The color of school failure: factors associated with academic failure of high-school students

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Abstract

Currently, elementary/middle school is virtually offered to all children in Brazil, and crude and net schooling rates have increased for high school. Despite the advancements, educational results provided by governmental bodies demonstrate that student academic performance, both in elementary/middle school and in high school, have declined in all different subgroups of the population. Some studies have shown important educational differentials, according to gender and race. However, studies intended to understand which factors associated with school achievement are, in their majority, related to elementary/middle school. In light of this, the purpose of this work is to verify the relationship between race/color, according to gender, to students enrolled in the 11th grade of high school, from the state education system of nine municipalities that are part of the metropolitan area of Belo Horizonte, capital of the state of Minas Gerais. Data utilized came from Pesquisa Jovem (Youth Research) and from School Census, regarding the year 2009. Logistic regression models were applied. In general, results have shown major differentials according to race/color and gender. Risks of failure at the 10th grade of high school were higher for those who declared themselves as being brown (pardo) and the situation was even worse for the females (OR=2,23) compared to the males (OR=1,66).

Keywords

Race/Color – School failure – High school – Teenagers – Brazil – Grade repetition.

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A cor da reprovação: *fatores associados à reprovação dos alunos do ensino médio*

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Resumo

Atualmente, o ensino fundamental (EF) está praticamente universalizado no Brasil e as taxas de escolarização bruta e líquida têm aumentado no ensino médio (EM). Apesar dos avanços, os resultados educacionais fornecidos pelos órgãos governamentais demonstram que o desempenho dos alunos, tanto no EF quanto no EM, tem declinado para diferentes subgrupos da população. Particularmente, alguns trabalhos têm evidenciado diferenciais educacionais importantes, segundo sexo e raça. No entanto, os estudos voltados para se entender quais os fatores associados ao desempenho escolar são, em sua maioria, direcionados para o EF. Diante disso, o objetivo deste trabalho é verificar a relação entre raça/cor, segundo sexo, para os adolescentes matriculados no 2º ano do EM, em escolas da rede estadual de ensino (REE) de nove municípios mineiros integrantes da região metropolitana de Belo Horizonte (RMBH). Os dados utilizados foram os da Pesquisa Jovem (PJ) e os do Censo Escolar, referentes ao ano de 2009, e foram aplicados modelos multivariados de regressão logística. No geral, os resultados mostraram diferenciais importantes segundo raça/cor e sexo. Os riscos de reprovação no 2º ano do EM foram maiores para aqueles que se autodeclararam como sendo da raça/cor parda, sendo a situação ainda pior para o sexo feminino (OR=2,23) comparada ao sexo masculino (OR=1,66).

Palavras-chave

Raça/Cor − Reprovação − Ensino médio − Adolescentes − Brasil.

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Introduction

In Brazil, the educational system has been suffering major changes and one of them was the process of democratization of education beginning in the 1990s (LUZ, 2008). Currenlty, elementary and middle schools (E/MS) are virtually universalized and the crude schooling rates (ratio between the number of registrations in a given level of schooling and the population in the appropriate age for that level) and net schooling rates (ratio between the number of registrations in the age group appropriate to a certain school level and the population in the same age group) in high school (HS) have increased (CASTRO; TIEZZI, 2005). However, one can see through the data from the 2005 Basic School Assessment System (BSAS) that student performance both in E/MS and in HS has dropped between 1995 and 2005 (INEP, 2007). Thus, expanding the access to education is not enough; it is also necessary to make students capable of completing their studies by promoting the development of their abilities and their entrance into the labor market. (LUZ, 2008).

The factors associated with academic achievement are related to individual, family characteristics as well as those of the school and its community, including the stock of capital and resources (DAMIANI, 2006; RIANI; RIOS-NETO, 2008). Individual and family characteristics include socio-demographic factors, whereas gender, race/color, religion, parents' schooling and economic assets are the aspects that affect a student´s probability of failing (MULLER; ELLISON, 2001; ANUATTI-NETO; NARITA, 2004; ALVES et al., 2007; LUZ, 2008; RIANI; RIOS-NETO, 2008).

