

SAMPSON LEE BLAIR

The State University of New York

<https://orcid.org/0000-0001-5039-7139>

TIMOTHY J. MADIGAN

Commonwealth University

<https://orcid.org/0000-0002-6185-534X>

## RISK-TAKING AND SCHOOL PERFORMANCE: AN EXAMINATION OF FAMILY, PEER, AND SCHOOL CONTEXTS\*

**Introduction:** There is little debate that risk-taking behaviors during adolescence, such as substance use and delinquency, can lead to deleterious outcomes.

**Research Aim:** This study examines how risk-taking behaviors affect academic success and also considers the relative influence of the family, peer, and school contexts.

**Method:** Using data from a nationally representative sample of high school seniors.

**Results:** Females and males are shown to have similar patterns of risk-taking behaviors, although males do report higher rates of marijuana use and delinquent acts. However, risk-taking behaviors appear to be more influential upon males' school performance, as compared to females. Additionally, the family and peer contexts yield greater influence upon females' grade performance, while the school contextual factors appear to affect females and males in a similar manner. Family and peer contextual factors more readily affect males' likelihood of pursuing a college degree.

**Conclusions:** The gender and contextual patterns shown in the analyses suggest that the relationship between risk-taking and academic success is complex. The findings of this study, along with its implications, are discussed within the ecodevelopmental perspective.

**Keywords:** adolescence, family, peers, risk-taking, school performance, substance use

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## INTRODUCTION

Around the globe, parents aspire to see their daughters and sons perform well in high school, so that they can then increase their chances of having a good life. Researchers have long noted that educational attainment is linked with improved cognitive functioning, and is also associated with higher occupational attainment, higher incomes, and a variety of positive life outcomes (Moore & Stoddard, 2025). However, as adolescents proceed through their high school years, they undergo a wide array of physical, cognitive, and emotional maturation, and increasingly desire to be accepted by their peers, while seeking to be more independent from parental control and oversight (Prins et al., 2021). Although they often become more involved in school activities (e.g., sports, clubs, see Ladis et al., 2021), their motivation to perform well in school and to pursue higher levels of educational attainment begins to wane, which potentially affects their performance in school (Crosnoe & Benner, 2015). Concurrently, this critical time is also when adolescents are tempted to engage in a variety of risk-taking behaviors, such as substance use and delinquency (Johnston et al., 2019).

Risk-taking during the adolescent years takes on various forms, and among the more typical forms is substance use. The appeal of drinking alcohol, smoking, using marijuana, or even trying more illicit and dangerous substances (e.g., heroin, cocaine) is quite strong, and leads to experimentation and use by many adolescents (Kreski et al., 2022). In the U.S., alcohol consumption is common among teens, as over 35% of high school seniors drink on a regular basis, and do so at an alarming rate (Kann et al., 2014). Among teens who do drink, researchers have noted that they drink to the point of being intoxicated approximately 2.5 times per month (Yurasek et al., 2019), with such patterns peaking during the late adolescent years (Hutchinson et al., 2020). Alcohol consumption is usually a beginning point, as many adolescents subsequently experiment with smoking (Johnston et al., 2019). The use of traditional cigarettes among adolescents has declined over recent years, yet has been supplanted by electronic cigarettes (vaping), with approximately one out of four high school students vaping on a regular basis (Meich et al., 2019). Marijuana use has increased over the past decade, and has become the second most commonly used substance, with over one out of three high school students using it (Beverly et al., 2019). Of course, delinquency is another common form of risk-taking, as the mid-to-late adolescent years represents a peak time in the performance of such acts as shoplifting, vandalism, and other illegal activities (Hoffman, 2020).

While risk-taking during adolescence is certainly common, its various forms have long been noted as resulting in poor outcomes and consequences for adolescents. In this study, the potential impact of risk-taking upon educational performance will be examined. Researchers have previously noted that behaviors such as substance use and delinquency are associated with school performance and at-

