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**Risk behaviors among natives and immigrant youths in Switzerland:
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Conflict of Interest

The authors declare no conflict of interest.

Objective. To examine the attitude towards risk behaviors in a sample of post-mandatory education youths and observe the differences between natives, two immigrant groups and a group of youths of mixed origins (YMO).

Subjects. A total of 5'834 youths from eleven post-mandatory schools in the canton of Fribourg (Switzerland) participated in the GenerationFRee study, a cross-sectional study to assess their lifestyle. Participants were divided by sex in: (a) Natives: Swiss-born youths to Swiss-born parents, (b) First generation migrants: foreign-born youths to foreign-born parents, (c) Second generation migrants: Swiss-born youths to foreign-born parents, (d) YMO: Swiss-born youths to one Swiss-born parent and one foreign-born parent. Participants reported personal, family, school information and attitudes towards height risk behaviors. All significant variables at the bivariate level were included in a binary logistic regression.

Results. The logistic regression showed that, compared to natives, first and second generation migrant boys were less likely to misuse alcohol. Boys of mixed origins were similar to migrants although at the bivariate level they were more exposed to risk behaviors compared to migrants. First and second generation migrant girls were less likely to misuse alcohol and trice more likely to be excessive Internet users. Girls of mixed origins were more likely to have their parents not living together and reported almost twice more often antisocial behavior.

Conclusion. Findings expose a lower engagement in risk behaviors migrants. The migrant status in these two groups is clearly buffered if other control variables are considered. Thus, we can affirm that in the present study, migrants are a not high risk population or not more at risk than the native group. YMO showed higher risk behaviors compared to natives or migrants. Special attention should be given to this specific group, as they may be more vulnerable during adolescence.

Key words. Adolescent, youths, migrant generation, migrant status, risk behavior, Switzerland

Introduction

Switzerland is known as a nation with a consequent immigrant history.

Data from the Federal Statistics Office (1) show that in the total Swiss population, 35.4% report a migrant background (28.5% for first generation and 6.9% for second); in addition to that, the foreign population comes mostly from the European Union. Concerning young people (2), 12,2% of the migrant population is composed by youths between 15-24 years of age.

It is widely recognized that adolescence is a crucial period for social and physical development; it implies for example transition into adulthood, gain of independence and development of an own identity. Social context is crucial and a factor such as migration may influence this evolving process.

Comparing risk behaviors between migrants and native adolescents in Europe, several studies have shown that first generation migrants are less likely to use both legal and illegal substances (3-5). Major factors influencing these consumptions are the cultural background (3, 4), substance use in the country of origin (3) or the acculturation process (4, 5). The length of stay, the competence between the own and the host cultures, such as the use of the own/host language or social interactions, and the whole process of socio-cultural adaptation may explain the differences found between generations of migrants and natives or even between different migrant groups (4).

In Switzerland, a study conducted in 2005 (6) showed that Swiss youths and second generation migrants were similar in terms of their substance use behavior, while first generation migrant youths engaged less in risk behaviors. Therefore, the differences found between migrants and natives concerning physical and mental health were associated more with the socioeconomic status (SES) than with the migrant or cultural background. Moreover, a previous Swiss study conducted in 1992-1993 (7) showed that migrant adolescents reported poorer mental health and engaged more often in risk behaviors such as tobacco or cocaine/heroin use. On the other hand, they showed a lower risk for alcohol consumption while there was no significant statistical difference in minor delinquency and cannabis use.

In a Dutch study (8), Turkish youths scored lower on delinquent behavior compared to their native peers. Nevertheless, at the multivariate level, no ethnic differences were found. The

latter finding was also reported by another Dutch study (9) comparing Dutch, Moroccan, Turkish and Surinamese youths.

Concerning externalizing behaviors (including antisocial and violent behaviors), Gonneke et al. (10) conducted a review of the literature and found mixed results: problem behavior varied from a migrant group to another and it was difficult to draw conclusions on this diversity of findings because of the different study designs and group definitions. The same mixed findings were reported in another review of the literature (11); indeed, other variables such as a low SES or a non-European origin may have an influence on externalizing behaviors. Among adolescents in Switzerland, studies appear to be contradictory: using different evaluation tools, Hüsler et al. (12) showed that migrants scored less concerning delinquent behavior while Steinhausen et al. (13) showed that migrant youths scored more on externalizing problems.