The racial issue and its repercussion on the academic achievement are seen as a sort of social stratification. Even in the sight of different rankings, due to the conformation of data available and the objectives pursued by the authors, in general, the studies point out that students of black or brown color/race present the worst school results (ALVES et al., 2007;

SOARES; ALVES, 2003; ALVES, 2006; FONSECA, 2010; GONÇALVES, 2008). The study by Alves et al. (2007), utilizing information from the 2001 BSAS, showed that among students with previous experience of failing at the 8th grade, registered in public schools from Brazilian state capitals, the percentage was higher for students who declared they were black (58%), followed by brown (49%), and the least rates were for whites (42%). In addition, the risks of failure by black (85%) and brown (21%) students were higher than those for white students.

In Guimarães' work (2010), similar results were found. Based on data from the National Survey through Household Sample (PNAD) for Brazil, from 1986 through 2008, it was noted that once the 8th grade of middle school is completed, odds are that black and brown students are less likely to advance to high school than white students.

Regarding gender, Alves et al. (2007) observed that boys experienced 10 percent more previous failures than girls, and the risk of failing for male 8th graders was 49 percent higher than for girls. Damiani (2006) also found similar results. With data from the cohort made up by all children born in hospitals of the city of Pelotas (in the southern state of Rio Grande do Sul) in 1982, chances were that boys could fail and/or drop out school 30 percent higher than the girls.

In studies on academic achievement, usually gender as a variable is utilized as an indicator (or an explanation) (LEON; MENEZES-FILHO, 2002; DAMIANI, 2006; ALVES et al., 2007), which may lead to biased results, due to the interaction between this variable and the other explicative variables. Thus, we analyze separate models for males and females in this paper.

In addition to the differentials in academic achievement, seen in connection with gender and race/color, other aspects of the students´ life are observed. Generally, working students who possess low educational resources and whose parents have low level of schooling

are more likely to fail. According to Leon and Menezes-Filho (2002), for students in the Economically Active Population (EAP), either if they have a job or if they are unemployed, the probability of academic advancement is lower than their peers, and the probability of failure is higher in comparison to those who are out of EAP. For those within EAP, chances of being retained are higher among students who were working than those who were looking for a job.

Alves et al. (2007) also found that, among working students, 63 percent had failed at least once along their academic history. In this very study, authors show that, for students with low levels of educational resources (daily newspaper, magazine, enciclopedia, atlas, dictionary) and possession of economic assets (TV, computer, refrigerator, freezer, washing machine, cars), failure was also around 10 percent higher when compared to students who had such resources above the average. Additionally, among students whose parents had no instruction, failure was virtually twice as much (60 percent) as the rate among students whose parents had gone to college (35 percent).

Particularly for the poorest layers of the population, vulnerability to academic failure[1] ends up being greater due to precarious socioeconomic conditions, which are seen as associated with for school success (LUZ, 2008). This problem is aggravated because failure may lead to a discrepancy between age and school grade which contributes to drop-out (ALVES et al., 2007; LUZ, 2008). And considering that there are important differentials of academic achievement according to race/color (ALVES et al., 2007; SOARES; ALVES, 2003; ALVES, 2006; FONSECA, 2010; GONÇALVES, 2008), such

results end up reinforcing social stratification based on origin.

In sight of this, the purpose of this study is to verify the relationship between race/color and failure among junior high school students from the State Educational Network (SEN), in nine municipalities (Belo Horizonte, Betim, Brumadinho, Contagem, Esmeraldas, Ibirité, Pedro Leopoldo, Ribeirão das Neves, and Sarzedo), which are part of the Metropolitan Area of Belo Horizonte (MABH). For such, we have utilized multivaried models of logistic regression to examine data from the 2009 Youth Research[2], as well as information from the 2009 School Census.

The study of race/color and gender variables associated with failure in high school, according to race/color is crucial to understand not only the educational bottlenecks in high school, but also the differentials of these same variables in the students´ transition to the labor market and, consequently, in their salaries. Such problems have still got little attention in public policies. The results we have found may contribute to formulate public policies that will make access to education more equal for young women and men from different racial groups, enhancing their chances to complete high school.

Data and method

We utilized two sources of data. One source is the 2009 School Census, which provides information on students on a per registration basis in the end of the school year. Regarding academic achievement, there are two possible situations for the student: pass (the school year has been successfully completed) or fail (he or she was unsuccessful in the end of the school year). Regarding the school turnover, we utilized information on school drop-out.