tainment (e.g., Bradley & Greene, 2013), yet the specific aspects of this relationship remain unclear. In response to this need for a better understanding of the impacts of risk-taking by adolescents, this study will examine how risk-taking behaviors affect academic success and will also focus upon the relative influence of the family, peer, and school contexts. Given that the lives of adolescents revolve primarily around the contexts of family, peers, and school, this study will examine how each of these contexts may affect academic performance, while also controlling for the risk-taking behaviors of adolescents. Family cohesion and relationships, peer associations, and the nature of the school environment have all been linked to school performance and attainment (e.g., Stewart, 2008), but there remains a need to better comprehend how these contexts affects school performance, relative to the risk-taking behaviors of adolescents, themselves. Additionally, since previous studies have noted gender differences in risk-taking behaviors among adolescents (e.g., Johnston et al., 2019) and differences by gender in the influence of contextual factors (e.g., Rusby et al., 2018), this study will examine these patterns separately among adolescent females and males. Thus, this study will seek to examine the potentially interwoven influences of the family, peer, and school contexts of adolescents, in combination with their respective risk-taking behaviors, upon school performance and aspirations for educational attainment.

### **Risk-Taking and School Performance**

The adolescent years typically involve a variety of maturational changes, which often lead to subsequent changes in behaviors. Risk-taking can occur in numerous forms, with many involving rebellion against authority figures, thrill-seeking, anti-social behaviors (e.g., fighting), and substance use (Gullone et al., 2000). Experimentation with alcohol, tobacco, or marijuana, along with acts of delinquency, tend to increase during early adolescence and gradually decrease as individuals enter their early adult years (Gutman & Eccles, 2007). Hence, the high school years are the prime period for adolescent risk-taking, and also the years in which their performance at school may be endangered by such behaviors. Researchers have consistently demonstrated that risk-taking is associated with lower levels of school performance (e.g., Huffman et al., 2000), yet a clear explanation for these patterns remains elusive.

While the forms of risk-taking can vary, the general impact of these upon school performance seems relatively uniform. Higher levels of alcohol and marijuana usage, for example, have been associated with lower grade point averages among high school students (Bolin et al., 2017). However, other studies have noted that lower levels of marijuana use are actually associated with higher levels of school performance (Blair & Dong, 2021). Tobacco use, particularly on a daily level, has similarly been associated with lower levels of school performance (Stiby et al., 2014). Hence, there needs to be a distinction made between experimenta-

tion with particular substances, as compared to regular (i.e., daily) usage. With marijuana, higher usage levels may affect not only current school performance, but may also lower eventual educational attainment (Wallis et al., 2019). Similarly, alcohol consumption has a negative association with students' grade performance, while higher rates of usage (e.g., binge drinking) can negatively affect attainment rates (Hemphill et al., 2014). The impact of juvenile delinquency follows a similar pattern, with higher rates of delinquency being associated with both lower school performance and significantly higher rates of dropping out (Robison et al., 2017). These risk-taking patterns may reduce school performance by reducing hours spent on homework and studying, negatively affecting relationships with teachers and peers, and also decreasing school attendance.

Adolescent risk-taking does not occur within a social vacuum; instead, the adolescent years are a time in which individuals are undergoing maturation of several varieties, and the social contexts in which they spend their day-to-day lives begin to expand. Within these environmental contexts, particularly those of the family, peer, and school contexts, adolescents may be exposed to both risk and protective factors which may either increase or decrease their likelihood of risk-taking behaviors. Differential association theory (Sutherland, 1947) posits that adolescents are likely to give in to peer influence and attempt to replicate the behaviors (e.g., binge drinking) of their friends (Laursen, 2017). In the family context, both family structure and parent-adolescent relationships have been shown to influence both school performance and risk-taking by adolescents (Robison et al., 2017). Contextual effects may also have a synergistic effect; schools represent the primary point of contact with peers, along with teachers and administrators (who are in contact with parents), all of whom can affect both risk-taking and school performance (Somers et al., 2016).

Ecological systems theory (Bronfenbrenner, 1979) has long argued that adolescent development is influenced by the various social contexts in which adolescents interact with others. Overton (2010) advances this argument with Ecodevelopmental theory, which posits that adolescent development can be affected by factors within their surrounding social contexts and that adolescents can affect those social contexts, as well. Ecodevelopmental theory contends that each context (family, peers, and school) can affect adolescent behavior (both risk-taking and school performance) in both individual and combined manners. Each context can bring to bear both positive and negative forms of influence and operate either in combination or independently (Blair & Dong, 2021; Booth, 2021).

