Risky Behavior among Chilean Youths*

Conductas de riesgo entre los jóvenes en Chile

RAFAEL NOVELLA**
ANDREA REPETTO***

Abstract

This paper examines the connection between risky behaviors and various socioeconomic factors, including skills, preferences, aspirations, expectations, and exposure to shocks. Using a representative sample of Chilean youths aged 15 to 19 years old, our analysis identifies self-esteem, risk aversion, and educational aspirations as relevant factors associated with participation in risky activities. Remarkably, even after accounting for socio-demographic factors, skills, expectations, aspirations, and preferences, we uncover a significant correlation between exposure to shocks at both individual and family levels and engagement in risky behavior. Particularly striking is the association between experiencing job loss and family illness and the prevalence of risky behaviors. Additionally, we observe positive correlations among the unexplained variability of these behaviors, suggesting a complementary relationship between these activities. While these patterns are correlational rather than causal, they offer valuable insights into the determinants of risky decision-making among youths.

Key words: *Smoking, alcohol, violence, unemployment, health, self-esteem*

JEL Classification: *D91, I12, I31*

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** University College London, London, UK. https://orcid.org/0000-0002-2139-3291. E-mail: r.novella@ucl.ac.uk

*** Pontificia Universidad Católica de Chile. https://orcid.org/0000-0003-2378-9684. Corresponding author: andrea.repetto@uc.cl, Avda Vicuña Mackenna 4860, Edificio Mide UC, piso 3, Macul, Santiago, Chile.

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Resumen

Este trabajo examina la relación entre conductas de riesgo y diversos factores socioeconómicos, incluyendo habilidades, preferencias, aspiraciones, expectativas y exposición a shocks. Utilizando una muestra representativa de jóvenes chilenos entre los 15 y 19 años de edad, nuestro análisis identifica la autoestima, la aversión al riesgo y las aspiraciones educativas como factores relevantes asociados a la participación en actividades riesgosas. Es interesante notar que, incluso después de controlar por factores sociodemográficos, habilidades, expectativas, aspiraciones y preferencias, observamos una correlación significativa entre la exposición a shocks tanto a nivel individual como familiar y la participación en conductas de riesgo. Resulta especialmente llamativa la relación entre la pérdida de empleo y las enfermedades familiares y la prevalencia de conductas de riesgo. Asimismo, observamos correlaciones positivas entre la variabilidad no explicada de los distintos comportamientos, lo que sugiere una relación complementaria entre estas actividades. Aunque los patrones descritos son correlacionales y no causales, ofrecen una pespectiva valiosa sobre los determinantes de las decisiones de riesgo de los jóvenes.

Palabras clave: *Tabaquismo, alcohol, violencia, desempleo, salud, autoestima*

Clasificación JEL: *D91, I12, I31*

1. Introduction

Adolescence is a critical phase in life characterized by physiological, psychological, and social changes that have lifelong impacts. Many risky behaviors, such as smoking, consuming alcohol, engaging in sex, and committing crimes, occur for the first time during this period. These behaviors may have consequences for youths' well-being, as they are associated with health, education, productivity, and labor market outcomes. Furthermore, these behaviors can also impact others through their relationship with crime, accidents, the cost of insurance, and potential dependence on public resources.

The economics literature on risky behaviors describes individuals as trading off present and future costs and benefits. Individuals compare the expected present satisfaction associated with smoking or drinking alcohol to the expected (discounted) cost of future health problems or low productivity (Becker & Murphy, 1988). This approach has been complemented by behavioral economics literature, which describes circumstances where individuals do not necessarily act in their own best interests, such as engagement in risky activities

(O'Donoghue & Rabin, 2001). When it comes to teenagers and risky behaviors, developmental psychologists also concern themselves with how cognitive, affective, and social development affect decision-making (Fischhoff, 1992).

The aim of this study is to analyze risky behaviors among teenagers in Chile. Our analysis has three goals. First, we aim to document the prevalence of specific risky behaviors among adolescents in the country and the patterns of association between these activities. Second, we seek to describe the correlations between risky behaviors and economic variables, including preferences, expectations, aspirations, and skills. Finally, we intend to describe the relationship between participation in risky behaviors and shocks, including unemployment and illness.

Using a representative sample of Chilean youths aged 15-19, we find correlations between engaging in risky behavior and socioemotional skills, risk aversion, and educational aspirations. Interestingly, we find a significant correlation between exposure to shocks at both individual and family levels. Notably, experiencing job loss and health problems in the family are associated with a higher prevalence of risky behaviors. Furthermore, we document positive correlations between the unexplained variation of these behaviors, with the strongest associations observed among drugs and alcohol use. While these patterns are correlational rather than causal, we believe they offer valuable insights into the determinants of risky decision-making among youths.

Figures 1, 2, and 3 reveal a decline in participation in several risky behaviors among adolescents in Chile, although some rates remain higher than in advanced countries. Figure 1 illustrates the prevalence of alcohol, tobacco, marijuana, and cocaine consumption among students in grades 8 to 12. Remarkably, the rate of alcohol and tobacco use dropped by 38% and 71% in the past two decades, respectively. However, according to PAHO statistics, the rates of tobacco use are still much higher than those in Canada (1%) and the United States (4.6%), and even higher than in other Latin American and Caribbean (LAC) countries, such as Brazil (6.9%), Peru (7.2%), and Uruguay (11.5%). Cocaine use also fell, from a prevalence of 1.5% in 2003 to 1% in 2021. However, the prevalence of marijuana use shows a different dynamic: it grew from 6.8% in 2003 to 20.1% in 2015, and then declined steadily to 11.2% in 2021.

Figure 2 demonstrates that, after experiencing a plateau in the early 1990s, teen fertility in Chile steadily declined throughout the following decade. It rose again in the mid-2000s, then declined in the early 2010s. The downward trend is also observed in other regions, although it is less pronounced in LAC. Currently, Chile's teenage fertility rate is about half of LAC's rate but almost twice the rate observed in Europe and North America.