The failure variable was built based on these three pieces of information, in which

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1- For E/MS, local school networks are free to adopt the graded system (in which a student may fail a grade) or a cycle system (with no failure, and the student is has his/her learning followed for a certain period), as well as they can blend both methods. When the graded system is adopted, the first three years must be in cycles (MAINARDES; STREMEL, 2012). In the school network of the state of Minas Gerais, where E/MS has 9 grades, the method has 4 cycles: a) literacy in the 1st, 2nd and 3rd grade; b) complementary, in 4th and 5th grade; c) intermediate in 6th and 7th grade; and d) consolidation in 8th and 9th grade, according to SEE Resolution No. 2197 (MINAS GERAIS, 2012).

2- The Youth Research was conducted in nine municipalities with the purpose of checking the impact of the Youth Savings program on the life of both male and female students living in areas of high social vulnerability.

1 = fail (pass = 1 and drop-out = 0) and 0 = no fail (pass = 1 and drop-out = 0). Therefore, the analysis did not consider the students who had dropped out from school (drop-out = 1). The decision to withdraw students who had dropped out was based on the previous analyses in which we compared distributions related to the variables utilized considering these two situations: a) database with students who dropped out from school and b) database without the students who dropped out from school. The distribution pattern of the variables utilized in the analytical models presented according to the results of chi-square tests (value of p > 0.05) did not change. In addition, the percentage of dropouts was 1 percent of the total population in the age group from 15 through 19 years old.

The second data source is *Pesquisa Jovem* (Youth Research) – Survey of High School Assessment, a longitudinal survey conducted by Cedeplar/UFMG in partnership with SEDESE/MG, between 2007 and 2010. Four cohorts of students were interviewed. In the beginning of the study, such students were registered in the 11th grade of high school3 in the State Education System spread in some localities.

School sampling was done by conglomerates in one stage with geographic stratification, in order to ensure representativeness. The number of schools selected in each geographic stratum was proportional to the number of schools belonging to each area (Poisson´s Sequential Sampling). Schools were selected through a sampling proportionally to the number of students who were registered 10th graders (RIOS-NETO, 2007; COUTINHO, 2011).

Youth Research had two different tools for data collection. One was a standard questionnaire that was self-applied in classroom, with eleven sections: general identification, personal information, socioeconomic status,

work, education, lifestyle, health, relationship, violence, sexuality, and opinions. In each sampled school, all students in the 11th grade responded the questionnaire, regardless of taking part in the first round, applied in 2008 to 10th graders. The other tool was a short questionnaire that was utilized when the student who had participated in the first round was not found in the classroom for the second round. Using contacts left in the 2008 questionnaire, the Youth Research team tried to locate such student and when he or she was found, the short questionnaire was applied over the telephone.

The student´s weight was applied in all models, considering the unequal probabilities of selecting them and also the adjustment for no answers (VIEIRA, 2009). The final sample weight of the student was built only for those who entered the research in 2008. As a result, comparative analyses were conducted for the distribution of variables among the group of students who had taken part in the research since 2008 and the total number of students in 2009. As distributions were quite similar, indicating the sample had no selectivity, we chose to utilize in this paper only the students who started in the study in 2008 and who were also interviewed in 2009.

For the analyses, we selected students aged between 15 and 19 years old, who were registered in 11th grade in 2009. Only students who had responded the standard questionnaire, applied in classroom, and who had also participated in the 2008 research, as 10th graders, were selected. The option for the students who responded only the standard questionnaire is due to the fact that the short questionnaire does not include the information required for this study. In the whole, the sample has 2,826 students, 1,704 females and 1,122 males.

The independent variables were selected based on the literature review and grouped in 5 blocks of variables – race/color, other demographic characteristics, socioeconomic status, academic history, and life style – in

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3- High school in Brazil includes 10th, 11th, and 12th grades.

order to represent, within the individual and family levels, the features that may affect the student´s academic achievement.

Logistic regression models were estimated separately for males and females, because of their different behaviors, by gender, in the face of many issues that may interfere with school failure. The results we have reached are presented according to the exponentiation of the coefficient of each regressor. This exponentiation associated with the variable represents the odds ratio (OR), which indicates how the chances of failure vary when the category of the same risk factor or variable changes, always in comparison to a category that was taken as a reference. The variables may be seen as risk factors or protection factors, depending on the value of the odds ratio. When the response variable has unfavorable outcome 1 (fail), values less than 1 of the explicative variables indicate that they are protection factors, and if they are greater than 1, they are risk factors.