### **Gender, Risk-Taking, and School Performance**

In terms of both school performance and educational attainment, females have consistently exceeded males, with higher grades and higher levels of attainment (Bolin et al., 2017). In regard to risk-taking behaviors, though, there are notable

differences between females and males. For example, adolescent females have been shown to drink more alcohol during early adolescence, as compared to males, (Chen & Jacobson, 2012), while adolescent males' rates of alcohol consumption exceed those of females during mid- and late-adolescence (Miech et al., 2015). Delinquent behaviors follow a similar pattern, but with adolescent males committing substantially more offenses, as compared to females (Hoffman, 2020).

The differences in adolescent risk-taking by females and males may relate to prevailing gender roles and norms, as researchers have posited that females may view such behaviors as unfeminine, while males may regard them (e.g., drinking, delinquency) as a means of displaying masculinity (Shippee & Owens, 2011). In some forms, such as marijuana use, the differences between female and male usage rates have narrowed, with some studies actually showing higher marijuana use among females (e.g., Bhatia et al., 2023). Such differences may relate to contextual factors, as peer pressure to use marijuana has been shown to be greater among adolescent males (Farrell et al., 2017). Among females, the use of vaping and cigarettes has been associated with body image issues and pressure from female peers (Blair & Dong, 2021). Indeed, peer disapproval of substance use has been associated with lower risk-taking behaviors among females (Mason et al., 2016).

In the family context, parents may be exerting greater monitoring of sons, rather than daughters (Andrade et al., 2021), thus affecting their opportunities to engage in risk-taking. For females, factors such as the number of parents or the number of siblings has been shown to influence parents' monitoring of daughters' behaviors (Hoffman, 2017). Clearly, gender roles and expectations can be complicated in both the family and peer contexts, yet they remain salient factors which influence risk-taking behaviors (Dong & Blair, 2021).

Beyond the family and peers, schools generally provide a variety of protective factors which serve to decrease risk-taking among adolescents (Lee et al., 2021). When adolescents are engaged in their courses, have positive relationships with teachers, and maintain a strong connection with their school, rates of delinquency and substance use tend to be lower (Hsieh et al., 2023). For many high school students, participation in clubs, sports, and other school activities provides the opportunity to enhance their sense of "belonging" to the school community and also serves to limit their time to engage in risk-taking behaviors, as such activities are usually overseen by teachers, coaches, and other school authority figures. The connections which adolescents have with their school, along with having positive relationships with their peers and teachers, therein, are quite influential in reducing risk-taking tendencies (Bond et al., 2007). Gender may again play a role, though, as researchers have shown, that school engagement has a stronger influence upon females' risk-taking and particularly in terms of substance use, as compared to males (Daigle et al., 2007).

## RESEARCH PROBLEM AND AIM

From the perspective of ecodevelopmental theory, the family, peer, and school contexts can certainly influence risk-taking behaviors and school performance. In order to better understand the complex nature of these relationships, analyses of a representative sample of high school students in the U. S. will now be conducted.

## MATERIALS AND METHODS

Data for this study is derived from the 2023 wave of the Monitoring the Future survey (Monitoring the Future: A Continuing Study of American Youth). This annual study was initiated in 1975, with the goal of assessing the substance use patterns of adolescents in the United States. Over subsequent years, the survey was continually increased in its coverage, including a wide array of items assessing daily activities, school experiences, family traits, and social attitudes, among many other topics. The data used herein includes a nationally representative sample of high school seniors, drawn from approximately 130 public and private high schools across the nation. Students were informed that no identifying information would be included and that their answers would be anonymized and confidential. As such, their responses to sensitive items such as substance use should be reliable. The resulting sample used in this study, after the removal of cases with missing or incomplete responses, is 632 females and 564 males, between 17 and 19 years of age and in their senior year of high school.

School performance was first assessed with a self-report of the respondent's current overall grade average. In the United States, high school grades are typically scaled from "D" through "A." In this study, grades were coded as follows: "A"=9, "A-"=8, "B+"=7, "B"=6, "B-"=5, "C+"=4, "C"=3, "C-"=2, and "D"=1. In addition, students were also asked how likely they believed that they would graduate from a 4-year college. Responses to this item were coded as: "definitely will"=4, "probably will"=3, "probably won't"=2, and "definitely won't"=1. Together, these items provide insight about both high school grade performance and students' expectations about future academic performance.