Furthermore, there has been a decrease in the number of adolescent offenders entering the justice system. Figure 3 indicates that the rate of adolescents in conflict with the law has steadily decreased, and at a much faster rate than that of adults. Although not strictly comparable, juvenile crime statistics in the United States also show a decreasing trend over time (Hockenberry and Puzzanchera, 2023).[1]

This study aims to make contributions to at least three distinct bodies of literature. The first relates to protective factors that mitigate the prevalence of risky behaviors among the youth population. These factors encompass socio-emotional skills and educational aspirations (Donnellan et al., 2005; Chiteji, 2010; Favara and Sánchez, 2017), as well as peer and friend behaviors (Clark and Lohéac, 2006; Card and Giuliano, 2013; Einsberg et al., 2014). Moreover, the literature has evidenced that youth do respond to economic incentives such as tobacco and alcohol prices and taxes (Cook and Moore, 2001; Carpenter and Cook, 2008; Paraje et al., 2021; Assael, 2023), along with access restrictions (Cook and Moore, 2001; DiNardo and Lemieux, 2001; Wagenaar and Toomey, 2002). Similarly, contextual factors like the length of the school day and the type of educational institution attended can also influence the prevalence of certain behaviors (Berthelon and Kruger, 2011; Figlio and Ludwig, 2012).

The second literature refers to the consequences of risky behavior among youths, encompassing effects on educational outcomes (Renna, 2007; Fletcher and Lehrer, 2009; Parkes et al., 2010; Lye and Hirschberg, 2010; Carrell et al., 2011), health (Patton et al., 2016), fertility (Kearny and Levine, 2012), and incarceration (Levitt and Lochner, 2001).

Finally, our study contributes to the literature on the social consequences of economic shocks. Beyond the existing evidence on persistent earnings losses (Jacobson et al., 1993; von Wachter et al., 2009: Albagli et al., 2020), the literature has highlighted a connection with stress-related health issues and reduced life expectancy (Burgard et al., 2007; Sullivan and von Wachter, 2009; Eliason and Storrie, 2009), decreased school performance of children (Oreopoulos et al., 2008; Stevens and Schaller, 2011), and a higher incidence of divorce (Charles and Stephens, 2004). Furthermore, economic shocks are linked to lower happiness and life satisfaction (Frey and Stutzer, 2002).

The remainder of the paper proceeds as follows. Section 2 presents the survey design and data, while Section 3 describes and discusses the results. Section 4 concludes.

[1] In the United States, the overall delinquency rate among youths aged 10-16 in 2020 was 65%, below the 2005 rate.

2. Survey Design And Data

2.1 The Millennials in Latin America and the Caribbean Survey

Our analysis is based on the Millennials in LAC survey, a cross-sectional survey conducted in Chile and six other countries in Latin America and the Caribbean.[2] The survey was designed to study the schooling and labor market decisions of youths. The Chilean survey was administered between July and October 2017 and included information on 3,560 individuals aged 15 to 24 years living in the urban areas of the Metropolitan, Biobío, and Valparaíso regions. Households were selected based on previous censuses using a stratified multistage sampling method. The final stage of the sampling method consisted of randomly choosing a young person within the household.

The survey consists of two questionnaires. The first contains standard demographic and socioeconomic questions. It also gathers information on cognitive and socioemotional skills, expectations, and aspirations, among other variables. The second questionnaire collected information about risky behaviors and was self-administered to improve the data's response rate and quality (Tourangeau et al., 1997; Krumpal, 2013). Written consent was obtained from the participants if they were 18 or older or their parents otherwise.

2.2 Study Measures[3]

The survey gathers information on several measures of risky behavior. First, we measure whether the individual engaged in unprotected sex during the last sexual intercourse. Second, we measure violent behavior: whether the respondent or someone in his/her group of friends carried a weapon in the previous thirty days or committed a robbery in the last 12 months. Finally, we measure the consumption of alcohol and drugs: tobacco smoking, binge drinking, and marijuana and other drugs consumption in the last 12 months. We created dummy variables indicating whether the individual has engaged in each of these seven behaviors and a summary variable adding up the dummies.

The survey also gathers information on risk and intertemporal preferences. To measure risk tolerance, subjects were asked about their willingness to pay 5% of a monthly minimum wage to participate in hypothetical lotteries with

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[2] The data used in this paper were collected as part of the "Millennials in Latin America and the Caribbean: to work or study?" project. The project, including the data collection, was funded by the International Development Research Centre (IDRC-Canada) and the Inter-American Development Bank (IDB). The countries in the study are Brazil, Chile, Colombia, El Salvador, Haiti, Mexico, and Paraguay. See Novella et al. (2018) and Alvarado et al. (2020) for more information.

[3] This section is based on Alvarado et al. (2020) and Gantier et al. (2023).

prizes between 1% and 5% of the same minimum wage. We created a risk averse dummy variable equal to 1 when the individual is unwilling to participate in any of these lotteries and 0 otherwise. We expect a lower likelihood of risky behaviors among risk averse individuals.

We include traditional sociodemographic control variables such as age and gender. Education is measured by the number of years of schooling achieved. We also include a teenage parenthood dummy that equals one if the youth had a child when younger than 20 years old or is pregnant and younger than 20, and zero otherwise. Finally, we include measures of dependency in the family, that is, the number of household members below five and above 65 years of age.

We also include the household's monthly income per capita. In addition, we include measures of economic shocks experienced by the youth (job loss and illness) and the family (divorce, illness or death, and crime) in the last 12 months to capture sources of unexpected variation in household resources. We created a set of dummy variables indicating separately the experience of each shock and an aggregated variable that adds up these variables.

The survey considers a basic numeracy test that poses simple problems in which respondents must divide and multiply to obtain the correct answers. To evaluate cognitive achievement, we use the standardized percentage of correct answers such that the measure has a zero mean and unit variance (z-scores).

The survey also measures socioemotional skills. In particular, it includes the Rosenberg self-esteem test that measures people's image of themselves (Rosenberg, 1965). We normalize this measure to have a mean of zero and a standard deviation of one. A higher score reflects higher self-esteem. Therefore, we expect socioemotional skills to be negatively correlated with risky behavior.