Initially, the relationship between the independents variables and the dependent variable were investigated separately. In these single-varied analyses, the independent variables that had significance probability (p-value) less than 0.25 were considered eligible to the multi-varied models (Chart 1). According to some scholars, such procedure is a good option to prevent important covariates from being excluded or confounding variables from being included in the multi-varied model (HOSMER; LEMESHOW, 2000).

Chart 1 – Models of logistic regression to analyze factors associated with school failure

Block of Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Demographic characteristic: race/color	x	x	x	x	X
Other demographic characteristics		x	x	x	X
Socioeconomic status			x	x	x
Academic history				x	x
Life style					x

In order to detect the possibility of multi-colinearity (perfect or approximate linear dependency between at least two explicative variables) in each multi-varied model presented in Chart 1, we analyzed the variance inflation factor (VIF). Generally, it is an indication of multi-colinearity when values are greater than 10. None of the proposed models showed problems of this kind, that is, all variables considered in the analyses had VIF < 10. For statistical analysis, we utilized programs SPSS (version 13.0) and STATA (version 10).

Results

Chances of failure, expressed as Odds Ratio (OR), are presented in Table 1 for females and males. In the initial model considering the association between failure and race/color for 11th graders in 2009, one can see that females who declared themselves as black (OR=1.61) or brown (2,17) showed greater chances of failure when compared to those who said they were white.

In model 2, controlling for demographic variables such as age and if the student has a child or is pregnant, risks of school failure drop for both brown and black female students. Failure risks increase according to age – women 17-19 years-old have a chance of failing that is 5 times greater than females who are 15 years-old. For those who were pregnant on the research date, chances of failing were more than twice (OR=2,38) the chance of women who were not pregnant nor had a child.

In model 3, which also considers the variables related to socioeconomic status, there was a slight increase in the chances of failure for girls of black race/color and a little reduction for those of brown race/color. A reduction is perceived in the failure chances according to age groups and an increase of 28 percentage points in the failure risks when the female student is pregnant of her first child. For girls, not living with their parents is a failure risk. For those living with the father only, chances of failing would be 4.18 times greater in relation to those living with both parents in the same household. Female students who were daughters of a Pentecostal[4] Protestant mother double their chances of failing (OR=2.04) compared to the daughters of a Catholic mother, whereas being the daughter of a Neo-Pentecostal Protestant mother has a protective effect (OR=0,14). Regarding the education level of mothers, having graduated from high-school was a protection factor for school failure, reducing almost 60 percentage points the risks of failing 10th grade in 2009.

In model 4, that adds aspects of the students´academic history, the risks of a black female student fail are no longer significant, whereas, for brown girls, there is an increase of 21 percentage points in relation to model 3. Regarding age, as seen in model 4, being 18 and 19 years old is not significant, as well as being pregnant or not. There was also a drop in the chances of failing for female students who lived with the mother or the father, but an increase of 22 percentage points in the chances of the daughters of a Pentecostal Protestant mother failing, in relation to the daughters of a Catholic mother. For girls who had experienced academic failure and drop-out in elementary/middle school, risks of failure were more than double in relation to students who had never had such experience. On the other hand, factors such as having

4 - The variable religion was categorized based on the information provided by students in the questionnaires. Sometimes there was a direct mention to the category adopted but most of the time students indicated the name of the churches, which were correspondingly grouped in the religions according to Coutinho (2011).

attended day care center, nursery, or kindergarten (OR=0.60), self-evaluation of one´s own grades as average (OR=0.29) or good (OR=0.08), average appreciation of school (OR=0.41) and high appreciation of teachers (OR=0,53) implied in protection against school failure.

In the last model, when lifestyle was also considered through the variables of violence within one's family or school, there was virtually no change in the risks of failure compared to model 4. It can be noted that failure risks for females 16 and 17 years-old increase and, for the girls who said they were pregnant with their first child, the risks of failing were also significant. For the other variables, there were no relevant changes. For female students who said they had undergone violence within the family and the school, the chance of failure was 36 percent and 64 percent higher than for girls who had not experienced such situations.