Few studies are available in Europe concerning adolescents of mixed origins and their attitude towards risk behaviors (3, 14). These studies report a higher risk of alcohol misuse, tobacco and cannabis use compared to natives or mono-cultural groups. One proposed explanation is that these youths experience more acculturative stress, which could lead to more personal problems, such as a difficult relationship with their parents or at school. As a result, they would have greater chances to engage in risk behaviors (14). Hence, research is needed to characterize this population and their engagement in risk behaviors.

Thus, more research is needed on adolescent migrants in Switzerland as available data are contradictory, scarce and do not explore other risk behaviors such as at risk gambling or excessive Internet use. The aim of this study is to assess whether there are any differences between first and second generation immigrants, youths of mixed origins and their native peers in Switzerland concerning their engagement in risk behaviors.

Methods

GenerationFRee is a longitudinal study conducted in the canton of Fribourg, Switzerland, to assess the lifestyles of adolescents and young adults (15). This research is based on the baseline data collected during the 2014-2015 school year using a representative sample of AYA in post-mandatory education.

Students of all post-mandatory schools (five high-schools and six professional schools) completed an anonymous online self-administrated questionnaire. In Switzerland, mandatory school goes up to age 15, and afterwards about one third of adolescents follow high-school and two thirds vocational education. The latter are enrolled by companies to train for their future profession and attend class at vocational schools only 1-2 days per week.

The total sample size consisted in 5'834 AYA, from which 5'634 agreed to complete the questionnaire. Among them, 211 were not in the defined age range (15-24 years of age) and 244 did not complete the questionnaire reliably. The final sample consisted of 5'179 youths (56% girls).

Dependent variable

Four categories were created according to the participants' background:

1. Natives: Swiss-born youths with Swiss-born parents (n=3082; 57% girls)
2. First generation migrants: foreign-born youths to foreign-born parents (n= 469; 55% girls)
3. Second generation migrants: Swiss-born youths to foreign-born parents (n= 723; 58% girls)
4. Youth of mixed origins: Swiss-born youths to one Swiss-born and one foreign-born parent (n= 792; 55% girls)

Swiss adolescents born abroad to Swiss parents or to at least one Swiss parent who completed the questionnaire (n= 48 and n= 65, respectively) were excluded as being a confounding factor for the classification. In fact, their original nationality could not be confirmed and their birth context was unknown (they could be adopted for example).

Independent variables

Personal variables included age, gender, emotional wellbeing, and residence (rural/urban). Family variables comprised family structure (parents living together/other), socioeconomic status (SES), mother-adolescent and father-adolescent relationship.

To measure emotional well-being we used the WHO-Five Well-Being Index (WHO-5), whose validity in adolescents has been proved (16). The WHO-5 index includes five items and each one is rated on a 6-point Likert scale ranging from 0 (= at no time) to 5 (= all of the

time) (17). Scores are added and a result below 13/25 indicates poor well-being. Cronbach's alpha in the present study was .81.

Self-assessment of SES was determined using the question in the ESPAD project (18): "Compared to the financial situation of other families in Switzerland, would you say that your family is..." with seven possible answers ranging from 'very much below average' to very much above average' and trichotomized into "above average", "average" and "below average". Father and mother relationship with the adolescent or young adult were rated on a scale from 1 [very poor] to 10 [Excellent].

School variables included academic track (student/apprentice) and self-reported school performance (above average, average or below average student).

We analyzed 8 risk behaviors including tobacco smoking (smoking or not), cannabis use (at least once during the past month), use of illegal substances other than cannabis (at least once during the past month) and alcohol misuse (at least one episode of drunkenness during the past month). Violent behavior (physical harm towards an adult, carrying a weapon, using a weapon during a fight) and antisocial behavior (vandalism, theft, dealing with drugs, setting fire to something) during the past year were evaluated and the three possible answers ("Never", "1-2 times", "3 or more times") were dichotomized into Never and At least once.

The short version of the Internet Addiction Test (s-IAT) was used to evaluate the level of excessive Internet use. The s-IAT includes twelve items and each one is rated on a 6-point scale ranging from 0 (= never) to 5 (= very often) (19). Scores are added with a result above 29 over 60 suggesting excessive Internet use.

Gambling behavior was evaluated with the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) (20), a 12-item instrument which explores general behavior related to gambling on a scale from 0 to 12 points. The three possible outcomes and scores ("No problem gambler" [< 2 points], "At risk gambler" [$\geq 2 - < 4$ points] and "Problematic gambler" [≥ 4 points]) were dichotomized into "No problem gambler" [< 2 points and including non-gamblers] and "At risk gambler" [≥ 2 points].

