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Does Adolescent Gambling Co-occur with Young Fatherhood?

Grace P. Lee, MHS¹, Carla L. Storr, ScD^{1,2}, Nicholas S. Ialongo, PhD¹, and Silvia S. Martins, MD, PhD¹

¹Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, Maryland ²Department of Family and Community Health, University of Maryland School of Nursing, Baltimore, Maryland

Abstract

Background—Young fatherhood is associated with various adverse outcomes. This study aims to describe the relationship of adolescent gambling with young fatherhood (by age 20) while adjusting for several young fatherhood antecedents.

Methods—Data were from 294 males who have been followed for 16 years since entering first grade in nine inner city public schools (86% African Americans, 81% of the original male cohort). Self-reports of impregnation (including age) and gambling were collected during late adolescence. Nelson-Aalen curves and Cox regression models assessed the hazard of young fatherhood among adolescent nongamblers, social gamblers, and problem gamblers.

Results—More Young Fathers than Nonfathers reported adolescent social (49.2% vs 42.5%) and problem gambling (28.3% vs 13.2%, $p < .001$). Problem gamblers were the most likely to impregnate someone by age 20, followed by Social Gamblers, then Nongamblers. Problem gambling (aHR=3.16, 95% CI=1.75, 5.72, $p < .001$) had the highest increased hazards of young fatherhood, followed by social gambling (aHR=1.95, 95% CI=1.30, 2.94, $p = .001$), high school drop out (aHR=1.75, 95% CI=1.14, 2.70, $p = .01$), and subsidized lunch status (aHR=1.69, 95% CI=1.01, 2.38, $p = .04$).

Conclusion—Adolescent male gamblers, particularly problem gamblers, were more likely than their nongambling peers to become fathers by the age of 20. Such a result shows that there is a subpopulation of males who are at high risk for adverse outcomes such as young parenthood and problem behaviors. Only through further studies could the needs of this subpopulation be better assessed so that appropriate assistance could be delivered to better the lives of such individuals.

Background

Young fatherhood is a public health issue that, in terms of research, has slowly come out of the shadow of adolescent pregnancies over the past recent years. Studies of urban adolescent males found rates of fatherhood to be between 10–30% before the age of 19 or 20,^{1,2} which were similar to estimates of 14–24% by age 21 or 22 years from large nationally representative studies.^{3,4} Males who become fathers during adolescence tend to be on average 2 to 3 years older than the adolescent girls they impregnate.⁵

Address correspondence to: Dr. Martins, Columbia University, Department of Epidemiology, 722 West 168th St, room 509, New York, NY 10032. ssm2183@columbia.edu.

Dr. Martins is now at Columbia University in New York.

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Adverse outcomes of young fatherhood are varied and long-lasting. Similar to adolescent mothers, young fathers report lower self-esteem, lower perceived social support from friends and the community, and lower general life satisfaction after birth of the child.⁶ Young fathers report significantly more academic problems and less years of education than nonfathers and older fathers.^{7,8} Compared to childless young men, young fathers were more likely to commit delinquent acts such as theft, trespassing, assault, be called into court, and be more involved with problem behaviors such as alcohol and drug use.^{1,9} By age 30, more men who became fathers by age 22 were found to be living in public housing, receiving government benefits, working as manual laborers, and unemployed than nonfathers.⁷ However, adversity was not faced only by men whose sex partners gave birth upon impregnation. Higher psychological distress scores had been noted by age 25 among those who had impregnated a partner by age 21 than those who did not experience impregnation by age 21.¹⁰ Additionally, psychological distress was just as high among young men who became fathers as it was among those whose adolescent partners' pregnancies ended in abortion.¹⁰

Several familial factors have consistently been shown to be associated with young fatherhood. Mother's age at first birth is negatively associated with young fatherhood.^{4,7,11–13} Sons of adolescent mothers have almost three times the risk of becoming a father by age 20 compared to those with older mothers,¹³ with each one-year increase in mother's age at first birth estimated to reduce her son's odds of becoming a father by age 21 by 15%.⁴