Risk-taking can take on many forms during the adolescent years. Among these, substance use is typically viewed as one of the more common and problematic forms of risk-taking, given the dangers and illegal nature of such usage. Substance use was assessed in terms of alcohol use, vaping (electronic cigarettes), and marijuana use. It is important to bear in mind that the use of all of these substances is prohibited by law for minors. In regard to alcohol use, respondents were asked how often they had consumed alcohol over the past 30 days, with responses ranging from: "0 occasions," 2) "1-2 occasions," 3) "3-5 occasions," 4) "6-9 occasions," 5) "10-19 occasions," 6) "20-39 occasions," to 7) "40 or more occasions." Respondents

were asked how often they had vaped over the past 30 days, with responses ranging from: “0 days,” “1-2 days,” “3-5 days,” “6-9 days,” “10-19 days,” to “20 days or more.” Finally, respondents were also asked about their use of marijuana (i.e., how often they had used it over the past 30 days), using the same scale as alcohol use. Beyond substance use, respondents were also asked about a variety of delinquent behaviors which they may have engaged in over the past year. These behaviors included the following: taking part in a gang fight, hurt someone badly enough to need medical attention, used a knife or gun against someone, stolen something worth less than \$50, stolen something worth more than \$50, shoplifted, stolen a car, stolen parts of a car, broken into someone’s home, committed arson, intentionally damaged school property, and intentionally damaged property at work. Responses to these individual items were coded as 1 = yes and 0 = no, and then combined to create an additive scale of delinquency.

#### DATA ANALYSIS

Multiple measures were included in the analyses to assess the relative impact of various social contexts of adolescents. First, in terms of the family, respondents were asked about the highest level of educational attainment of their parents, with responses coded as: 1 = grade school, 2 = some high school, 3 = high school degree, 4 = some college, 5 = college degree, to 6 = graduate degree. Family size can certainly affect school performance, so respondents were also asked how many siblings they had. Additionally, the nature of the parent-adolescent relationship was assessed by asking respondents how often had argued or fought with their parents over the past year, with responses ranging from “not at all” to “5 or more times,” over a five-point scale. Finally, given the influence of parents, respondents were also asked how many parents lived with them in their home. Potential influence of peers during adolescent years can be considerable, so multiple measures were included to assess this context. Substance use, in particular, is often common among peers, so respondents were asked how many of their friends regularly use alcohol or marijuana, with responses ranging from “none at all” to “all” over a five-point scale. Peer contact can also be influential so respondents were queried as to how often they get together with their friends, with responses ranging from “never” to “daily” across a six-point scale. The school context is also quite important in affecting academic success of adolescents. Respondents were asked how frequently they participated in a variety of different school activities, including: a) the school newspaper or yearbook, b) music or other performing arts, c) athletic teams, and d) other school clubs or activities, with responses ranging from “not at all” (1) to “a great extent” (5). Respondents were also asked about how many days over the past month they had skipped school (intentionally not gone), with responses rang-

ing from “none” (1), “one” (2), “two” (3), “three” (4), “four or five” (5), “six to ten” (6), to “eleven or more” (7) times. Finally, respondents were asked how frequently they had gotten into a serious fight at school, over the past year, with responses ranging from “none at all” to “five or more times,” across a five-point scale. The relative influence of risk-taking, in combination with the family, peer, and school contexts, will now be examined.

## RESULTS

Table 1 presents mean levels of grade performance and likelihood of college attendance, by sex. As shown, females reported significantly higher grade performance as compared to males. The majority of females (55.9%) reported performing within the “A” range (A and A-), while only 39.7% of males reported likewise. This disparity in grade performance is consistent with exiting trends in school performance, as females do tend to outperform their male counterparts. This gap in performance is also reflected in the students’ stated likelihood that they will pursue a 4-year college degree, where 61.4% of females reported that they “definitely will” attend college, as compared to only 40.6% of males. The likelihood of college attendance among males is rather surprising, as 29.3% report that they either “probably won’t” or “definitely won’t” pursue a college degree. Simply, the gender differences in both school performance and expectations of attending college are quite striking.

Table 1.

*Mean levels of grade performance and likelihood of college attendance among high school seniors, by sex*

	Females	Males
Grade Performance	7.18 (1.93)	6.51*** (2.10)
A	32.0%	20.0%
A-	23.9	19.7
B+	14.7	16.5
B	10.4	14.9
B-	7.6	11.3
C+	5.1	6.7
C	3.5	5.5
C-	1.9	3.0
D	0.9	2.3



Likelihood of College Attendance		
	3.39	2.96***
	(0.90)	(1.07)
Definitely will	61.4%	40.6
Probably will	23.9	30.1
Probably won't	7.4	14.4
Definitely won't	7.3	14.9
N	632	564

Note Significance levels denote difference between means:

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ ; Sample is limited to high school seniors, aged 17-19.