The study protocol was approved by the Cantonal Ethics Committee of Vaud.

Statistical analysis

Statistical analyses were performed with STATA 13.0 (StataCorp, College Station, Texas). In a first step, we used Chi-square test to compare categorical and Student's t-test for continuous variables between the groups. Results are given as point prevalence and means. In a second step, all statistically significant variables ($p < 0.05$) at the bivariate level were included in a binary logistic regression analysis, using natives as the reference group. Results are given as adjusted odds ratios with 95% confidence intervals (95%CI). All analyses were done separately by gender as there are differences in risk behaviors (21). Each migrant group was compared to the native one separately.

Results

Boys: natives vs. 1st generation (Table 1)

Compared to Swiss natives, first-generation migrants were significantly older, reported a lower SES, a poorer relationship with their father, and were more likely to live in an urban setting. While they were more likely to use illegal substances other than cannabis, to use Internet excessively, or to be at risk gamblers, they reported lower rates of alcohol misuse.

The logistic regression showed that first generation migrant boys were more likely to be older and live in a city. They also were less likely to report an above average SES, and twice more likely to report a below average SES. Only one risk behavior remained significant: they were less likely to misuse alcohol.

Boys: natives vs. 2nd generation (Table 2)

Second-generation migrants showed the same characteristics than first-generation ones except for the relationship with their father and, additionally, reported a poorer emotional wellbeing, and a higher likelihood to live in an intact family and to be a student. They also reported significantly lower prevalence rates of antisocial behavior, cannabis use and alcohol misuse but higher rates of excessive Internet use.

The regression analysis showed that, except for a below average SES and family structure, second generation migrant boys were very similar to the first generation ones.

Boys: natives vs. Youths of mixed origins (Table 3)

Boys of mixed origins reported a significantly lower SES, poorer emotional wellbeing, a worse relationship with their father, and a lower likelihood to live with both parents, while

they were more likely to live in an urban setting and to be students. They also reported a significantly higher prevalence of cannabis use and a lower prevalence of alcohol misuse.

The binary logistic regression showed that youths of mixed origins were less likely to report an above average SES, but they were more likely to live in an urban area and to be students. Concerning risk behaviors, the only one that remained significant was alcohol misuse.

Girls: natives vs. 1st generation (Table 4)

Compared to Swiss natives, first-generation migrants were significantly older, reported a lower SES and a poorer emotional wellbeing, had a worse relationship with both parents, were more likely to live in an urban setting and less likely to be students. While they were less likely to misuse alcohol (but not other substances), they were more likely to report excessive Internet use or at risk gambling.

The logistic regression showed that first generation migrant girls were more likely to report a below average SES and to live in an urban area. On the contrary, they showed lower odds of being students. Two risk behaviors remained significant: they were less likely to misuse alcohol and trice more likely to be excessive Internet users.

Girls: natives vs. 2nd generation (Table 5)

Second-generation migrants differed from natives in SES, emotional wellbeing, family structure, residence and perceived school performance. They were also significantly less likely to report alcohol misuse but more likely to use Internet excessively.

The regression analysis showed that second generation migrant girls were more likely to be in the below average SES group, to report a poorer well-being, and to live in an urban area. On the contrary, they were less likely to have an intact family or to perceive their school performance as above average. Concerning risk behaviors, they were very similar to those reported by first generation migrants.

Girls: natives vs. Youths of mixed origins (Table 6)

Girls of mixed origins stated a lower SES, poorer emotional wellbeing and relationship with their father, lower prevalence of living in an intact family and a higher rate of urban residence than their native counterparts. With the exceptions of violent behavior, alcohol misuse and at risk gambling, they reported higher prevalence rates in all risk behaviors.

The logistic regression showed that girls of mixed origins were more likely to have their parents not living together and a worse relationship with their father and to live in an urban area. They reported almost twice more often an antisocial behavior.

Discussion

The main purpose of this study was to examine the engagement in risk behaviors in a sample of post-mandatory education AYA and observe the differences between natives, two generations of immigrants and a group of youths of mixed origins. Findings showed that first and second generation migrants show lower odds concerning engagement in risk behaviors compared to natives. Moreover, migrant status is not even relevant for some risk behaviors, such as smoking and violence for girls but also smoking, violence, antisocial behavior and drug use for boys, which show no statistical significance even at the bivariate level. Only youths of mixed origins, especially girls, showed more risk behaviors compared to Swiss natives. In this section, hypotheses for these results are proposed and discussed.