Young fathers also tend to grow up in households of low socioeconomic status (SES), particularly single young mother households.^{3,7,11} The heightened risk of young fatherhood in single mother households could be due to several reasons. Firstly, through social learning, sons of young single mothers might not only view young parenthood as normative behavior; but with the constant absence of their own fathers throughout the young men's lives, they might also regard pregnancies as the mother's responsibility and not the father's.¹⁴ Secondly, single mother households have also been found to experience the most financial struggles out of all family structures.¹⁵ Part of the reason behind such disparity could be that young single mothers also tend to report low academic achievement.¹⁶ As a result, children from such families not only have less resources and opportunities available for them, but they also have less parental academic expectations, all of which could lead to the children's own low academic abilities and achievement.¹⁷ Sociologists have suggested that young men with limited education and employment opportunities might view fatherhood as a marker of manhood that emphasized sexual prowess.¹⁸ Another explanation could be the low parental monitoring within such households.¹⁹ For example, Hofferth & Goldscheider⁴ found that young men who reported low parental monitoring had 75% increased odds of fathering by age 20 compared to those who reported higher parental monitoring. Involvement in problem behaviors might partly attribute to the increased risky sexual behaviors that led to the young pregnancies.^{20–22}

Gambling, particularly problem gambling, is another problem behavior that has been found to be strongly associated with low SES, substance use, delinquency, and risky sexual behaviors.^{23–26} The Diagnostic and Statistical Manual of Mental Disorders (4th ed.; *DSM-IV*²⁷) describes problem gambling as a continuous or periodic loss of control over gambling behavior; it is marked by irrational thinking and erroneous cognitions, a preoccupation with gambling and with obtaining money to gamble, a continuation with gambling despite adverse consequences and an inability to stop gambling despite a desire to do so. Furthermore, according to the Problem Behavior Theory, which states that problem behaviors often co-occur among adolescents and young adults,²⁸ adolescent males who are problem gamblers could also exhibit more risky sexual behavior. Hirschi and Gottfredson²⁹

also suggested that the lack of self control explains the tendency of an individuals' engagement in various types of addictive behaviors. Numerous studies have found impulsivity to be positively associated with adolescent gambling and problem gambling.^{30,31} Likewise, impulsivity has been found to be associated with increased risky sexual behaviors during adolescence.^{32,33} Additionally, adolescent problem gamblers report taking significantly more sexual risks than adolescent nongamblers.^{34,35} Risky sexual behavior, in turn, increases the odds of fatherhood by young adulthood.³⁶ However, there does not appear to be any research exploring the co-occurrence of young fatherhood and adolescent gambling. The current study aims to describe the relationship of adolescent gambling behavior with young fatherhood among a sample of predominantly low-income, urban, African American males while adjusting for many of the other risk factors and behaviors found to be associated with young fatherhood in previous studies. We hypothesize that young fatherhood will occur more often and at an earlier age if they are involved in gambling activities during early adolescence.

Methods

Sample

The data came from the Johns Hopkins Center for Prevention and Early Intervention Cohort 3 project,³⁷ a study initiated as a randomized prevention trial targeting academic achievement and aggression. Cohort recruitment occurred in Fall 1993 at nine urban primary public schools, primarily located in western Baltimore, MD (n=678, mean age=6.2 years, 53% male). Within each school, there were three 1st grade classrooms, which were randomly divided into one control and two intervention classrooms. Teachers in the control classrooms provided the usual curriculum while teachers in the intervention classrooms implemented either classroom behavior management strategies or enhanced parent-school communication.³⁷ While the intervention only lasted for one year, the cohort was followed-up annually. Of the original cohort of 678 students, approximately 80% were successfully followed up during each assessment that took place between the ages of 17 and 22 years.