In the literature, studies indicate worse academic achievement for black male students when compared to white ones (ALVES et al., 2007; GONÇALVES, 2008; FONSECA, 2010). For the 11th graders, being black was not significant. Similarly to what happened to the females, the greatest risks of failing affected those who declared themselves to be brown, with 67 percent more chances of failure in relation to male students of white race/color. For the students belonging to the race/color "other" (yellow, indigenous and others), there is a protection effect towards failure in all models. In general, when the sequence of models are compared, one may say that there was slight variation in the chances of failure according to race/skin color, which can be seen best for those self-declared brown in models 3 and 4.

In model 2, when we included the variables age and having impregnated a woman/having a child, the situation seen in model 1 virtually does not change. As it was the case with females, increased age was the risk factor, but in much higher magnitude than what was found for females, and the chances

of failing are almost eleven times greater for males 18 years-old than for those 15 years-old.

In model 3, when we added variables associated with socioeconomic status, the chances of failure increased 14 percentage points for brown students. There is also a drop in the chances of failing according to age, as also seen for the girls. Unlike the females, for whom having a job did not lead to risks of failure, for males with a job at the time of the study, chances of failing were more than twice the chance of those who had never had a job; for those who were not working but had already had a job, chances of failure were 80 percent higher than for those who had never worked. Regarding religion, being the son of a Historical or Pentecostal Protestant mother increases the changes of failing by 46% and 27%, respectively, in relation to being a son of a Catholic mother. Having a mother with no religion makes the situation more critical, as it more than doubles the chances of failure (OR=2.48) in relation to being the son of a Catholic mother. Yet, being the son of a Neo-Pentecostal Protestant mother was a protection factor for failure (OR=0.21), just like the girls.

As protection factors, having an income of up to 2 minimum wages or more than 3 minimum salaries reduces the chances of failing by almost 30 percent and by 45 percent, respectively. Unlike what we had noticed for the females, living with the father only was a factor of protection (OR=0.41) for boys against failing the 11th grade.

In model 4, when controlled for the variables associated with academic history, there was a drop in the chances of failure, according to race/skin color, in 22 percentage points, for brown males. Chances of failing according to age also reduced in relation to model 3, with a special note to boys 18 years-old (from OR=9.89 to 6.10). Another highlight is the loss of significance of being the son a Historical or Pentescostal Protestant mother. For males who had had the experience of academic failure in E/MS, chances of failing

increased 50 percent in relation to those who had never faced such situation. In this case, the risks for the boys were quite smaller than those of the girls (OR=2.09). Unlike what was found for females, among males, having dropped out in E/MS acted as protection factor that avoided failure (OR=0.24). Similar to the girls, self-evaluation of one´s own grades as average or good was a protective factor for failure (OR=0.32 and OR=0.07, respectively).

In model 5, upon introducing the aspects related to the lifestyle, chances of failing in the 11th grade were 66 percent higher for brown male students than for the white ones. There was a 10-percentage point increase in the failure risks for brown students in relation to model 4. For the boys who said they used to drink some sort of liquor and for those who had suffered violence within the family, chances of failure are higher (25 percent and 66 percent, respectively), compared to the students of white race/skin color. Yet for those who experienced violence in the school´s neighborhood it was a protection factor (OR=0.66). We also noted that there was a drop in the failure chances according to age, with a highlight to those who are 18 years-old, started with OR=11.33, and by the end of the models, had OR=5.66. In the other variables associated to the blocks of other demographic characteristics, socioeconomic status and academic history, there was little variation in the chances of failure.

In summary, the risk factors for failure in 11th grade among males and females, the common risk factors were: to be brown; to be over 15 years old; to have a Pentecostal Protestant mother; to have failed E/MS and to have suffered violence within the family. In addition to those, females had the following risk factors: to be black; to be pregnant of her first child; to live with her mother only or with her father only; to have an educated mother (higher education or above); to have dropped out in E/MS, and to have suffered violence within the school. For males, the additional risk factors were: to have a job or to have had a

job; to have the father involved in his academic life; to have a Historical Protestant mother or a mother with no religion; to drink liquor.