In line with other studies conducted in Europe (5, 22), first and second generation migrants showed a lower risk of alcohol misuse. This is, in fact, a major difference compared to natives' group, otherwise extremely similar to migrants in others risk behaviors. We can suppose that alcohol consumption greatly depends on the cultural background; a consistent part of the migrant population in Switzerland comes mostly from Mediterranean countries, which implies different social norms about alcohol use. These results underline the process of adaptation to the host society, which greatly depends on the cultural background and the possibilities of integration in the host country. As discussed by Sarasa-Renedo et al (3) , there is evidence of the influence of the country-of-origin cultural factors, protecting immigrants against substance use.

Another finding is the highest risk of excessive Internet use of first and second generation migrant girls. This finding may be explained by the higher percentage of personal computers and Internet access in adolescents' bedrooms among the non-Swiss adolescent population (23). Furthermore, it can be hypothesized that migrants may use more the Internet to stay in touch with their family or friends still living in their country of origin.

Concerning gender, the results are consistent with Swiss research (24) , showing a higher prevalence of excessive internet use for females. In fact, the existing gap with male users has

rapidly diminished, as girls use more the Internet for obtaining information, communicating online (chat or e-mail), for educational purposes (25, 26) and use more social networks than boys (27).

In the present study, behavioral risks such as violence and antisocial behavior are not significant at the multivariate or even bivariate level for first and second generation migrants. Moreover, the two migrant generations show a lower or almost equal rate when compared to natives. This is in contrast with some research done at the European level (28) showing that young migrants are more involved in crime than natives. Considering data collection, a study conducted in the Netherlands (29) underlines the difference between recorded crime and self-reported data: the former one over-represents migrants in crime statistics, while the latter shows less involvement in crime among migrants.

Concerning youths of mixed origins, boys do not differ from natives and migrants while girls report a significant difference in antisocial behavior compared to Swiss natives.

Regarding the possible causes, two interpretations can be given. Focusing on family structure, results show that, for girls and boys, the highest rate of disrupted families is represented by the group of youths of mixed origins while first and second generation migrants have a lower risk to have their parents not living together. Results did not change for the mixed group when we analyzed separately Swiss mother-Foreign Father and vice versa (data not shown). Thus, the first interpretation may be supported by the high rate of parents not living together, even significant at the multivariate level for girls but not for boys. Indeed, youths from the United States living in disrupted families showed a higher rate of antisocial behavior (30). In other words, the mixed group could be more inclined to adopt risk behaviors more because of family structure than their migration history. It can be hypothesized that the biracial reality could be challenging in a family dynamic and lead to a divorce or a higher engagement in risk behaviors.

A second interpretation can explain our findings regarding youths of mixed origins. Research conducted in the United States (31, 32) reported that multiracial students showed higher frequency of substance use and higher rates of violent/antisocial behavior (31) or higher health and behavioral risks (32) compared to adolescents with only one ethnic origin. Therefore, youths of mixed origins can undergo stress associated with identity conflict (32) and the integration of two identities and cultural backgrounds may be challenging, as shown

in the literature review done by Phillips (33). Although bicultural identity could be seen as an advantage through childhood, it can become a burden at adolescence, in a context where 'normality' and peer identification are the strongest factors. As Herman (34) put forward, youths of mixed origins may adapt to the bicultural status or choose one of them; and in the case of the latter, they will chose it with great influence of others' perception of the adolescent's appearance. It can thus be supposed that this necessity to choose may imply some instability and a major engagement in risk behaviors. This hypothesis is discussed by Shish & Sanchez (35) who reviewed the literature on multiracial identity and found no clear differences between mono or multiracial individuals.

The main strengths of this study are that it is based on a large representative sample of AYA and includes youths of mixed origins as one independent group. Moreover, this is the first study to our knowledge that explores gambling and excessive Internet use in migrant adolescents.