The mean levels of risk-taking among adolescents are shown in Table 2. In terms of alcohol and vaping usage, the patterns are quite similar among females and males. Almost 30% of both females and males reported consuming alcohol over the past 30 days. While slightly more females reported vaping, as compared to males (19.4% versus 16.5%, respectively), their total usage patterns were not significantly different. Males reported using marijuana more frequently than their female counterparts, but the difference was relatively meager, as approximately one-fifth of both females and males reported using marijuana over the past month. Reported levels of delinquency were higher among males, as anticipated (0.92 versus 0.75, respectively). Again, however, reported differences seem rather meager, as 36.9% of males reported committing a delinquent act (e.g., vandalism, shoplifting) over the past month, as compared to 34.8% of females. Overall, while males do report a slightly higher level of marijuana use and delinquency, the patterns of risk-taking among both female and male adolescents are quite similar.

Table 2.  
*Levels of risk-taking among adolescents, by sex*

	Alcohol	
	Females	Males
	1.50	1.52
	(0.94)	(1.06)
Used in past 30 days	29.6%	29.6%
	Vaping	
	Females	Males
	1.63	1.57
	(1.57)	(1.46)
Used in past 30 days	19.4%	16.5%

Marijuana		
	Females	Males
	1.49 (1.24)	1.62* (1/49)
Used in past 30 days	19.0%	20.2%
Delinquency		
	Females	Males
	0.75 (1.36)	0.92** (1.66)
Committed in past year	34.8%	36.9%
N	632	564

*Note.* Sample is limited to high school seniors, aged 17-19.

Table 3 presents the mean levels of contextual characteristics (family, peers, and school) among adolescents. Both females and males reported having parents who had attended college and they also reported having approximately two siblings, on average. However, females reported a significantly higher frequency of fights and arguments with parents, as compared to males (3.70 versus 2.99, respectively). While the nature of these arguments is not provided, it does indicate a higher degree of tension between daughters and parents, as compared to sons and parents. The presence of parents was similar, as well, with 69% of females and 68% of males reporting having two parents in the home.

Table 3.  
*Mean levels of contextual characteristics among adolescents, by sex*

	Females		Males	
	Mean	SD	Mean	SD
Family				
Parental Education (1-6)	4.42	1.29	4.52	1.12
Siblings (0-3)	2.01	0.96	1.92	0.98
Fights w/parents (1-5)	3.70***	1.28	2.99	1.35
Two parents (0-1)	0.69	0.46	0.68	0.46
Peers of Friends who use:				
Alcohol (1-5)	2.83	0.83	2.85	0.80
Marijuana (1-5)	2.04***	0.67	2.75	0.71
times Go Out/week (1-6)	2.68	1.33	2.80	1.39
School				
School activities (1-5)	2.13***	0.93	1.88	0.85

times Skipped school (1-7)	1.55	1.15	1.52	1.20
Fights at school (1-5)	1.12**	0.52	1.19	0.65
N	632		564	

Note. Significance levels denote difference between means:

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ ; Sample is limited to high school seniors, aged 17-19.

The nature of peers was similar among females and males, with slightly better than half reporting that their friends regularly drink alcohol (despite the illegal nature of the consumption). In terms of marijuana use, males reported having significantly more friends who regularly use it, as compared to females (2.75 versus 2.04, respectively). Females and males also reported a similar tendency to spend about three nights each week with friends. In regard to the school context, females reported a higher level of involvement in school activities (e.g., clubs, sports), as compared to males (2.13 versus 1.88, respectively). Given that most school activities take place immediately after the end of the school day, this also implies that females spend more afternoons involved in such activities. Females and males reported a similar pattern of skipping school, but males reported a higher tendency to be involved in fights at school (1.19 versus 1.12, respectively). Hence, while the family, peer, and school contexts are similar among females and males, there are several notable distinctions which may influence how substance use is associated with school performance.