The variables that turned out to be protective factors for females and males are: to have self-evaluated grades as average or good and to have a Neo-Pentecostal Protestant mother. The additional protective factors for females were: to have the father involved in her academic life; to have a mother who completed E/MS; to have attended pre-school; to like school; to strongly like the teachers. For the males, the additional protective factors were: to be yellow or indigenous; to have a family income greater than 1 minimum salary; to live with the father; to have nobody involved in his academic life; to have dropped out from E/MS and to have suffered violence in the school´s neighborhood.

It must be stressed that, for both sexes, the final model points that students who declared themselves brown, in comparison to white, have greater chances of failing 10th grade. However, the risks were greater for females (OR=2.23) in relation to males (OR=1.66).

Discussion and final comments

The purpose of this paper was to verify the connection between race/skin color and academic failure among male and female 11th grade students registered in the state of Minas Gerais public education system in nine municipalities of the Belo Horizonte Metropolitan Area in 2009. This is a case study and, therefore, results cannot be generalized for other populations.

In several articles related to academic achievement, gender is analyzed as an independent variable. In our study, we analyzed the factors associated with failure among males and females separately. The findings of this study were not the same of those appearing in the literature, a fact that may be related to the way the targeted population was selected, to the size of the sample or even to specific characteristics of the population. Yet, they show differentials between females and males that may be connected to gender issues, which impose unequal roles for men and women.

The studies dedicated to the topic of race/skin color demonstrate the existence of social stratification, whereas those in the education field also indicate that this process is reinforced. Moreover, the literature reviewed shows that black and brown students face more risks of failing, mainly among the males (ALVES et al., 2007; SOARES; ALVES, 2003; ALVES, 2006; FONSECA, 2010; GONÇALVES, 2008). Unlike what was found in the literature, the risk of failing 11th grade among black male students was no different that among white male students. However, being brown turned out to increase the risk of failure in 66 percent if compared to white students, even after controlling for variables associated with other demographic characteristics, as well as socioeconomic status, academic history, and life style.

The situation among females was more critical to the extent that the risk of failure among browns was more than twice the risk among whites, whereas the risk for blacks was 50 to 60 percent higher in relation to whites. When controlled for other demographic characteristics and socioeconomic status, there was a drop in the risk of failing 11th grade, which shows perhaps that age, pregnancy or having children, not living with father and mother in the same household, and having a Pentecostal Protestant mother have stronger connections with failure, thus reducing the effect of race/skin color. However, upon the inclusion of variables related to academic history and lifestyle, the risk of failure increased. One may say that having failed in E/MS and having suffered violence within the family and within the school potentiates the effect of race/color over the chances of failing.

After adding variables related to socioeconomic status, the chances of failure for male brown students increased. This result

Vanessa Lima Caldeira FRANCESCHINI; Paula Miranda-RIBEIRO; Marília Miranda Forte GOMES. The color of school...

Table 1 – Odds ratios of the binary logistic model for failed students, according to sex RMBH (2009)