The current study used data from the 294 male participants who provided any data on fatherhood and gambling behavior, which were both first assessed in the age 17 (2004) interview. Eighty-one percent of the original male cohort had information on both key variables; there were no differences by race, percentage receiving subsidized lunches, or intervention condition between the study sample and the original sample of 362 males (p values>.05). As seen in Table 1, the majority of the 294 participants were African Americans (86%), and 70% received free or reduced-price lunches (a proxy for low SES). Half of the sample had been raised by a single caregiver. Approximately 20% of the participants were high-school dropouts. Study protocols were approved by institutional review boards (IRB) of Johns Hopkins University.

Measures

Young Fatherhood (assessed annually between 2004–2009)—Self reports of fatherhood were collected via the question: “Have you ever gotten someone pregnant, including current pregnancies, still births, miscarriages, or live births in which the baby later died?” Nearly three-fourths (72%) of those acknowledging having impregnating someone reported this in more than one interview. Participants were then asked to provide their age the first time they had impregnated someone; to limit recall bias the age provided at the first acknowledgement was used. Those who reported having impregnated a sex partner by age 20 were classified as “Young Father” and those who reported no impregnations by age 20 were classified as “Nonfathers.” For time to event type analysis, if a participant reported impregnating a partner and his age at first impregnation was missing, we imputed his age at

the time of the first assessment survey with the positive impregnation report as a conservative proxy of age at first impregnation (7.5% imputed).

Adolescent Gambling (assessed in 2004, 2006, 2007.)—The South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA) assessed gambling behavior when participants were between the ages 16–19 years. The SOGS-RA is a 12-item adaptation of the adult orientated SOGS, that assesses gambling behaviors and problems in the 12 months preceding the interview using wording of items and response options that reflect adolescence gambling behavior at an age-appropriate reading level.³⁸ The scale correlates with gambling activity ($r=0.39$), gambling frequency ($r=0.54$), and the amount of money gambled in the past year ($r=0.42$).³⁸ The Cronbach's alpha is .86 for males.³⁸ Those who reported not having gambled in the past 12 months are classified as 'nongamblers'. Gamblers who scored 0–1, which meant they had essentially had no gambling problems, were classified as 'social gamblers' and those with a score of 2 or more were classified as 'problem gamblers'.³⁹ Others have found that adolescents with a few problems (i.e., 2–3 problems) are very similar to those with more problems.⁴⁰ Participants were classified based on their highest score at any of the data waves.

Conduct Disorder (assessed annually between 2000–2004)—The Conduct Disorder module of the Diagnostic Interview Schedule for Children (DISC-IV⁴¹) assessed whether youth met the DSM-IV criteria for a past-year diagnosis of early conduct disorder. Endorsement of at least three self reported symptoms, such as having ever shoplifted, in the past year was needed to be classified as a case of current conduct disorder. A youth was classified as having conduct disorder if they met criteria during any of the age 13–17 interviews.

Alcohol and Illegal Drug Use (assessed annually between 2000–2004)—Questions from the Monitoring the Future National Survey⁴² collected self-reports of past-year use of alcohol and illegal drugs (marijuana, crack cocaine, cocaine, heroin, inhalants, and ecstasy). These sections of the interview were completed using Computer Assisted Personal Interview (CAPI) to enhance truthful reporting. A youth indicating use in any of the interviews conducted between ages 13–17 was classified as an early-onset alcohol user and/or early onset illegal drug user.

Parental Monitoring (assessed annually between 2000–2004)—The Parental Monitoring Subscale of the Structured Interview of Parent Management Skills and Practices—Youth Version (SIPMSP⁴³) assessed parental monitoring by asking youths to respond to questions such as “How often would your parents or a sitter know if you came home an hour late on weekends?” Each item within the subscale was rated on a 5-point Likert scale (1=all of the time to 5=never). The average score of the seven items indicated the overall parental monitoring level with higher scores indicating less monitoring. The Cronbach's alpha was found to be 0.62.⁴⁴ For the current study a cumulative parental monitoring level in adolescence was calculated by averaging the scores collected across ages 13–17. Three groups of parental monitoring level were next created based on tertiles of the score: High (lowest tertile), Moderate (middle tertile), and Low (highest tertile).