Table 4 presents the regression models for high school grades among adolescents, by sex. For each sex, Model 1 presents associations with risk-taking measures, while Model 2 presents risk-taking measures in conjunction with contextual measures. Among females, Model 1 reveals a negative association between marijuana use ( $b = -0.282$ ) and high school grades, while alcohol use yields a positive association ( $b = 0.145$ ). In the full model (2), marijuana use again is shown to be negatively associated ( $b = -0.173$ ) with females' grade performance, yet alcohol use no longer yields a significant influence. Family factors appear to be quite salient in affecting females' grade performance. Parental educational attainment and the presence of two parents reveal positive associations ( $b = 0.255$  and  $0.353$ , respectively), while the number of siblings is shown to be negatively associated ( $b = -0.175$ ) with females' grade performance. Significant peer influence is limited to friends' alcohol use ( $b = 0.186$ ), which is positively associated with female grade performance. School factors, though, are shown to be very meaningful in their relationship with females' grade performance, as participation in school activities is shown to be positively associated ( $b = 0.373$ ), while skipping school and getting in fights at school yield negative associations ( $b = -0.289$  and  $-0.445$ , respectively) with females' grade performance.

Table 4.  
*OLS regression models for high school grades among adolescents, by sex*

	Females		Males	
	Model 1	Model 2	Model 1	Model 2
Alcohol	.145* (.071)	.027 (.013)	.076 (.039)	.002 (.001)
Vaping	-.073 (-.059)	-.070 (-.058)	-.199*** (-.140)	-.172*** (-.122)
Marijuana	-.282*** (-.182)	-.173*** (-.111)	-.131** (-.093)	-.074 (-.052)
Delinquency	-.063 (-.045)	.014 (.010)	-.214*** (-.170)	-.120* (-.095)
Parental Education		.255*** (.171)		.292*** (.155)
Siblings		-.175** (-.087)		-.099 (-.046)
Fights w/parents		-.035 (-.023)		-.010 (-.007)
Two parents		.353** (.084)		.140 (.031)
of Friends who use:				
Alcohol		.186* (.080)		.106 (.041)
Marijuana		-.153 (-.053)		-.104 (-.035)
times Go Out/week		.009 (.006)		.022 (.014)
School activities		.373*** (.180)		.507*** (.206)
times Skipped school		-.289*** (-.173)		-.216*** (-.124)
Fights at school		-.445*** (-.120)		-.338** (-.105)
<i>F</i>	8.022	11.929	12.196	10.153
R-square	.049	.213	.080	.185
N	632		564	

Note. Standardized coefficients shown in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ ; Sample is limited to high school seniors, aged 17-19.

Among males, Model 1 reveals that grade performance is negatively associated with vaping and marijuana use ( $b = -.199$  and  $-.131$ , respectively), along with delinquency ( $b = -.214$ ). These associations strongly support the contention that risk-taking behaviors have a deleterious impact upon males' grade performance. In Model 2, vaping is again shown to yield a negative association with males' grade performance ( $b = -.172$ ), while a meager association is also shown in regard to delinquency ( $b = -.120$ ). Interestingly, males' use of marijuana does not yield a significant association in the full model (2). Unlike the pattern of family factors shown in the full model of females' grade performance, only parental educational attainment ( $b = .292$ ) reveals a positive association with males' grade performance. School factors do, though, yield significant associations among males, as participation in school activities ( $b = .507$ ) is shown to be positively associated with grade performance. Understandably, skipping school and getting into fights at school are both negatively associated ( $b = -.216$  and  $-.338$ , respectively) with males' grade performance.

Table 5 presents the regression models for college attendance among adolescents, by sex. Among females, Model 1 reveals that alcohol use yields a positive association ( $b = .119$ ) with college attendance, while marijuana use is shown to be negatively associated ( $b = -.075$ ). In the full model (2), however, both of those substance use measures fail to yield significant associations. Parental educational attainment, though, is again shown to be important, as it is positively associated with females' college attendance ( $b = .080$ ). In a manner similar to that shown in terms of grade performance, females' participation in school activities is again positively associated ( $b = .238$ ) with college attendance, while getting into fights at school is shown to detract from that outcome ( $b = -.230$ ).