Indicators	FEMALES Failed – Reference					MALES Failed – Reference				
	MOD1	MOD2	MOD3	MOD4	MOD5	MOD1	MOD2	MOD3	MOD4	MOD5
RACE/SKIN COLOR										
Race/Skin Color (IBGE)										
White	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Black	1,61 **	1,46 *	1,49 *	1,18	1.14	1.17	1.02	1.14	1.03	1.13
Brown	2.17 ***	2.07 ***	2.01 ***	2,22 ***	2.23 ***	1,67 ***	1,64 ***	1,78 ***	1,56 ***	1,66 ***
Other	0,89	0,85	0,87	0,95	0,91	0,45 **	0.35 ***	0.34 ***	0.33 ***	0.31 ***
OTHER DEMOGRAPHIC CHARACTERISTICS										
Age										
15		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
16		2,7 **	2.48 **	2,82 **	3.05 **		3.20 **	2,79 **	2,58 *	2,45 *
17		5.25 ***	4,74 ***	4.05 ***	4.48 ***		7.24 ***	5,62 ***	4.35 **	3,92 **
18		3.14 **	2,84 **	1,73	2.15		11.33 ***	9,89 ***	6.10 ***	5,66 ***
19		5,79 ***	4.33 ***	2.11	2,82		7,62 ***	6,96 ***	6.23 ***	5,78 ***
Has a child or is pregnant										
Has a woman who is pregnant of his child										
No		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Yes		1,69	1,.35	1.39	1.42		1,77	1.36	1.06	0,67
I'm pregnant of my 1st child		2.38 *	2,66 *	2.56 *	2.67 *					
SES										
Do you have a job now?										
No, I have never worked			1.00	1.00	1.00			1.00	1.00	1.00
No, but I had a job			0,94	0,85	0,80			1,84 ***	1,73 ***	1.68 ***
Yes			1.20	1.04	1.00			2.15 ***	2.10 ***	2.00 ***
Household income										
Up to 1 min salary			1.00	1.00	1.00			1.00	1.00	1.00
Up to 2 min salaries			0,97	0.88	0.83			0.69 **	0.61 **	0.60 **
UP to 3 min salaries			0.98	0.99	0.96			0.82	0.70 *	0.68 **
Over 3 min salaries			0.91	0.89	0.88			0.55 ***	0.47 ***	0.47 ***
Lives with father, mother?										
With father and mother			1.00	1.00	1.00			1.00	1.00	1.00
With mother			1.79 ***	1.69 ***	1.68 ***			1.17	1.17	1.19
With father			4.18 ***	3.47 ***	3.40 ***			0.41 **	0.36 **	0.30 **
None			1.76 **	1.30	1.20			0.83	1.13	1.15
Who is more involved in your school life										
My mother			1.00	1.00	1.00			1.00	1.00	1.00
My father			0.54	0.65	0.71			1.42 *	1.75 **	1.76 **
Other			0.92	1.05	1.08			0.94	0.88	0.89
Nobody is involved			0.93	0.88	0.86			0.36 ***	0.32 ***	0.36 ***
Mother´s religion										
Catholic			1.00	1.00	1.00			1.00	1.00	1.00
Historical Protestant			0.87	0.98	0.90			1.46 **	1.33	1.45 *
Pentecostal Protestant			2.04 ***	2.26 ***	2.33 ***			1.27 *	0.15	1.13
Neo-pentecostal Protestante			0.14 **	0.25	0.27			0.21 ***	0.35 *	0.44
Other			0.93	0.95	0.90			0.94	0.99	1.04
I have no religion			0.78	0.86	0.78			2.48 ***	2.82 ***	2.86 ***
Mother´s level of education										
Elementary school			1.00	1.00	1.00			1.00	1.00	1.00
Middle school			0.85	0.79	0.81			1.05	1.11	1.16
High-school			0.42 ***	0.45 ***	0.47 ***			0.79	0.78	0.80
Higher education and above			1.37	1.52	1.59 *			1.08	1.34	1.23
Blank, null, ign, no mum			0.62 *	0.42 **	0.42 **			0.94	1.03	1.03

*** P<=0.01; ** P<=0.05; * P<=0.10

Table 1 – Odds ration of the binary logistic model for failed students, according to sex RMBH (2009)

Indicators	FEMALES							MALES				
	Failed – Reference							Failed – Reference				
	MOD1	MOD2	MOD3	MOD4		MOD5		MOD1	MOD2	MOD3	MOD4	MOD5
ACADEMIC HISTORY												
Attended nursery/ preschool between 4 and 6 years old												
Yes				1.00		1.00					1.00	1.00
No				0.60	**	0.58	**				1.18	1.20
Ever failed E/MS												
No				1.00		1.00					1.00	1.00
Yes				2.09	***	1.96	***				1.50 **	1.54 **
Ever dropped out school in E/MS												
No				1.00		1.00					1.00	1.00
Yes				2.44	**	2.37	**				0.24 ***	0.23 ***
Self-evaluation of grades												
Bad				1.00		1.00					1.00	1.00
Average				0.29	***	0.29	***				0.28 ***	0.32 ***
Good				0.08	***	0.08	***				0.07 ***	0.07 ***
Likes this school												
Little				1.00		1.00					n/s	n/s
Average				0.41	***	0.41	***					
Very much				1.03		1.05						
Likes classes												
Little				1.00		1.00					1.00	1.00
Average				0.77		0.81					1.19	1.12
Very much				1.25		1.24					0.96	0.82
Likes his/her teachers												
Little				1.00		1.00					1.00	1.00
Average				0.74		0.73					1.18	1.18
Very much				0.53	**	0.54	**				1.26	1.27
LIFESTYLE												
Drinks some sort of liquor												
No						1.00						1.00
Yes						1.09						1.25 *
Suffered violence within the family												
No						1.00						1.00
Yes						1.36	*					1.66 **
Suffered violence within the school												
No						1.00						1.00
Yes						1.64	**					1.06
Suffered violence in the school's neighborhood												
No						n/s						1.00
Yes												0.66 ***

Source: Youth Survey – High School Assessment Research - CEDEPLAR/UFMG, 2009.