The questionnaire also gathers perceptions about wages. To measure the perceived returns to schooling, we include the difference between the monthly salary youths believe college graduates earn in their local area in logs, and the earnings of local secondary education graduates (also in logs); i.e., the expected return to a college education. We hypothesize that individuals who expect higher returns are less likely to engage in risky behavior.

Finally, to measure educational aspirations, the survey asks individuals about the highest academic degree they would like to complete assuming no constraints. Our aspirational measure is the number of additional years of education the respondents would like to meet beyond what they have achieved. We hypothesize a negative correlation between aspirations and risky behavior.

2.3 Sample

Our sample consists of teenage youths (i.e., those aged between 15 and 19) with complete information on the relevant variables. The full sample contains 1,916 individuals in the relevant age group. We lose 489 observations due to missing relevant data. Appendix Table 1 compares our sample and the sample of individuals missing information.

Table 1 contains the main statistics of our sample and according to the youth's engagement in at least one of our risky behavior measures. On average, youths in the sample are 17 years old and have completed almost ten years of education. The sample is evenly distributed by gender. Six percent have already had a child or were expecting one at the time of the interview.[4]

3. Risky Behavior Among Youths

3.1 Correlates of Risky Behavior

In Table 1 we present the main statistics of the final sample, categorized by youths' engagement in at least one of our risky behavior measures. On average, individuals in the sample have participated in 1.4 risky behaviors out of a potential of 7 over the last 12 months. The most prevalent activities are binge drinking and marijuana consumption, reported by 42% and 34% of the sample, respectively. Among those who have engaged in at least one risky behavior, the mean number of risky activities rises to 2.4.

Figures 4 and 5 illustrate simple correlations between engagement in each risky activity and various characteristics and environmental factors of youths. The statistical significance of difference-in-means tests for aggregate risky behavior is reported in the final columns of Table 1. The figures and tests reveal differences between individuals who engage in risky behaviors and those who do not across relevant aspects.

Figure 4 demonstrates that men (Panel a) and older individuals (Panel b) are more likely to engage in risky behavior. Panels c and d also indicate differences based on numerical and socioemotional skills, with a lower prevalence

[4] To explore the external validity of our results, we compared our final sample to the nationally representative 2017 CASEN survey sample. We find many demographic similarities when limiting the analysis to youths aged 15 to 19 living in the urban areas of Santiago, Biobío, and Valparaíso. In the CASEN sample, 50% of individuals are men, the average age is 17, and the average years of education is 10.7. However, we find a significant difference in income per capita: including subsidies, households' income in CASEN is twice that in our sample. Possibly, youths are unaware of the monetary resources available in their households, as in CASEN, the primary respondent is an adult.

of risky activities among individuals with higher skills.[5] Furthermore, Panels e and f suggest that individuals who engage in risky behaviors have lower educational aspirations and expect lower returns from a college education, respectively. Panel g shows that they are also less likely to be risk averse.

Notably, youths who engage in risky behaviors have experienced a larger number of shocks and a higher prevalence of all types of shocks except for parental separation. Particularly, they are more likely to have lost their jobs, experienced an illness of death in the family, or had someone in the household become a crime victim. These differences are statistically significant, as shown in Table 1.

Figure 5 depicts the prevalence of each risky activity by shock experience, highlighting the noteworthy differences. For instance, those who experienced a shock are 62% more likely to consume marijuana and to smoke tobacco than those who have not.

3.2 Co-Occurrence of Risky Behaviors

In this section, we investigate the relationships between different risky behaviors, exploring whether individuals who engage in one behavior are also likely to engage in others. To mitigate the risk of spurious correlations stemming from youth characteristics and environmental factors, we initially regress each risky behavior dummy variable on the observable covariates presented in Table 1. Subsequently, we estimate pairwise correlations between the residuals.

Specifically, we estimate seven linear probability models, each corresponding to a relevant behavior (unprotected sex, smoking, etc.). Our models control for various sociodemographic variables (including gender, age, years of education, household's monthly income per capita, teenage parenthood status, and the number of household members younger than five and older than 65), measures of cognitive and non cognitive skills (numeracy and self-esteem), as well as variables capturing expected returns, educational aspirations, risk averse, and indicator variables for shocks. Additionally, we incorporate dummy variables to account for regional differences that may influence youths' decisions, encompassing factors like labor market conditions, the educational environment, and social preferences. Appendix Table 2 presents the estimation results, while Table 2 summarizes the residuals correlations.

Our findings reveal relevant correlation among risky activities. Particularly noteworthy is the close connection observed among binge drinking, tobacco use, and consumption of marijuana and other drugs. These results may reflect

[5] We divide the sample into halves when we plot behavior by numeracy skills, self-esteem, aspirations, and expectations.

unobserved characteristics of youths predisposing them towards risky behavior, which remain unaccounted for in the regression models. Alternatively, they may signify complementarity between these activities.

3.3 Risky Behaviors and Socioeconomic Shocks

In this section, we emphasize the correlation between risky behavior and socioeconomic shocks. Figure 6 presents the associated estimated coefficients of the linear probability models detailed in the previous section, along with their confidence intervals. The complete results are available in Appendix Table 2.

Two shocks demonstrate particularly notable correlations with risky behaviors: experiencing job loss and encountering a significant illness or death within the family. For instance, losing a job is linked with a 16.4 percentage point (pp) higher likelihood of smoking tobacco, a 13.6 higher pp likelihood of binge drinking, and 22.2 pp higher probability of consuming marijuana. Similarly, a health-related shock or familial loss is associated with a 5.2 pp higher probability of engaging in unprotected sex, an 11.4 pp higher likelihood of binge drinking, and an 11.2 pp higher chance of consuming marijuana.

Of particular interest, we observe that youths from families recently affected by crime are 12.6 pp more likely to consume marijuana.

3.4 Discussion

Our findings align with previous literature, demonstrating correlations between engaging in risky behavior and factors such as age, skills, and risk aversion (Donnellan et al., 2005; Chiteji, 2010; Favara and Sánchez, 2017). Furthermore, this study introduces novel evidence highlighting a correlation between risky behaviors and educational aspirations. Additionally, we elucidate relevant links between various risky behaviors even after accounting for observables. This finding suggests that some individuals might be more prone to risky behaviors than others due to unobserved factors, emphasizing the importance of analyzing these activities jointly rather than in isolation.