However, some limitations need to be stressed. First, because of its cross-sectional design, no causal relationship can be drawn. Second, as the results of this survey come from a self-reported questionnaire, response bias cannot be precluded. Third, only youths enrolled in post-mandatory education are included in our study. Other youth groups such as asylum-seekers or illegal migrants, who, depending on their legal context, cannot follow their studies after compulsory education, are not included in the sample. Fourth, the present study does not differentiate migrants regarding their country of origin, nor the reason for migration and legal status in Switzerland which can have an important influence on the integration and attitudes towards the host country. Concerning the country of origin, first, second and youths of mixed origins come mostly from the European Union and Eastern Europe (77%) (n=1292), especially from Portugal (27%), France (14%), Kosovo (11%), Italy (7%), Germany (3%) and Spain (3%). The remaining 33% was represented by Asian, African and South-American migrants. Due to the higher rate of migrants coming from Central and Western Europe, other nationalities were less represented and the size of each category was not large enough to reach statistical significance. However, analyses on the various groups were done and no major differences were found (data not shown). Finally, the questionnaire did not include questions evaluating peer and family influences on risk behaviors, or the length of stay in Switzerland, the latter concerning mostly first generation migrants.

Conclusions

In the present study findings expose a lower engagement in risk behaviors for first and second generation migrants. Indeed, migrant status in these two groups is clearly buffered when potentially confounding variables are considered. Thus, we can affirm that, in the present study, migrants are not a high-risk population or not more at risk than natives. These results are important in showing that in a sensible period of migrations in Europe, we should not stigmatize or diabolize the migrant status by associating it with a susceptibility to violence or any other risky behavior. Research has shown that it is more the social and the physical environment in which the migrants are placed in, and the opportunity that it offers, than the migrant status itself that tends to enhance an illegal behavior (28, 36).

In addition, it may be suggested that being enrolled in post-mandatory school education may play a fundamental role in preventing risk behaviors if we compare to asylum-seekers who do not have access to non-compulsory education in Switzerland and are disproportionately involved in crime (28).

This study, focusing also on youths of mixed origins, put forward that the female population showed higher engagement in antisocial behavior, compared to natives. Special attention should be given to this specific group, as difficulties may double when cumulating the challenges often implied when going through adolescence with those of being of mixed origin, at an age when peer perceptions of normality are the strongest. In fact, youths of mixed origins appear to show a major peers' influence concerning risk behaviors and a poorer relationship with their families (37-40).

In sum, adolescence being a period of self-construction and transition to adulthood, the more the youths are vulnerable the more this process can be challenging. Among migrant youths, those of mixed origins seem to be the most vulnerable.

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Table 1

BOYS: Natives vs. First-generation migrants

Variable	Natives	First generation migrants	Adjusted Odds Ratio	P
Mean age (years \pm standard error)	18.17 \pm 0.06	18.82 \pm 0.15***	1.11 [1.00:1.23]	<.05
Socioeconomic status				
Above	47%	27%***	0.50 [0.34:0.73]	<.001
Average	46%	53%	Reference	
Below	7%	20%	2.22 [1.32:3.76]	<.01
Well-being (poor)	12%	15.50%		
Relationship with father (mean \pm SE)	8.27 \pm 0.07	7.83 \pm 0.20*	1.01 [0.94:1.10]	.715
Relationship with mother (mean \pm SE)	8.73 \pm 0.05	8.97 \pm 0.13		
Family structure (parents not living together)	30%	30%		
Residence (urban)	23%	57%***	3.79 [2.66:5.40]	<.001
Perception of school performance				
Above average	30%	27%		
Average	64%	64%		
Less good	6%	9%		
School track (student)	29%	24%		
Violent behavior during the past year (at least once)	16%	17%		
Antisocial behavior during the past year (at least once)	27%	22%		
Current smoking	41%	39%		
Cannabis use (at least once during the past month)	23%	23%		
Drug use (at least once during the past month)	4%	7%*	2.03 [0.76:5.42]	.158
Alcohol misuse (at least one episode of drunkenness during the past month)	58%	37%***	0.36 [0.25:0.51]	<.001
Excessive Internet use (IAT>29)	9%	15%*	1.65 [0.97:2.80]	.058
Gambling (SOGS-RA \geq 2)	6.7%	12.5%*	1.61 [0.84-3.05]	.149