*** P<=0.01; ** P<=0.05; * P<=0.10

is perhaps connected with the effect of having a job, which imposes higher risks of failure among males.

Age is considered a risk factor for school failure. The older a student is, the higher is the chance of failing a grade, which leads to the distortion age-grade and increases the probability of dropping out of school (Luz, 2008). We observed that, for males, the risk of failing 11th grade was higher than for the females in all ages when aspects associated with the student´s academic history and lifestyle were not taken into account. After introducing such variables, among 16 and 17 year-old students, females had higher risk of failing 10th grade in relation to males.

Another aspect that has also been discussed in the literature is motherhood and fatherhood during adolescence and their effects on academic achievement. For women, having a child has a strong connection with failing 11th grade, probably related to difficulties in reconciling the roles of mother and student, as suggested by Aquino et al. (2003).

Regarding religion, both Muller and Ellison (2001) and Anuatti-Neto and Narita (2004) suggest that the student´s involvement with religion and his/her mother´s religious adherence have an effect on academic achievement. In this study, we have also found an effect of the mother´s religion onto the student´s chances of failing 11th grade, despite the fact that the chances for boys and girls are associated with different religious affiliations. In the final model, being the son of a Historical Protestant mother or a mother with no religion was a risk factor, whereas being the daughter of a Neo-Pentecostal Protestant mother was associated with greater risk of failing 11th grade.

In relation to the level of education of family members, the literature indicates that the higher the level of education that a family members has (ALVES et al.; 2007), especially the mother (RIANI; RIOS-NETO, 2008; BONAMINO et al., 2010), the greater are the chances of academic achievement. This study found that

being the child of a mother who graduated from high school is a protective factor against failing 11th grade. Unlike what we expected, when lifestyle characteristics are introduced in the final model, having a mother with higher education or above was a risk factor for failing 11th grade. Such result is perhaps connected to the fact that violence within the family and within the school may have nullified the protective effect of the maternal level of education.

In terms of academic history, having ever failed a grade in E/MS was a risk factor for failure in 11th grade for both teenage boys and girls, being greater for girls. Having ever dropped out from school in E/MS was a high risk factor for girls but a protection factor for boys. This aspect may possibly be a hint of how factors associated with academic failure operate in different ways according to gender. Among the population we have studied, males are more likely to fail and females are more likely to drop out from school. In the case of teenage girls, pregnancy may be an issue, perhaps connected to a disadvantaged social context social in which education is not perceived as a pathway to a better future. Among males, the fact that they are more likely to fail may be linked to the difficulty in combining work and school. In the case of those who have already gone through the experience of dropping out from E/MS and currently have a job, it is possible that, upon returning to school, they do not want to waste any time and, as a result, chances of failing are smaller in relation to females.

Regarding grades, considering one´s own grades to be average or good worked as a protection factor against failure for both sexes. For female 11th graders, being fond of the school and the teachers played a prevailing role and a protective effect, yet for the males it was of no relevance. In this case, it seems that interpersonal relationships had a greater effect on females.

In relation to drinking liquor, this variable turned out to be a risk factor for failing 11th grade only for the males. Interesting

Educ. Pesqui., São Paulo, v. 42, n. 3, p. 773-786, jul./set. 2016.

784

is the role played by violence onto academic achievement. In the male world, violence within the family increased the risk of failing. Among females, despite the fact that violence both within the family and the school were a risk factor for failing 11th grade, the magnitude of the violence within the school was much higher if compared to the violence within the family. Although school violence is usually associated with males, the fact that it increased the risk of failure among females may indicate that women are also negatively affected by it.

This paper suggests that race/skin color and gender must be taken into account if one wants to reduce the risk of failing 11th grade in the areas under study, all of them poor neighborhoods of the Belo Horizonte Metropolitan Area. Although the results cannot be generalized for the entire country, they can teach important lessons to other poor neighborhoods of other metropolitan areas. Academic failures in high school will certainly persist if race/skin color and gender issues are not properly addressed.

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