High -School Dropout—At age 19, participants were asked “What is the last year of schooling that you complete?” Those with less than a high school diploma or GED were classified as high-school dropouts.

Demographic characteristics—Race, household structure (two-parent/caregiver or single-parent/caregiver), lunch status (full-price or free/reduce-price) were collected at baseline when the sample was age 6.

Analysis

Exploratory analyses with Chi-square statistics were first conducted to uncover differences in the demographic and behavioral characteristics between Young Fathers and Nonfathers. Nelson-Aalen cumulative hazard analyses next compared the risks of young fatherhood among Nongamblers, Social Gamblers, and Problem Gamblers.

Cox proportional hazards models were next fitted to examine the hazard of adolescent gambling on young fatherhood.⁴⁵ Simple Cox models first tested for the unadjusted associations between young fatherhood and each covariate (i.e., gambling status, race, household structure, lunch status, conduct disorder, alcohol use, illegal drug use, high school drop out, and parental monitoring). Next, a multivariate Cox model assessed the association between young fatherhood and adolescent gambling status adjusted for all other covariates. Due to the initial study design, models need to account for the sampling and intervention strategies (i.e. students were clustered within schools). Individuals belonging to the same cluster were likely to resemble one another due to their shared environment; and if the resemblances in outcomes among those in each cluster were ignored, the standard errors would be underestimated, inflating the Type I error.⁴⁶ As a result, a variant of the Huber-White sandwich estimator of variance was used to obtain robust standard errors and variance estimates. All analyses were performed using STATA 11.0.⁴⁷

Results

Among the 294 males with complete fatherhood and gambling data, 41% (n=120) reported fathering by age 20. Thirty-five percent of the sample were Nongamblers (n=104), 45% were Social Gamblers (n=133), and 19% were Problem Gamblers (n=57). The three most frequent types of gambling activities were betting money on games of personal skill such as pool or basketball (Social Gamblers: 58%; Problem Gamblers: 77%), card games (Social Gamblers: 50%; Problem Gamblers: 80%), and dice games (Social Gamblers: 35%; Problem Gamblers: 61%). Among Problem Gamblers, the mean SOGS-RA score was 3.9 (SD=1.8). As seen in Table 1, significantly more Young Fathers than Nonfathers were adolescent Social and Problem Gamblers. A similar pattern was observed for subsidized lunch status, early-onset conduct disorder, early-onset illegal drug use, high-school dropout, low parental monitoring in adolescence.

Figure 1 shows the Nelson-Aalen cumulative hazard curves, stratified by adolescent gambling status. The cumulative hazard of young fatherhood at a specific age indicates the hazard of the event of fatherhood at that age, conditional on not having experienced the event at the specified age. Males who problem gambled during adolescence were the most likely to become fathers by age 20, followed by those who social gambled, with those who never gambled reporting the lowest cumulative hazards ($p<.001$). The absolute differences in cumulative hazards also grew larger with increasing age. For instance, the cumulative hazard of fatherhood by age 20 was 52.6% (95% CI=40.4%, 66.0%) among Problem Gamblers, 26.7% (95% CI=20.0%, 35.1%) among Social Gamblers, and 19.3% (95% CI=12.9%, 28.3%) among Nongamblers.

Results of the unadjusted and adjusted Cox regression models are shown in Table 2. The unadjusted models fitted the bivariate associations between young fatherhood and each covariate. The adjusted model examined the relationship between adolescent gambling status and young fatherhood while controlling for race, household structure, lunch status,

early-onset conduct disorder, early-onset alcohol use, early-onset illegal drug use, high school drop out, and parental monitoring. Males who reported social gambling and problem gambling during adolescence had approximately two and three times, respectively, the hazards of being a young father than those who did not report any adolescent gambling. Subsidized lunch status and high school drop out were also associated with more than a two-third increase in hazard of fathering by age 20.