*p<.05; **p<.01; ***p<.001 compared to Natives group

Table 2

BOYS: Natives vs. Second-generation migrants

Variable	Natives	Second generation migrants	Adjusted Odds Ratio	P
Mean age (years \pm standard error)	18.17 \pm 0.06	18.54 \pm 0.11**	1.14 [1.04:1.25]	<.01
Socioeconomic status				
Above	47%	36%***	0.59 [0.43:0.82]	<.01
Average	46%	53%	Reference	
Below	7%	10%	1.20 [0.75:1.92]	.448
Well-being (poor)	12%	18%**	1.37 [0.89:2.09]	.153
Relationship with father (mean \pm SE)	8.27 \pm 0.07	8.22 \pm 0.14		
Relationship with mother (mean \pm SE)	8.73 \pm 0.05	8.81 \pm 0.12		
Family structure (parents not living together)	30%	19%***	0.32 [0.22:0.47]	<.001
Residence (urban)	23%	62%***	5.68 [4.19:7.69]	<.001
Perception of school performance				
Above average	30%	30%		
Average	64%	63%		
Less good	6%	7%		
School track (student)	29%	36%*	1.16 [0.83:1.63]	.386
Violent behavior during the past year (at least once)	16%	17%		
Antisocial behavior during the past year (at least once)	27%	20%*	0.70 [0.47:1.04]	.079
Current smoking	41%	35%		
Cannabis use (at least once during the past month)	23%	17%*	1.03 [0.67:1.57]	.906
Drug use (at least once during the past month)	4%	3%		
Alcohol misuse (at least one episode of drunkenness during the past month)	58%	31%***	0.35 [0.25:0.48]	<.001
Excessive Internet use (IAT>29)	9%	13%*	1.62 [0.99:2.63]	.053
Gambling (SOGS-RA \geq 2)	6.7%	9.2%		

*p<.05; **p<.01; ***p<.001 compared to Natives group

Table 3

BOYS: Natives vs. Youths of mixed origins

Variable	Natives	Youths of mixed origins	Adjusted Odds Ratio	P
Mean age (years \pm standard error)	18.17 \pm 0.06	18.11 \pm 0.12		
Socioeconomic status				
Above	47%	37%***	0.68 [0.51:0.90]	<.01
Average	46%	50%	Reference	
Below	7%	13%	1.32 [0.83:2.08]	.237
Well-being (poor)	12%	19%**	1.26 [0.87:1.83]	.224
Relationship with father (mean \pm SE)	8.27 \pm 0.07	7.7 \pm 0.16***	0.96 [0.90:1.02]	.174
Relationship with mother (mean \pm SE)	8.73 \pm 0.05	8.62 \pm 0.10		
Family structure (parents not living together)	30%	41%***	1.26 [0.94:1.69]	.120
Residence (urban)	23%	40%***	2.00 [1.51:2.65]	<.001
Perception of school performance				
Above average	30%	27%		
Average	64%	66%		
Less good	6%	7%		
School track (student)	29%	36%*	1.33 [1.01:1.75]	.044
Violent behavior during the past year (at least once)	16%	16%		
Antisocial behavior during the past year (at least once)	27%	29%		
Current smoking	41%	43%		
Cannabis use (at least once during the past month)	23%	29%*	1.34 [0.98:1.83]	.063
Drug use (at least once during the past month)	4%	5%		
Alcohol misuse (at least one episode of drunkenness during the past month)	58%	49%**	0.70 [0.54:0.92]	.01
Excessive Internet use (IAT>29)	9%	9%		
Gambling (SOGS-RA \geq 2)	6.7%	6.7%		

*p<.05; **p<.01; ***p<.001 compared to Natives group

Table 4

GIRLS: Natives vs. First-generation migrants

Variable	Natives	First generation migrants	Adjusted Odds Ratio	P
Mean age (years \pm standard error)	18.19 \pm 0.05	18.62 \pm 0.12***	1.02 [0.94:1.12]	.664
Socioeconomic status				
Above	34%	19%***	0.54 [0.36:0.80]	.002
Average	59%	62%	Reference	
Below	8%	19%	1.63 [1.03:2.59]	.037
Well-being (poor)	23%	35%***	1.37 [0.97:1.95]	.076
Relationship with father (mean \pm SE)	7.77 \pm 0.6	7.17 \pm 0.18***	0.98 [0.93:1.04]	.567
Relationship with mother (mean \pm SE)	8.6 \pm 0.04	8.2 \pm 0.13**	0.96 [0.88:1.05]	.392
Family structure (parents not living together)	30%	29%		
Residence (urban)	23%	57%***	4.29 [3.14:5.87]	<.001
Perception of school performance				
Above average	29%	24%		
Average	65%	72%	Reference	
Less good	5%	4%		
School track (student)	55%	39%***	0.48 [0.35:0.68]	<.001
Violent behavior during the past year (at least once)	4%	5%		
Antisocial behavior during the past year (at least once)	9%	8%		
Current smoking	34%	34%		
Cannabis use (at least once during the past month)	14%	11%		
Drug use (at least once during the past month)	1%	2%		
Alcohol misuse (at least one episode of drunkenness during the past month)	35%	22%***	0.49 [0.34:0.70]	<.001
Excessive Internet use (IAT>29)	5%	17%***	3.54 [2.26:5.54]	<.001
Gambling (SOGS-RA \geq 2)	2%	4%**	1.47 [0.52:4.13]	.470

