80 (1.26–2.59)	.77 (.49–1.23)
Regularly	1.95 (1.35–2.84)	2.34 (1.48–3.69)	.99 (.57–1.73)
Marijuana, lifetime	1.79 (1.34–2.41)	1.45 (1.04–2.02)	1.19 (.78–1.82)
Alcohol, sip	.71 (.42–1.21)	1.59 (.95–2.66)	.50 (.25–1.01)
Alcohol, current			
Never regular	Reference	Reference	Reference
Light	1.19 (.73–1.94)	1.22 (.73–2.02)	1.15 (.59–2.25)
Moderate	1.40 (.87–2.24)	1.36 (.83–2.25)	1.15 (.59–2.21)
Heavy	1.90 (1.09–3.30)	2.00 (1.02–3.93)	1.16 (.51–2.63)
Other drug, lifetime	2.77 (1.80–4.25)	1.79 (1.05–3.05)	1.76 (.92–3.35)
Caffeine use			
None	Reference	Reference	Reference
1–2 per day	.85 (.57–1.27)	.71 (.47–1.08)	1.11 (.64–1.91)
3+ per day	1.28 (.84–1.94)	1.18 (.76–1.84)	.96 (.54–1.71)
Mood			
Dysphoria/depression	2.16 (1.51–3.09)	1.74 (1.16–2.60)	.98 (.60–1.61)
Aggression			
Serious fights	3.00 (1.92–4.69)	2.00 (1.19–3.38)	1.33 (.69–2.56)
Carry weapon	2.16 (1.58–2.94)	2.07 (1.46–2.93)	1.06 (.67–1.67)
Weight			
Normal	Reference	Reference	Reference
Underweight	.98 (.60–1.60)	1.20 (.67–2.16)	.85 (.41–1.77)
Overweight	.85 (.57–1.27)	1.54 (1.00–2.36)	.51 (.29–.89)
Obese	.98 (.54–1.78)	1.63 (.91–2.92)	.54 (.25–1.20)

Values indicate odds ratios with 95% confidence intervals in parentheses.

gambling) warrants additional investigation. A national survey of Canadian parents, with teens between the ages of 13 and 18, revealed that parents perceive adolescent gambling to be relatively unimportant compared with other risky behaviors [22]. Adolescents' perception of their parents' approval may be indicative of behavior in which adults themselves engage. This pattern appears consistent with findings in other areas of addiction, e.g., that smokers are more likely to provide tobacco products to minors [23].

The less frequent acknowledgement by the gift-recipient group of the importance of having parents who do not gamble raises questions whether parental gambling may be more prevalent in this group. Parental gambling participation has been reported to additively predict early gambling in children [13], and females with a problem-gambling parent had earlier ages at gambling onset and greater financial troubles [24]. Moreover, children of parents with gambling problems experience more depressive feelings and conduct problems by mid-adolescence than do children of parents without gambling problems [25]. Together, findings suggest that parental gambling involvement may lead to negative outcomes for adolescents.

The gift-recipient group was less likely to acknowledge the importance of having nongambling peers or engaging in non-gambling-related activities. Previous findings suggest a strong peer influence on gambling behaviors in adolescents [11]. The gift-recipient group was less likely to acknowledge the importance of learning about the potential harms of gambling, either from parents or from other family members, or being educated about such potential harms at school. Together, these data indicate a lesser likelihood of perceiving problem-gambling-prevention efforts as important, and such views should be considered in the development and implementation of youth-problem-gambling-prevention initiatives [26].

It may be beneficial to have gift-recipient groups suggest what strategies may work in preventing adolescent gambling, given that they frequently reported many current strategies as "not important." From a public policy standpoint, the implementation of effective youth-gambling-prevention strategies, and the education of adolescents and their parents of the negative outcomes of problematic gambling, could be particularly important. Such efforts involving both parents and children might help alter parental gambling attitudes and behaviors and youth perceptions of parental approval of gambling. Studies of adolescent smoking indicate that certain factors, such as concern for health and addiction, a positive self-image, and perceived self-confidence, influence adolescents' decisions about smoking [27]. Incorporating elements relating to these factors in educational and prevention approaches may be beneficial in youth-problem-gambling prevention.