Morevover, we find a noteworthy correlation between exposure to shocks at both individual and family levels. Particularly, experiencing job loss is associated with a higher prevalence of risky behaviors. Although the impact of job loss on adolescents may seem surprising, it is crucial to note that a significant proportion of subjects were employed during the survey period (20.2%), with many working part-time while studying. Therefore, job loss could indeed influence young workers' engagement in the risky behaviors analyzed in this paper. Similarly, we observe analogous outcomes concerning health issues and family deaths.

As previously indicated, our results only reflect correlations in the data. However, if causality is established, our findings may have implications for the design of policies aiming to address concerns about the prevalence of risky behaviors among youths. Interventions targeting cognitive and non-cognitive skills, particularly self-esteem, may hold promise in mitigating rates of risky behaviors, as they are amenable to change at this life cycle stage (Almlund et al., 2011). Interventions that have demonstrated efficacy in altering youths' educational trajectories by enhancing their socioemotional skills may hold the potential to mitigate rates of risky behaviors. Some of these interventions can be implemented at minimal cost. An encouraging body of experimental evidence underscores the potential of motivation, self-esteem, and student achievement enhancement through interventions providing words of encouragement and values affirmation, along with similar "light touch" approaches (Martins, 2010; Behncke, 2012; Bancroft et al., 2017; Bettinger et al., 2018; Broda et al., 2018; Baker et al., 2020).

Furthermore, policy initiatives could focus on averting costly earnings losses resulting from youth unemployment. Specifically, the unemployment insurance system in Chile, which currently offers limited coverage for young workers due to its design, could be strengthened.[6] Also policies could aim at reducing the impact of health shocks through improvements in healthcare access and efficiency. Enhancing efficiency in primary healthcare services and surgical wards are critical components of this aim (CNEP, 2020).[7]

Nonetheless, our study has limitations, particularly due to the cross-sectional nature of our dataset, which complicates establishing causal relationships between variables and the likelihood of engaging in risky behaviors. Many economic shock measures included in the analysis, such as job loss, might serve as either determinants or consequences of risky behaviors. Future analyses should attempt to disentangle the causal effects of shocks on the likelihood of engaging in risky behavior.

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6 Coverage statistics by age can be found in https://www.spensiones.cl/apps/centroEstadisticas/paginaCuadrosCCEEsces.php?menu=sces&menuN1=afiliados&menuN2=NOID

7 Official waiting time statistics can be found in https://public.tableau.com/app/profile/tableau.minsal/viz/PortadaLE/PortadaLE

4. Conclusion

A substantial body of literature demonstrates that economic shocks affect various outcomes, including labor market and health outcomes, educational attainment, and subjective well-being. This study contributes to understanding a crucial aspect of the impact of economic shocks on young individuals—their engagement in risky behaviors. The findings highlight the connection of economic circumstances, adolescent behaviors, and future life trajectories, suggesting that economic shocks can shape not only traditional outcomes but also behaviors with profound implications for long-term well-being.

The correlation between economic shocks and youths' participation in risky behaviors raises important concerns about their future trajectories. Engaging in risky behaviors during adolescence may lead to detrimental outcomes in adulthood, affecting individual's socio-economic standing and overall quality of life.

While this study establishes associations between economic shocks and risky behaviors among youths, disentangling the causal relationship requires further investigation. Future work should leverage longitudinal data and experimental designs to delineate the mechanisms through which economic shocks lead to engagement in risky behaviors, enabling the design of informed policies and interventions to safeguard the well-being and future prospects of young individuals in the face of economic uncertainty. Future work should also examine risky behaviors concurrently rather than in isolation.

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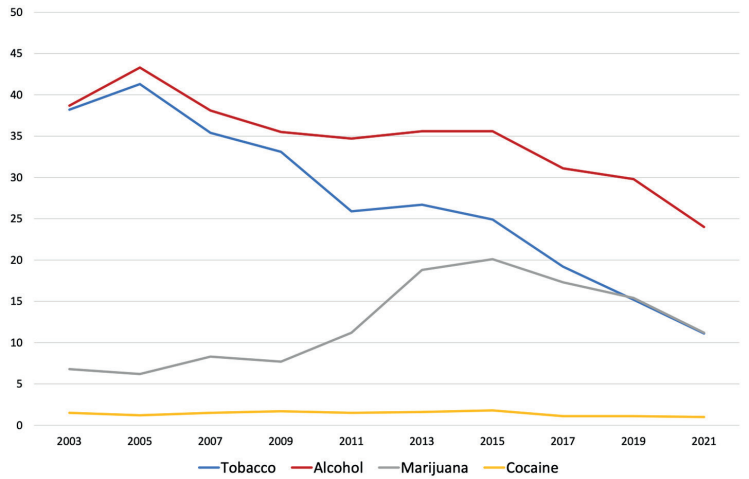
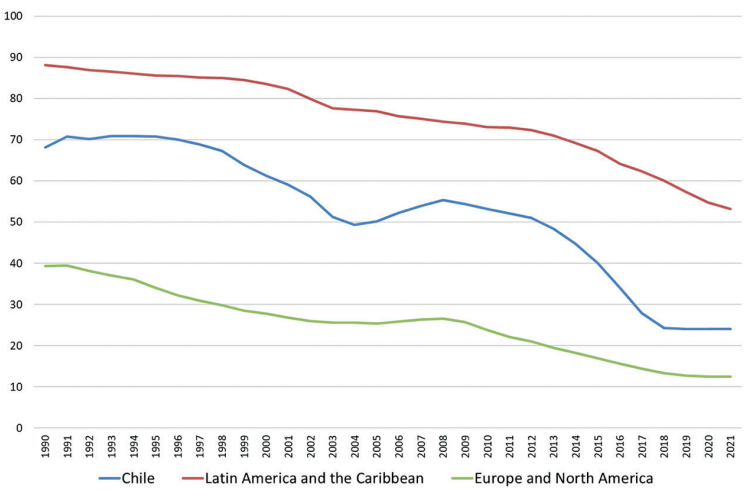
FIGURE 1
PREVALENCE OF TOBACCO,ALCOHOL, MARIJUANA,
AND COCAINE USE, 8TH-12TH GRADE
(% USE IN PREVIOUS MONTH)



Note: SENDA (2023).