Discussion

Approximately 40% of the male young adults in the current sample indicated they had impregnated a sex partner by age 20. Through bivariate associations, we found adolescent gambling (both social and problem gambling), subsidized lunches (a proxy for low SES), early-onset conduct disorder, early-onset alcohol use, early-onset drug use, low parental monitoring, and dropping out of high school to be positively associated with young fatherhood. However, after adjusting for all of the covariates, only the positive associations with both adolescent social and problem gambling, subsidized lunch status, and high-school drop out remained statistically significant.

The current study used subsidized lunch status as a proxy for low SES. Its positive association with young fatherhood among the current sample of young men is consistent with past studies.^{3,7,11} Many researchers have also found low SES to be associated with adolescent gambling.^{26,48} Furthermore, growing up in low SES environments, individuals often experience many adversely stressful events, as evidenced by the high rates of high school dropout, incarceration, low employment, and deaths in low SES neighborhoods.^{49,50} In the same predominantly African American sample reported on in this paper, Storr and colleagues⁵¹ found gamblers to experience more events than nongamblers, and directly experiencing threatening and deviant/violent types of events was associated with problem gambling symptoms. Among male adolescents, maladaptive avoidance coping strategies have been found to be more common among problem gamblers than nongamblers.⁵² Therefore, engaging in risky sexual practices and gambling activities might be coping mechanisms adolescents from low SES backgrounds use as a way to dissociate from the adverse events in their lives.

According to the Problem Behavior Theory, individuals tend to engage in multiple problem behaviors,²⁸ which some have suggested could be due to the lack of self control.²⁹ Supporting the theory, studies have found gambling and, particularly, problem gambling to be positively correlated to risky sexual behaviors, such as multiple sex partners and unprotected sex, among adolescents.^{34,35} Such risky sexual behaviors have been demonstrated to be antecedents to young fatherhood,^{53–55} thus bridging the association between adolescent gambling and young fatherhood.

Conversely, while the unadjusted hazard estimates of early onset alcohol and illegal drug use appeared to be associated with young fatherhood, such associations were attenuated upon controlling for the demographic and behavioral covariates. The relationship between substance use and young fatherhood could be confounded by the other covariates, such as low SES. For instance, research have shown that adolescents from low SES backgrounds and single parent households were more likely to have ever used alcohol and illegal drugs than those from high SES and two-parent households.^{56–59} Furthermore, studies that have shown substance use to be associated with young fatherhood generally did not concurrently adjust for SES (e.g.^{1,22,53}). Therefore the lack of associations found between adolescent substance use and young fatherhood in the present study could reflect their true relationships.

The current sample of males was predominantly low-income African Americans, a subpopulation that past research have shown to have the highest odds of becoming young fathers, and mostly likely to view young fatherhood favorably and oppose abortions as an option to unplanned pregnancies.^{14,60,61} Such findings suggest that most impregnations reported by the participants ended in births. As such, another important reason to invest research into further understanding young fatherhood is for the wellbeing of the baby. Studies have found the relationship between the young parents often decline with time.^{62,63} For example, Larson and colleagues⁶³ found that adolescent mothers who reported their child's biological father as their current boyfriend decreased from 60% one month after birth to 26% forty-two months after birth. Failure of the father to achieve ongoing intimacy with the mother also correlated negatively with paternal involvement.⁶² In fact, many young, low-income African American fathers become nonresident fathers with little contact with their child(ren).¹⁴ Because father's involvement and presence in children's lives have positive benefits for the children's adjustment and development such as academic achievement, mental health, and satisfactory intimate relationships,^{7,64} it is imperative to fully understand the risk process of young impregnation so as to develop effective prevention and intervention programs for those at risk.