*p<.05; **p<.01; ***p<.001 compared to Natives group

Table 5

GIRLS: Natives vs. Second-generation migrants

Variable	Natives	Second generation migrants	Adjusted Odds Ratio	P
Mean age (years \pm standard error)	18.19 \pm 0.05	18.34 \pm 0.10		
Socioeconomic status				
Above	34%	29%**	0.83 [0.62:1.10]	.198
Average	59%	58%	Reference	
Below	8%	13%	1.64 [1.05:2.54]	.028
Well-being (poor)	23%	35%***	1.58 [1.19:2.11]	.002
Relationship with father (mean \pm SE)	7.77 \pm 0.6	7.69 \pm 0.14		
Relationship with mother (mean \pm SE)	8.6 \pm 0.04	8.5 \pm 0.11		
Family structure (parents not living together)	30%	21%***	0.48 [0.34:0.67]	<.001
Residence (urban)	23%	63%***	5.65 [4.34:7.36]	<.001
Perception of school performance				
Above average	29%	22%*	0.69 [0.51:0.93]	.017
Average	65%	72%	Reference	
Less good	5%	6%	0.92 [0.55:1.55]	.764
School track (student)	55%	50%		
Violent behavior during the past year (at least once)	4%	6%		
Antisocial behavior during the past year (at least once)	9%	11%		
Current smoking	34%	30%		
Cannabis use (at least once during the past month)	14%	11%		
Drug use (at least once during the past month)	1%	2%		
Alcohol misuse (at least one episode of drunkenness during the past month)	35%	20%***	0.49 [0.37:0.66]	<.001
Excessive Internet use (IAT>29)	5%	17%***	3.19 [2.15:4.74]	<.001
Gambling (SOGS-RA \geq 2)	2%	2%		

*p<.05; **p<.01; ***p<.001 compared to Natives group

Table 6

GIRLS: Natives vs. Youths of mixed origins

Variable	Natives	Youths of mixed origins	Adjusted Odds Ratio	p
Mean age (years \pm standard error)	18.19 \pm 0.05	18.33 \pm 0.10		
Socioeconomic status				
Above	34%	34%***	1.18 [0.91:1.53]	.209
Average	59%	52%	Reference	
Below	8%	14%	1.43 [0.94:2.17]	.092
Well-being (poor)	23%	30%**	1.20 [0.91:1.58]	.200
Relationship with father (mean \pm SE)	7.77 \pm 0.6	7.1 \pm 0.15***	0.95 [0.91:0.99]	.045
Relationship with mother (mean \pm SE)	8.6 \pm 0.04	8.5 \pm 0.09		
Family structure (parents not living together)	30%	42%***	1.32 [1.00:1.72]	.044
Residence (urban)	23%	45%***	2.53 [1.98:3.24]	<.001
Perception of school performance				
Above average	29%	24%		
Average	65%	70%		
Less good	5%	6%		
School track (student)	55%	56%		
Violent behavior during the past year (at least once)	4%	7%*	1.13 [0.68:1.87]	.647
Antisocial behavior during the past year (at least once)	9%	18%***	1.78 [1.20:2.64]	.004
Current smoking	34%	40%*	0.98 [0.75:1.27]	.866
Cannabis use (at least once during the past month)	14%	21%***	1.20 [0.86:1.69]	.282
Drug use (at least once during the past month)	1%	4%***	1.93 [0.91:4.10]	.089
Alcohol misuse (at least one episode of drunkenness during the past month)	35%	37%		
Excessive Internet use (IAT>29)	5%	8%*	1.36 [0.86:2.15]	.193
Gambling (SOGS-RA \geq 2)	2%	1%		

*p<.05; **p<.01; ***p<.001 compared to Natives group