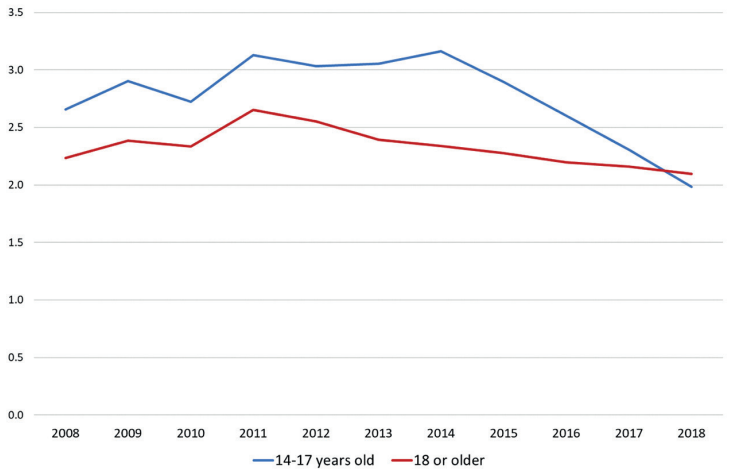
FIGURE 2
FERTILITY RATES, WOMEN AGED 15-19
(BIRTHS PER 1000 WOMEN)



Note: United Nations, World Population Prospects 2022.

FIGURE 3

ADMISSIONS OF CRIMINAL CASES BY AGE OF DEFENDANT
(PER 100.000 INHABITANTS IN THE RESPECTIVE AGE GROUP)

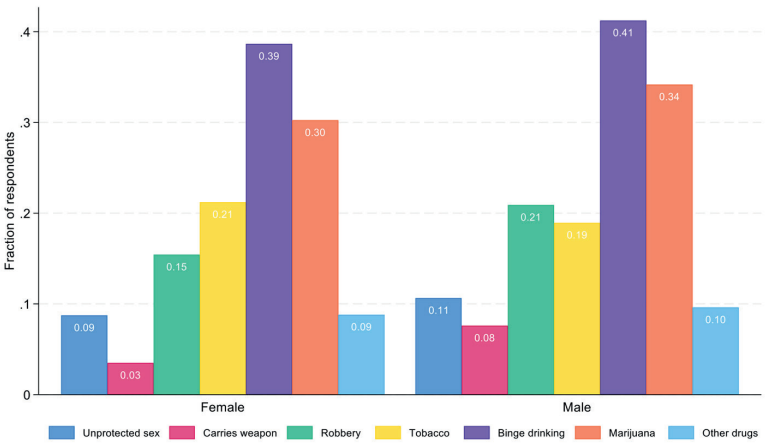


Note: UNICEF and Defensoría Penal Pública (2020).