There are several limitations to the study. Firstly, the small sample size greatly restricted the study's statistical power, which could partially explain the attenuation of associations between young fatherhood and certain covariates in the adjusted model. Secondly, the majority of the data used were based on self-reports, thus subject to recall and social desirability bias, particularly those regarding gambling, substance use, and impregnation. Another limitation associated with the male participants' self-reported data on impregnation is that many might not know they had caused pregnancies. Such potential unawareness combined with the relatively low reliability of the present study's self-report of impregnation could further attenuate the current findings. Because the self reports of age of gambling onset was available for only a small subset of the sample (n=80), the study was unable to establish the temporal sequencing of fatherhood and gambling. Thirdly, current study did not collect information regarding the participants' mothers' ages of first birth, which have been shown in the past to be associated with young fatherhood.^{4,7,12,13} Similarly, the composition of the households, particularly of the single parent/caregiver households, that the participants had grown up in was not identified. Among urban African American communities, from which the current cohort was predominantly sampled, single households were generally led by either mothers or grandmothers.⁶⁵⁻⁶⁷ Some studies showed that children who grew up with their grandmothers exhibited less deviance and were better adjusted than those who grew up with single mothers,^{68,69} therefore the lack of distinction among the types of single households could explain the present study's lack of association between household structure and young fatherhood. Finally, adolescent gambling could be a proxy of other underlying personality traits such as impulsivity or sensation seeking,^{30,31} thus suggesting that the current finding of the co-occurrence of adolescent gambling behaviors and young fatherhood only depicted a small part of a bigger picture. Future studies should focus more on the mechanisms that lead to young fatherhood, adolescent gambling, and other potential characteristics so as to gain a better understanding of the public health issue of young fatherhood.

A major strength of the study was the sample, which was selected from an epidemiologically defined population representative of students in schools located in urban neighborhoods. Because urban families experience high rates of marital disruption, and single-parent/caregiver households tend to have lower parental-monitoring,⁷⁰ youth from such families represent a highly vulnerable population at risk for adverse outcomes such as young parenthood and problem behaviors. Study findings from the current sample could be generalizable to other young men from low-income urban settings, and inform intervention

researchers the needs of this population so as to shape their interventions to maximize their effectiveness.

Conclusion

Young fatherhood by age 20 was common among males who had grown up in low-income, urban settings. The current study examined the co-occurrence of young fatherhood and adolescent gambling while adjusting for several previously found risk factors. Amongst the sample of predominantly African American young men, those who reported gambling, particularly problem gambling, during adolescence had increased hazards of reporting first fatherhood by age 20. Such a result shows that there is a subpopulation of males who are at high risk for adverse outcomes such as young parenthood and problem behaviors. Only through further studies could the needs of this subpopulation be better assessed so that appropriate assistance could be delivered to better the lives of such individuals.

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Figure 1.
Unadjusted Cox regression cumulative hazard curves for participant's age at first fatherhood by adolescent gambling status