Table 5.  
OLS regression models for college attendance among adolescents, by sex

	Females		Males	
	Model 1	Model 2	Model 1	Model 2
Alcohol	.119*** (.125)	.056 (.058)	-.009 (-.009)	-.074* (-.073)
Vaping	-.018 (-.032)	-.031 (-.054)	-.069* (-.096)	-.066** (-.092)
Marijuana	-.075** (-.103)	-.046 (-.063)	.003 (.004)	.029 (.040)
Delinquency	-.019 (-.028)	.000 (.000)	-.027 (-.042)	-.009 (-.014)
Parental Education		.080*** (.113)		.194*** (.203)

Siblings		-.027		-.021
		(-.029)		(-.019)
Fights w/parents		.052		.084***
		(.073)		(.107)
Two parents		.045		.109
		(.023)		(.048)
of Friends who use:				
Alcohol		.083		.205***
		(.076)		(.155)
Marijuana		-.084		-.120
		(-.062)		(-.080)
times Go Out/week		.016		-.017
		(.023)		(-.022)
School activities		.238***		.317***
		(.245)		(.254)
times Skipped school		.005		-.038
		(.007)		(-.043)
Fights at school		-.230***		-.131*
		(-.132)		(-.080)
F	3.278	7.686	1.896	9.939
R-square	.023	.148	.013	.202
N		632		564

Note. Standardized coefficients shown in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ ;  
Sample is limited to high school seniors, aged 17-19.

Among males, a weak association is shown between vaping and college attendance in Model 1 ( $b = .069$ ). In the full model (2), both vaping and alcohol use are shown to be negatively associated with males' college attendance ( $b = -.066$  and  $-.074$ , respectively). Similar to the pattern shown among females, males' college attendance is positively associated with parental educational attainment ( $b = .194$ ). Interestingly, the factor of fights with their parents is also positively associated with males' college attendance ( $b = .084$ ). Having more friends who drink alcohol also yields a positive association with males' college attendance ( $b = .205$ ), suggesting that both family and peer characteristics have peculiar effects upon the likelihood that males will attend college. Participation in school activities is again shown provide a positive association ( $b = .317$ ), while getting into fights at school is shown to detract ( $b = -.131$ ) from males' college attendance. The meanings of these findings will now be discussed.

## DISCUSSION

There is little debate that risk-taking during the adolescent years tends to lead to harmful outcomes, yet the discrete and nuanced manners in which these influences occur require greater examination. From the ecodevelopmental perspective, the social contexts of females and males proved to be quite influential in affecting their academic success. The patterns revealed among female and male adolescents in these analyses strongly support the contention that risk-taking can be quite deleterious to school performance and also aspirations for educational attainment. Substance use and delinquent behaviors, in and of themselves, were shown to detract from adolescents' school performance. However, it is also necessary to note that both the familial and school contexts yielded strong associations with adolescents' school performance and aspirations. These associations raise additional queries about the interwoven nature of family, peer, and school contexts during adolescent years. In the school environment, students who participate in school activities, such as sports and clubs, typically spend many hours during and after school engaged in these activities. This pattern of engagement necessarily detracts from time which they might otherwise have spent performing delinquent acts or using substances. Similarly, adolescents who are getting into fights at school, or are perhaps skipping school, may have more opportunities to then engage in delinquency and/or substance use.

The relatively weak influence of peers upon school performance and aspirations is rather intriguing. Parents have long feared that their daughters and sons will be "hanging out with the wrong crowd," thus believing that friends can lead their daughters and sons into trouble. The results of this study appear to suggest the opposite, in that peer substance use and social engagement with peers (outside the school context) have almost no meaningful influence upon adolescents' school performance and aspirations. Parental and family effects, though, were shown to significantly affect school performance and aspirations. Of course, this study is relying upon a large survey of adolescents to assess these patterns. It is possible that there are more discrete and complex influences upon school performance and aspirations, as the lives of adolescents are most certainly complicated in nature.

## CONCLUSIONS

Concerns about the academic success of adolescents are well warranted and deserve greater attention by researchers. During their teen years, females and males will encounter numerous opportunities to engage in risk-taking behaviors, and the choices they make may have lasting impacts upon not only their performance in school, but also the longer trajectory of their adult lives. Much of the risk-tak-

ing behaviors of adolescents occurs within social settings, such as times when they are hanging out with their peers. Concurrently, they spend considerable time within the family and school contexts, which are often viewed as environments which only provide protective influences upon the likelihood of risk-taking. This study was undertaken with the objective of disentangling the multitude of influences which can affect school performance of adolescents and to examine how the effects of risk-taking may differ between females and males. The analyses revealed that, despite many stereotypes concerning the influence of family, peers, and schools, the relationship between risk-taking and school performance is decidedly complex.