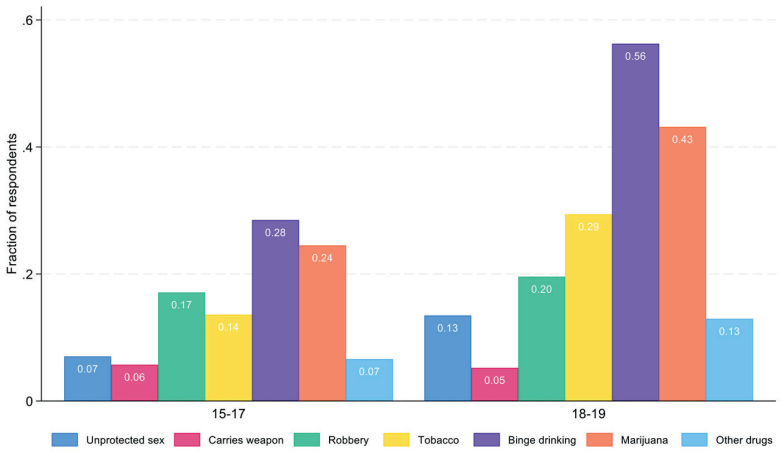
FIGURE 4

PREVALENCE OF RISKY BEHAVIORS BY INDIVIDUAL CHARACTERISTICS

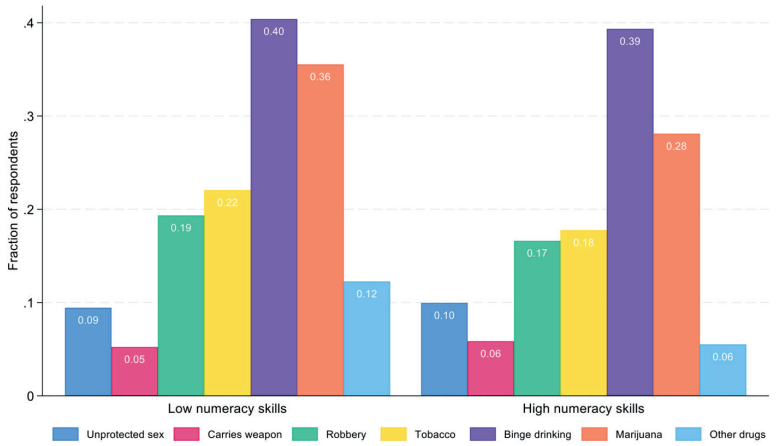
A. GENDER



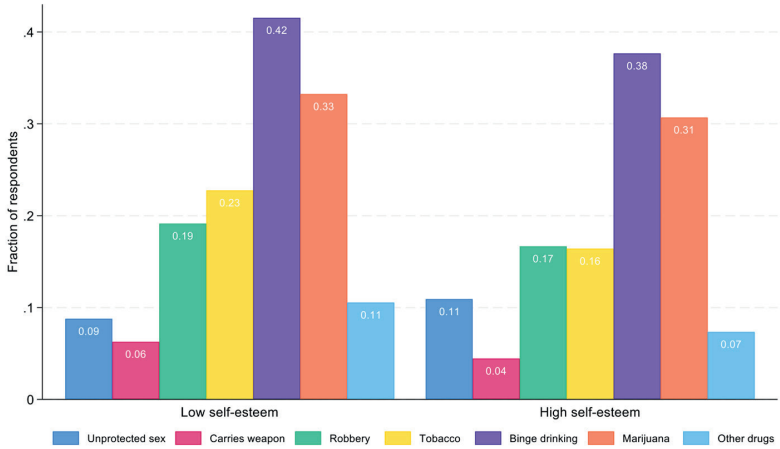
B. AGE



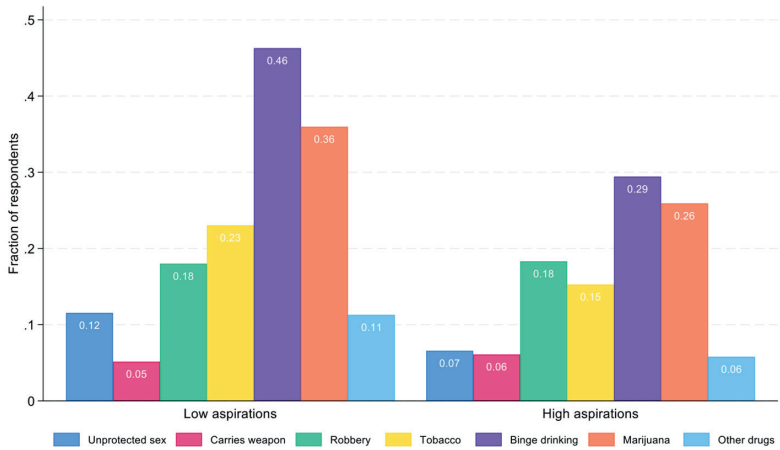
C. NUMERACY SKILLS



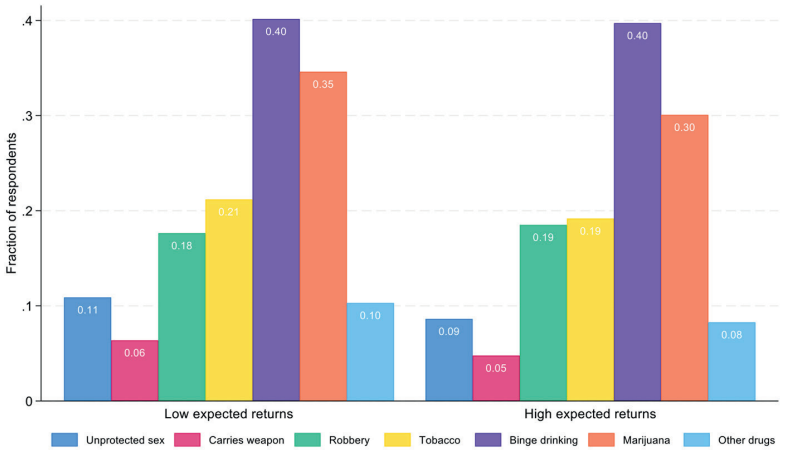
D. SELF-ESTEEM



E. EDUCATIONAL ASPIRATIONS



F. EXPECTED RETURNS TO COLLEGE



G. RISK AVERSION

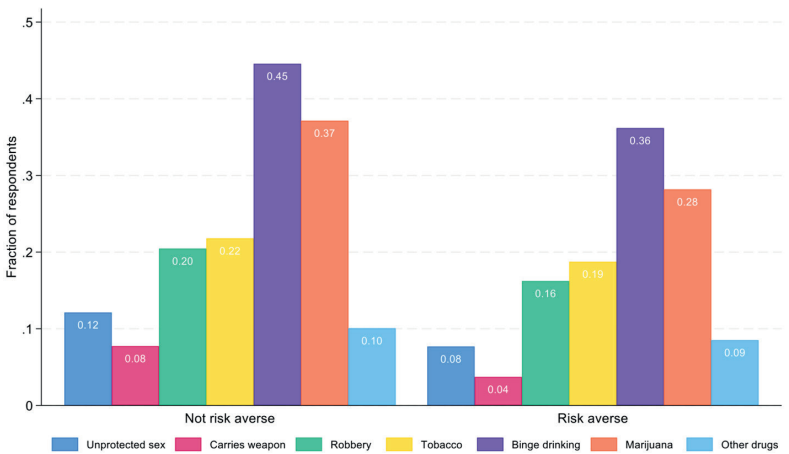


FIGURE 5

PREVALENCE OF RISKY BEHAVIORS BY EXPERIENCE OF SHOCKS

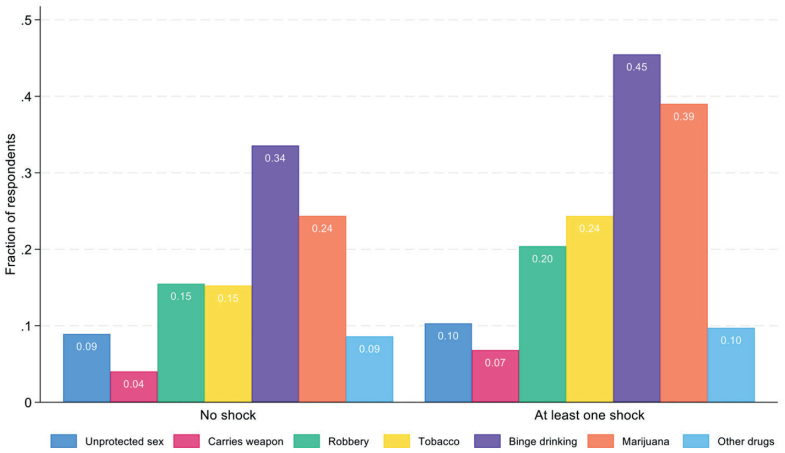


FIGURE 6

CONDITIONAL CORRELATION BETWEEN RISKY BEHAVIORS AND INDIVIDUAL SHOCKS

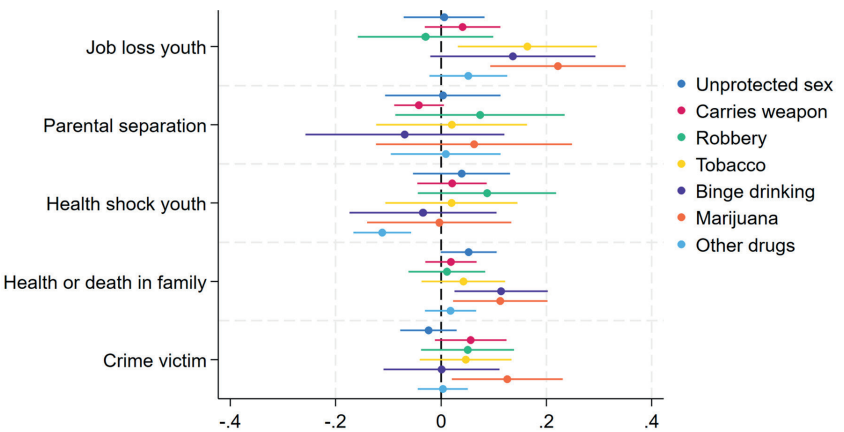


TABLE 1
DESCRIPTIVE STATISTICS

	All		No risky behavior		At least one risky behavior		Means test	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Difference	p-value
Any risky behavior	0.60	0.49	0.00	0.00	1.00	0.00		
Number of risky behaviors	1.43	1.55	0.00	0.00	2.40	1.31		
Unprotected sex	0.09	0.29	0.00	0.00	0.16	0.37		
Carries a weapon	0.07	0.25	0.00	0.00	0.11	0.32		
Robbery	0.19	0.39	0.00	0.00	0.31	0.46		
Tobacco	0.22	0.41	0.00	0.00	0.36	0.48		
Binge drinking	0.42	0.49	0.00	0.00	0.70	0.46		
Marijuana	0.34	0.48	0.00	0.00	0.58	0.50		
Other drugs	0.11	0.31	0.00	0.00	0.18	0.39		
Age	17.03	1.39	16.61	1.37	17.31	1.33	-0.70	0.27
Male	0.51	0.50	0.49	0.50	0.52	0.50	-0.03	0.00
Years of education	9.95	1.86	9.57	1.94	10.21	1.76	-0.64	0.06
Teenage parenthood	0.06	0.24	0.05	0.21	0.07	0.25	-0.02	0.34
Household members under 5 years	0.25	0.53	0.24	0.55	0.26	0.52	-0.03	0.60
Household members over 65 years	0.22	0.50	0.23	0.50	0.21	0.50	0.01	0.47

Income per capita (thousand pesos)	121.20	87.50	118.75	86.69	122.93	88.04	-4.17	0.60
Numeracy skills	0.03	1.00	0.05	0.99	0.02	1.01	0.03	0.38
Rosenberg score	0.01	1.00	0.08	0.99	-0.04	1.00	0.12	0.03
Expected return to a college education	0.63	0.50	0.63	0.49	0.63	0.51	0.01	0.75
Educational aspirations	6.38	2.65	6.78	2.66	6.11	2.61	0.67	0.00