Table 5
Adjusted odds ratios for gambling measures

Variable/category	Gift scratch tickets (%)	No gift scratch tickets (%)	Interaction OR: gift versus no gift
	At risk/problem/pathological gamblers versus low-risk gamblers	At risk/problem/pathological gamblers versus low-risk gamblers	At risk/problem/pathological gamblers versus low-risk gamblers
Gambling type			
Strategic	5.99 (1.71–21.0)	2.81 (1.13–6.98)	2.43 (.55–10.70)
Machine	2.63 (1.95–3.55)	1.78 (1.30–2.44)	1.47 (.96–2.25)
Gambling location			
Online	3.08 (2.24–4.23)	2.09 (1.36–3.21)	1.51 (.90–2.52)
School gambling	4.37 (3.20–5.97)	3.51 (2.50–4.94)	1.30 (.83–2.04)
Casino	3.52 (2.31–5.37)	4.29 (2.25–8.15)	1.00 (.48–2.09)
Triggers for gambling			
Pressure	4.30 (2.59–7.13)	3.51 (2.07–5.96)	1.22 (.60–2.46)
Anxiety	12.68 (5.67–28.40)	16.94 (5.75–49.94)	.68 (.18–2.52)
Reasons why gamble			
Excitement	2.75 (1.90–3.98)	2.82 (2.00–3.98)	1.04 (.64–1.69)
Financial reasons	3.45 (2.51–4.73)	3.06 (2.21–4.22)	1.18 (.76–1.82)
Escape	2.45 (1.83–3.28)	2.88 (2.05–4.04)	.94 (.61–1.43)
Social reasons	2.04 (1.54–2.71)	1.64 (1.18–2.29)	1.22 (.81–1.86)
People gamble with			
Family	1.49 (1.12–1.97)	1.24 (.91–1.70)	1.19 (.80–1.78)
Friends	1.50 (1.06–2.13)	2.01 (1.41–2.88)	.73 (.45–1.17)
Other adults	2.20 (1.64–2.96)	2.08 (1.42–3.04)	1.09 (.69–1.73)
Strangers	5.27 (3.22–8.61)	3.19 (1.63–6.23)	1.78 (.80–3.95)
Alone	3.12 (1.94–5.02)	3.32 (1.88–5.84)	1.09 (.54–2.21)
Time spent gambling			
1 hour or less	Reference	Reference	Reference
2+ hours/week	5.44 (3.67–8.07)	4.15 (2.49–6.90)	1.30 (.70–2.44)
Age at onset of gambling			
≤8 years old	Reference	Reference	Reference
9–11 years old	.80 (.49–1.30)	1.20 (.63–2.31)	.69 (.31–1.52)
12–14 years old	.72 (.47–1.11)	.74 (.43–1.30)	.93 (.47–1.85)
≥15 years old	.38 (.23–.61)	.91 (.51–1.62)	.39 (.19–.80)

Values indicate odds ratios with 95% confidence intervals in parentheses.

Relationships with gambling-problem severity

With the exception of age at gambling onset, our second hypothesis was largely not supported in that gambling-problem severity correlates were generally similar across the gift and nongift groups. Thus, whereas the receipt of scratch-ticket gifts may relate to gambling-problem severity and influence gambling attitudes and behaviors, including some particularly relevant to prevention strategies, the correlates of gambling-problem severity did not differ greatly in gift and nongift groups. However, the finding that ARPG was less likely than LRG to be associated with later age at gambling onset in the gift group is noteworthy and suggests that receiving instant lottery gambling tickets may promote the earlier engagement in gambling and development of problematic gambling, as reflected by reported earlier age at gambling onset and more frequent acknowledgement of ARPG, respectively. As other features linked to gambling-problem severity appear similar for the two groups, it might be difficult for adults (clinicians, school personnel) to identify how scratch-lottery-gift status may be influencing youth for whom they have responsibilities.

Relationships with problem/pathologic gambling

Given that the ARPG group included both at-risk and PPG respondents and that prior studies have demonstrated differences between these groups [19,28], we explored the extent to which relationships with health, functioning, and gambling measures might differ across lottery-gift groups if the PPG group was separated from the ARG group. The finding of a significant interaction effect for light smoking indicating a stronger relationship in the gift group versus the nongift group begs multiple questions and suggests several possibilities. First, the stronger link between PPG and light smoking in the lottery-gift group raises the question whether lottery-ticket gifts prime specific youth for riskier engagement in experimenting with tobacco and more risky gambling. Second, it raises questions about whether products may be obtained at similar venues (e.g., tobacco and lottery tickets at convenience stores) or used in conjunction (e.g., smoking while gambling). Future studies should examine these possibilities.