As anticipated, adolescent females outperformed their male counterparts in both grade point average and their likelihood of pursuing a four-year college degree. Surprisingly, females and males did not differ much in terms of their respective risk-taking behaviors. Although males were slightly more likely to engage in delinquency and use marijuana, the two sexes were quite similar, suggesting that the gender differences have decreased, considerably, over recent generations. Contextual factors also revealed that females were more likely to argue with their parents, but were also more likely to engage in school activities, as compared to males. Of greater interest, though, the multivariate analyses showed that grade performance of males was influenced more substantially by their risk-taking behaviors than was shown among females. Hence, despite the relative similarities in risk-taking behaviors among females and males, their impact upon grade performance was more salient among males. This distinction may relate to the nature of risk-taking, such as where and when males are using substances and/or engaging in delinquency. For the most part, such activities tend to occur in a social setting and the nuanced aspects of those activities may be distinct for females and males.

Among females, the family and peer contexts proved to be quite influential in terms of grade performance. This may indicate that females, as compared to males, are more emotionally attached to family and friends, and are thereby more easily influenced by those relationships. Among males, other than the effect of parental educational attainment, the influence of family and peer contexts was largely absent. For both sexes, though, the school context proved to be very strongly associated with grade performance. Engagement in school activities provided a positive association with grade performance for both females and males, while skipping school and getting into fights at school proved to detract significantly from school performance. Again, adolescents spend much of their day-to-day lives within the school context (where they are also interacting with peers), so the strong associations shown between the school context and grade performance is to be expected.

In terms of pursuing a four-year college degree, risk-taking was again shown to be more influential among males as compared to females. Alcohol and vaping



usage detracted significantly from males' likelihood of pursuing a college degree. It is worth noting, though, that family and peer contextual factors were more salient among males, as compared to females. This appears to indicate that family and peer contexts more readily affect females' grade performance in high school, while those same contexts are more influential in regard to males' likelihood of pursuing a college degree. It is possible that the contextual factors yield both short-term (high school grades) and long-term (college attendance) influence, and that these vary among females and males. Once again, though, school contextual factors proved to be meaningful for both females' and males' likelihood of obtaining a college degree.

### LIMITATIONS

The analyses demonstrate that these contextual effects do, indeed, vary among females and males. Future research should attempt to discern more fully the effects of each social context upon school performance among females and males, and also attempt to more accurately determine how the context of risk-taking itself may be interwoven with the family, peer, and school contexts. Like adolescents themselves the social contexts of their lives, along with their tendencies to engage in risk-taking behaviors, change quickly across the adolescent years, and researchers need to better understand these processes.

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## PODEJMOWANIE RYZYKA I WYNIKI W SZKOLE: BADANIE KONTEKSTÓW RODZINNYCH, RÓWIEŚNICZYCH I SZKOLNYCH

**Wprowadzenie:** Nie ulega wątpliwości, że ryzykowne zachowania w okresie dojrzewania, takie jak zażywanie substancji psychoaktywnych i przestępczość, mogą mieć szkodliwe skutki.

**Cel badań:** Celem badania było sprawdzenie, w jaki sposób zachowania ryzykowne wpływają na sukcesy w nauce, a także uwzględnienie względnego wpływu kontekstu rodzinnego, rówieśniczego i szkolnego.

**Metoda badań:** W badaniu tym wykorzystano dane pochodzące od reprezentatywnej próby uczniów ostatnich klas szkół średnich.

**Wyniki:** Wykazano, że kobiety i mężczyźni wykazują podobne wzorce ryzykownych zachowań, chociaż mężczyźni częściej sięgają po marihuanę i popełniają przestępstwa. Jednakże zachowania ryzykowne wydają się mieć większy wpływ na wyniki chłopców w szkole niż dziewcząt. Ponadto kontekst rodzinny i rówieśniczy wywierają większy wpływ na wyniki dziewcząt w nauce,

podczas gdy czynniki kontekstu szkolnego wydają się oddziaływać na dziewczęta i chłopców w podobny sposób. Czynniki rodzinne i rówieśnicze mają większy wpływ na prawdopodobieństwo podjęcia przez mężczyzn studiów wyższych.

**Wnioski:** Analizy uwzględniające płeć i wzorce kontekstowe wskazują, że związek między podejmowaniem ryzyka a sukcesami w nauce jest złożony. Analiza wpływu i wzorce kontekstowe, że związek między ryzykiem a sukcesami w nauce jest uniwersalny.

**Słowa kluczowe:** dorastanie, rodzina, rówieśnicy, podejmowanie ryzyka, wyniki w szkole, używanie substancji