Risk averse	0.54	0.50	0.61	0.49	0.49	0.50	0.12	0.00
Number of economic shocks (0-5)	0.70	0.87	0.56	0.77	0.80	0.92	-0.24	0.00
Job loss youth	0.09	0.28	0.04	0.20	0.12	0.32	-0.07	0.00
Parental separation	0.06	0.23	0.05	0.22	0.06	0.24	-0.01	0.34
Health shock youth	0.11	0.33	0.09	0.28	0.12	0.33	-0.04	0.02
Health or death in family	0.27	0.44	0.24	0.43	0.29	0.45	-0.05	0.05
Crime victim	0.18	0.39	0.14	0.34	0.21	0.41	-0.08	0.00
Number of observations	1427	1427	577	577	850	850	1427	1427

Note: This table presents averages for the complete sample, and according to youths' engagement in risky behavior. The table also presents the p-value for the test of differences of means between youths engaging and those not engaging in risky behavior. Any risky behavior is a dummy variable indicating whether the youth engaged in at least one of the behaviors listed below. Unprotected sex, carries a weapon, robbery, tobacco, binge drinking, marijuana, other drugs, teenage pregnancy, risk averse, and the shock variables are all dummy variables. Numeracy skills and Rosenberg score are normalized variables.

TABLE 2
RESIDUAL CORRELATIONS

	Unprotected sex	Carries a weapon	Robbery	Tobaco	Binge drinking	Marijuana	Other drugs
Unprotected sex	1.000						
	0.000						
Carries a weapon	0.030	1.000					
	0.260	0.000					
Robbery	0.075	0.071	1.000				
	0.004	0.008	0.000				
Tobaco	0.037	0.056	0.096	1.000			
	0.168	0.034	0.000	0.000			
Binge drinking	0.102	0.064	0.239	0.338	1.000		
	0.000	0.015	0.000	0.000	0.000		
Marijuana	0.121	0.177	0.176	0.435	0.484	1.000	
	0.000	0.000	0.000	0.000	0.000	0.000	
Other drugs	0.046	0.071	0.140	0.194	0.251	0.405	1.000
	0.084	0.008	0.000	0.000	0.000	0.000	0.000

Note: This table presents the correlations between the residuals of linear probability regression models of each risky behavior dummy variable on the set of observable covariates in Table 1. The first entry is the correlation, while the second entry is its significance.