Table 1Characteristics by young fatherhood status⁺

	Overall Sample (N=294) n (%)	Nonfathers (n=174) n (%)	Young Fathers (n=120) n (%)	p
Gambling Status				
Nongamblers	104 (35.4)	77 (44.3)	27 (22.5)	<.001
Social Gamblers	133 (45.2)	74 (42.5)	59 (49.2)	
Problem Gamblers	57 (19.4)	23 (13.2)	34 (28.3)	
Race				
Black	253 (86.1)	145 (83.3)	108 (90.0)	.11
White	41 (13.9)	29 (16.7)	12 (10.0)	
Household Structure				
Two-Parent/Caregiver	116 (39.5)	70 (40.2)	46 (38.3)	.95
Single-Parent/Caregiver	144 (48.9)	84 (48.3)	60 (50.0)	
Missing	34 (11.6)	20 (11.5)	14 (11.7)	
Lunch Status				
Full	84 (28.6)	60 (34.5)	24 (20.0)	.02
Subsidized	206 (70.0)	111 (63.8)	95 (79.2)	
Missing	4 (1.4)	3 (1.7)	1 (0.8)	
Intervention Status				
No	101 (34.4)	63 (36.2)	38 (31.7)	.42
Yes	193 (65.6)	111 (63.8)	82 (68.3)	
Early-Onset Conduct Disorder				
No	209 (71.1)	130 (74.7)	79 (65.8)	.02
Yes	61 (20.8)	27 (15.5)	34 (28.3)	
Missing	24 (8.2)	17 (9.8)	7 (5.9)	
Early-Onset Alcohol Use				
No	121 (41.2)	76 (46.7)	45 (37.5)	.07
Yes	143 (48.6)	76 (43.7)	67 (55.8)	
Missing	30 (10.2)	22 (12.6)	8 (6.7)	
Early-Onset Illegal Drug Use				
No	110 (37.4)	76 (43.7)	34 (28.3)	.01
Yes	160 (54.4)	81 (46.5)	79 (65.8)	
Missing	24 (8.2)	17 (9.8)	7(5.9)	
High School Drop Out				
No	189 (64.3)	122 (70.1)	67 (55.8)	.01
Yes	65 (22.1)	28 (16.1)	37 (30.8)	
Missing	40 (13.6)	24 (13.8)	16 (13.4)	
Parental Monitoring				
High	61 (20.7)	46 (26.4)	15 (12.5)	.01
Moderate	99 (33.7)	53 (30.5)	46 (38.3)	
Low	110 (37.4)	58 (33.3)	52 (43.3)	

	Overall Sample (N=294) n (%)	Nonfathers (n=174) n (%)	Young Fathers (n=120) n (%)	p
Missing	24 (8.2)	17 (9.8)	7 (5.8)	

⁺ Young fathers reported having caused first impregnation by age 20 years.

Table 2

Young fatherhood⁺ and adolescent behaviors and characteristics

N=294	Unadjusted ¹		Adjusted ²	
	HR	95% CI	p	aHR 95% CI
Gambling Status				
Nongamblers	1.00			1.00
Social Gamblers	1.86	1.27,2.74	.002	1.95 1.30,2.94 .001
Problem Gamblers	3.06	1.64,5.71	<.001	3.16 1.75,5.72 <.001
Race				
Black	1.00			1.00
White	0.69	0.33,1.44	.32	0.57 0.29,1.14 .11
Household Structure				
Two-Parent/Caregiver	1.00			1.00
Single-Parent/Caregiver	1.04	0.71,1.53	.83	0.75 0.53,1.07 .11
Lunch Status				
Full	1.00			1.00
Subsidized	1.85	1.18,2.90	.01	1.69 1.01,2.83 .04
Early-Onset Conduct Disorder				
No	1.00			1.00
Yes	1.84	1.20,2.80	.005	1.35 0.88, 2.07 .17
Early-Onset Alcohol Use				
No	1.00			1.00
Yes	1.37	1.04,1.82	.03	1.05 0.72,1.54 .79
Early-Onset Illegal Drug Use				
No	1.00			1.00
Yes	1.91	1.37,2.66	<.001	1.27 0.81,1.99 .29
High School Drop Out				
No	1.00			1.00
Yes	1.81	1.21,2.69	.004	1.75 1.14,2.70 .01
Parental Monitoring				

N=294	Unadjusted ¹		Adjusted ²	
	HR	95% CI	aHR	95% CI
High	1.00		1.00	
Moderate	2.10	1.09,4.05	1.84	0.97,3.49
Low	2.20	1.27,3.79	1.62	0.85,3.07

¹ Young fathers reported having caused first impregnation by age 20 years

² Simple Cox regression models of young fatherhood and each individual covariate

³ Cox regression model of young fatherhood and gambling status adjusted for all listed covariates (i.e., race, household structure, lunch status, conduct disorder, alcohol use, illegal drug use, high school drop out, and parental monitoring)