Prevention implications

Problem gambling represents an important public health issue. Although most efforts target adult pathological gambling, there is significant concern that adolescents and young adults have the highest prevalence estimates of problem and pathological gambling [26] and that problem gambling in adolescence may lead to pathological gambling in adulthood [29]. The Youth Gambling Risk Prevention Model [30] provides a basis for targeting gambling problems in adolescents who demonstrate differing levels of gambling involvement and may experience varying risks for the development of gambling-related problems. The primary, secondary, and tertiary methods of prevention proposed in this model warrant further testing.

The development of more stringent rules for not selling lottery tickets to minors and their enforcement appear very relevant to this model. A recent study in Montreal indicated that youths aged 15 to 17 were able to purchase lottery tickets

without any form of identification. Moreover, youths under 18 years of age were also able to access casino gambling despite restrictions [22]. It is probable that similar cases may occur in the United States, with laws regarding legal ages for participation varying according to jurisdiction and data suggesting increased underage participation by youth as they approach the legal age [20]. Data regarding youth smoking appear helpful to consider with respect to youth gambling prevention. Despite public support and laws preventing sales of tobacco to minors [23,31–35], tobacco sales to minors have increased recently [34]. However, as tobacco becomes more difficult to purchase, youth may seek to obtain tobacco from social sources, including family members and older adults [35]. The extent to which such behaviors may extend to lottery products warrants consideration, particularly because these behaviors would augment the importance of discouraging adults from providing lottery tickets to minors.

Increasing the awareness of the negative health outcomes and risks associated with problem gambling may be beneficial to adolescents, their families, teachers, educators, and other professionals (e.g., pediatricians). International efforts (e.g., those involving dissemination of the message, "Lotteries are not child's play; give responsibly this holiday season") reflect a widespread effort to target youth lottery gambling and engage adults with respect to limiting youth access to lottery gambling through gifts [36]. In Connecticut, the "Lottery Is Not Child's Play" initiative of the Connecticut Partnership for Responsible Gambling, promoted through the Connecticut Lottery website (http://www.ctlottery.org/Partnership/partnership.htm), explicitly states that lottery tickets are inappropriate gifts for minors and that adults should avoid involving underage children in lottery play and gambling. It is also important to examine the feasibility of enforcing statutes prohibiting gifting lottery tickets to minors because there may be complications related to the enforcement and public support of such mandates.

Strengths, limitations, and future directions

The current study has multiple strengths including a large sample assessed using inclusionary criteria for pathological gambling and questions used in other youth surveys. Nonetheless, there are limitations. First, the sample is not nationally representative, and the findings may not generalize uniformly. Second, owing to the cross-sectional design of the survey, the ability to examine the nature of observed associations is limited. For example, it cannot be determined whether receiving scratch-lottery gifts leads to specific attitudes, specific attitudes lead to receiving gifts, or other factors contribute to the observed relationship. Future studies might benefit from prospective designs. Third, several of the measurements, including those assessing depressive and aggressive features, used nondiagnostic and dichotomous measurements. Future studies using more precise measurements may be valuable in understanding the impact of lottery-scratch-ticket gifts, and they may benefit from including measurements of other "gambling gifts" (e.g., parents allowing children to borrow credit cards for online gambling). Fourth, some measurements (e.g., those assessing aggressive tendencies) use different timeframes. Although these questions are derived from the Youth Child Risk Behavior Survey (thus facilitating comparisons across studies), the differing timeframes may add complexity to understanding findings. Fifth, other questions queried perceptions, and it is not known the extent to which these perceptions are fully grounded (e.g., the extent to which youth know about parental attitudes or behaviors). Sixth, past-year receipt of gifted tickets was studied, given the interest in recent gambling behavior. Lifetime data were not assessed and may have provided additional insight. Seventh, the frequency but not quantity of lottery-ticket gifting was assessed. Assessment of lottery-ticket-gift quantities may have been informative. Eighth, inasmuch as youth problem gamblers are more likely to have parents who gamble [20], future studies might assess concurrently gambling behaviors and attitudes from youth and their parents. Ninth, because youth gambling participation may vary in states with different laws governing legal ages for gambling and permitting different forms of gambling, future studies should assess larger geographic regions (including multiple states) to examine the extent to which gambling behaviors and attitudes may vary accordingly.

The receipt of lottery-scratch-ticket gifts during childhood or adolescence is associated with problematic gambling features, early age at gambling onset, and permissive attitudes and promotional behaviors toward gambling. Moreover, youth who have received instant lottery tickets as gifts appear less likely to believe that gambling prevention strategies are important. The extent to which receipt of instant-lottery-ticket gifts may promote gambling behaviors and the development of gambling problems warrants consideration, and strategies for education, prevention, and treatment should incorporate findings relating to receipt of gambling products by underage individuals.

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Supplementary Material

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