APPENDIX TABLE 1

SAMPLE COMPARISON: INCLUDED AND EXCLUDED OBSERVATIONS

	Sample		Excluded observations		Means test	
	Mean	Std. Dev.	Mean	Std. Dev.	Difference	p-value
Age	17.04	1.38	16.88	1.42	0.16	0.02
Male	0.52	0.50	0.48	0.50	0.03	0.19
Years of education	9.97	1.87	9.76	1.89	0.21	0.02
Teenage parenthood	0.06	0.24	0.07	0.25	-0.01	0.57
Household members under 5 years	0.25	0.53	0.24	0.52	0.01	0.73
Household members under 65 years	0.23	0.51	0.20	0.47	0.03	0.22
Income per capita (thousand pesos)	121.2	87.5	108.3	75.9	13.0	0.00
Numeracy skills	0.05	0.99	-0.10	1.01	0.15	0.00
Locus of control score	0.07	0.99	-0.13	1.00	0.21	0.00
Rosenberg score	0.03	1.01	-0.06	0.98	0.09	0.05
Expected return to a college education	0.63	0.50	0.68	0.61	-0.05	0.13
Educational aspirations	6.44	2.60	6.18	2.71	0.27	0.04
Risk averse	0.53	0.50	0.55	0.50	-0.03	0.23
Short term discount rate	4.70	2.71	4.58	2.72	0.12	0.44
Discount difference	2.75	2.12	2.46	1.77	0.29	0.01
Number of economic shocks (0-5)	0.70	0.86	0.59	0.82	0.11	0.01
Job loss youth	0.09	0.29	0.05	0.22	0.04	0.00
Parental separation	0.05	0.22	0.05	0.22	0.00	0.84
Health shock youth	0.11	0.31	0.09	0.29	0.02	0.22
Health or death in family	0.27	0.44	0.24	0.43	0.02	0.29
Crime victim	0.18	0.38	0.16	0.36	0.02	0.22
Number of observations	1427	1427	489	489	1916	1916

APPENDIX TABLE 2
LINEAR PROBABILITY REGRESSION RESULTS

	Unprotected sex	Carries weapon	Committed robbery	Smokes tobacco	Binge drinking	Consumers marijuana	Consumers other drugs
	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Demographic							
Age	0.010	0.008	0.015	0.057***	0.069***	0.050***	0.030***
	(0.013)	(0.008)	(0.016)	(0.014)	(0.018)	(0.017)	(0.010)
Male	0.025	0.031	0.062*	-0.027	0.026	0.027	0.006
	(0.024)	(0.021)	(0.034)	(0.036)	(0.043)	(0.041)	(0.024)
Years of education	0.005	-0.018*	0.01	-0.033**	0.025	0.001	-0.009
	(0.011)	(0.011)	(0.012)	(0.013)	(0.015)	(0.015)	(0.008)
Teenage parenthood	0263***	0.006	-0.053	0.141	0.009	-0.116	-0.036
	(0.094)	(0.034)	(0.064)	(0.089)	(0.089)	(0.080)	(0.051)
Household members under 5 years	-0.019	-0.002	-0.008	0.013	-0.008	0.011	0.035
	(0.021)	(0.015)	(0.025)	(0.030)	(0.039)	(0.038)	(0.023)
Household members over 65 years	-0.029	0.028	0.007	0.022	0.014	0.003	-0.009
	(0.021)	(0.023)	(0.032)	(0.037)	(0.038)	(0.039)	(0.019)
Income per capita (thousand pesos)	0.000*	0.000	0.000	0.001***	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Skills							
Numeracy skills	-0.001	0.009	-0.02	0.030*	-0.014	-0.033*	-0.030***
	(0.011)	(0.011)	(0.017)	(0.017)	(0.021)	(0.020)	(0.011)

Rosenberg score	0.004	-0.008	-0.019	-0.034**	-0.053***	-0.027	-0.018
	(0.012)	(0.008)	(0.016)	(0.015)	(0.018)	(0.018)	(0.012)
Expectations and aspirations							
Expected return to a college education	-0.048*	0.004	0.013	0.005	0.048	-0.014	-0.024
	(0.026)	(0.013)	(0.032)	(0.030)	(0.039)	(0.035)	(0.028)
Educational aspirations	0.000	-0.005	0.009	-0.017*	-0.012	-0.013	-0.011*
	(0.005)	(0.004)	(0.006)	(0.010)	(0.010)	(0.010)	(0.006)
Preferences							
Risk averse	-0.037	-0.038*	-0.039	-0.002	-0.084*	-0.078**	0.002
	(0.024)	(0.022)	(0.033)	(0.033)	(0.043)	(0.039)	(0.022)
Exposure to shocks							
Job loss youth	0.006	0.041	-0.029	0.164**	0.136*	0.222***	0.052
	(0.039)	(0.037)	(0.065)	(0.067)	(0.080)	(0.066)	(0.038)
Parental separation	0.004	-0.042*	0.074	0.02	-0.069	0.063	0.009
	(0.056)	(0.024)	(0.082)	(0.073)	(0.096)	(0.095)	(0.053)
Health shock youth	0.039	0.021	0.087	0.02	0.034	-0.003	-0.111***
	(0.047)	(0.033)	(0.067)	(0.064)	(0.071)	(0.070)	(0.028)
Health or death in family	0.052*	0.019	0.011	0.042	0.114**	0.112**	0.018
	(0.027)	(0.025)	(0.037)	(0.040)	(0.045)	(0.046)	(0.025)
Crime victim	-0.024	0.056	0.051	0.047	0.001	0.126**	0.003
	(0.027)	(0.035)	(0.045)	(0.044)	(0.056)	(0.054)	(0.024)
Region							

Biobio	-0.039	-0.028	-0.041	-0.019	-0.004	-0.073	-0.015
	(0.034)	(0.027)	(0.040)	(0.043)	(0.048)	(0.047)	(0.033)
Metropolitan Santiago	-0.015	-0.02	-0.014	-0.06	-0.047	-0.074*	-0.061**
	(0.033)	(0.026)	(0.038)	(0.041)	(0.046)	(0.043)	(0.027)
Constant	-0.065	0.115	-0.264	-0.414	-0.970***	-0.476	-0.206
	(0.203)	(0.108)	(0.262)	(0.277)	(0.307)	(0.296)	(0.174)
Observations	1.427	1.427	1.427	1.427	1.427	1.427	1.427
R-squared	0.073	0.053	0.032	0.112	0.136	0.117	0.063

Note: p-values *0.10 **0.05 ***0.001
Standar errors in perenthesis