

Is the Flesh Weak? Religion, Religiosity, and Sexual Initiation among High School Students in Four Brazilian Cities¹

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ABSTRACT

This study aims at investigating the association among religion, religiosity, and sexual initiation of adolescents, 15-19 years-old, male and female, high school students in public state schools (n=2658). Results indicate strong association between religious affiliation, church attendance, and sexual initiation. Although sexual initiation is more frequent among adolescents who go to church only sporadically, the proportion who report having had sexual intercourse is high, even among the churchgoers. If compared to those who have no religious affiliation, committed Mainline Protestant and Pentecostal, males and females, as well as committed Catholic females are less likely to have had their first sexual intercourse. Results also indicate that the female sexual onset is usually at older ages if compared to that of the male, and there is intense gender representation.

Keywords: sexual initiation, religion, religiosity, adolescent, Belo Horizonte, Brazil.

¹ Paper based on Coutinho's Master's thesis in Demography, defended in February 2011 at Cedeplar, Universidade Federal de Minas Gerais, Brazil.

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1. Introduction

Brazil, like many other Latin American countries, has experienced changes to its norms and values regarding female sexuality. These changes have weakened the connection between sexual activity, marriage, and reproduction. Premarital sex, accepted and to some extent encouraged in males for decades, is increasingly considered a right of females. Females begin to exercise this right at increasingly younger ages (Heilborn et al., 2006). Data from PNDS 2006⁹ indicate 55.2% of female adolescents 15-19 years old have already engaged in their first sexual relation. This percentage is much higher than the 32.8% registered in DHS 1996¹⁰. The median age at the time of the first sexual relation registered in 1996, 19.5 years old, fell to 17 in 2006 (BEMFAM, 1996; BRASIL, 2009).

Female youth in the municipality of Belo Horizonte, the capital city of Minas Gerais, do not differ from youth in the rest of the Brazil. Simão (2005), using data from the SRSR¹¹ to compare two cohorts of females from Belo Horizonte in 2002, found a difference of three years in the median age at the time of first sexual intercourse between the younger cohort (20-24 years) that had their sexual debut at age 18, and the older cohort (50-59 years) whose median age at the time of their first sex was 21.

Studies have identified a variety of variables that are associated with sexual initiation, which influence adolescents' decisions and reduce the costs associated with the loss of virginity (Billy et al., 1994). A literature review including 80 articles published between 1960 and 2010 indicates that religion and religiosity are consistently linked to sexual initiation. Both conservative religions and frequent participation in worship services contribute to an apparent delay in sexual initiation (Coutinho, 2011).

⁹ *Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher* (2006), the Brazilian DHS.

¹⁰ *Pesquisa Nacional sobre Demografia e Saúde* (1996), the Brazilian 1996 DHS.

¹¹ *Saúde Reprodutiva, Sexualidade e Raça/Cor* (2002), Reproductive Health, Sexuality, and Race/Color.

Given the diversity of the religious landscape in Brazil in the last decades, together with findings that suggest religion may have an effect on sexual initiation, this study aims to investigate the association between religion, religiosity, and sexual initiation in male and female students between the ages of 15 and 19 enrolled in public high schools in the municipalities of Ribeirão das Neves, Belo Horizonte, Pedro Leopoldo, and Esmeraldas in the Brazilian state of Minas Gerais. We investigate several sociodemographic, educational, lifestyle, and sexual (including sexual initiation) characteristics, in addition to religious participation (a variable that combines religious denomination and frequency of participation in church activities) among males and females (n=2658) and their relationship to sexual initiation. The analyses include descriptive statistics and univariate and multivariate logistic regression models (univariate models not shown here).

The results indicate a strong link between religious affiliation, participation in worship services, and sexual initiation. Despite a greater probability of sexual initiation among non-practicing respondents, the proportion of males and females who report already having experienced sexual relations is quite high, even among those who consider themselves religious practitioners. In comparison to those that self-identify as nonreligious, traditional Protestants, practicing Pentecostals, and practicing Catholics of both genders have a lower probability of being sexually initiated.

2 Literature Review

[Forthcoming]

3 Data and Methods

The data analyzed in this study come from the longitudinal sample survey “Pesquisa Jovem” (Youth Survey), financed by the State Secretary of Social Development and Sports of Minas Gerais (Sedese) and conducted by the Centro de Desenvolvimento e Planejamento Regional of Universidade Federal de Minas Gerais (Cedeplar/UFMG) from 2007 to 2010 in several municipalities of Minas Gerais. The research methodology

consisted of three consecutive years of interviews with a representative sample of adolescents, all of whom were enrolled in their first year of high school within the state education system at the start of the study. The first cohort, the focus of this study, was interviewed for the first time in the municipalities of Ribeirão das Neves, Belo Horizonte, Pedro Leopoldo, and Esmeraldas in November 2007.

Our analysis concentrates on the second wave of the first cohort, for which data collection occurred in November 2008. In total, 3,385 students met the criteria of having been enrolled the previous year (2007) in their first year of public high school in the study municipalities. At the time of the survey, 2,820 (83.3%) were enrolled in their second year, while 551 (16.3%) were retained in the first year. Fourteen people, 0.4% of the sample, did not complete this piece of information correctly, but were included in the analysis. Note that 446 adolescents who completed the first wave of the survey did not complete the questionnaire in the second round. This number represents 13.2% of the total number of students that should have been interviewed (3,385), and they have been subsequently excluded from the analysis.

In order to guarantee representativeness, survey sampling of state schools was done by clusters, in a single stage, with geographic stratification. The number of schools in each geographic stratum was chosen to be proportional to the number of schools in each region. For the selection of schools, we adopted a sampling procedure with probabilities proportional to distance (PPD), with size measured as the number of students registered in the first year of high school.

The 39 page, self-administered questionnaire inquired about personal characteristics, socioeconomic status, employment, education, lifestyle, health, relationships, violence, sexuality, and opinions about general issues, thus forming a rich base of data about different aspects in the lives of the adolescent students in the state schools in the Metropolitan Region of Belo Horizonte (RMBH).

The respondents are only a portion of the enrolled students that met the survey criteria, namely those present in the classroom on the day of the interview. We presume that there is no difference between the students who did not respond due to their absence on the day of the interview and those who were present and completed the survey. It is important to highlight the selectivity of youths who are registered and attend public schools. Many of them do not even reach high school, and others, present in the first round of surveys in 2007, dropped out of school or may have never even enrolled, changed schools, or passed away. Therefore, it is not possible to generalize the interview results to RMBH youth. The literature reveals that adolescents who drop out of school or evade it have very different sociodemographic characteristics than those who continue their studies (Silva and Hasenbalg, 2002). Thus, in a context of poverty and violence, youth who manage to continue their studies and are represented in surveys of this type are a select group, whose characteristics may differ from their peers who were unable or did not wish to continue their education.

Despite the classification of an adolescent as a person between the ages of 12 and 18 by the Child and Adolescent Statute (Brazil, 1990), we use the definition of the World Health Organization (WHO) in which adolescence extends to 19 years of age. Those older than 19 years of age, married couples, or those in stable unions (including the few widows) and all those who ignored the question about their own current religion, gender, or did not want or know how to respond were excluded, resulting in a final sample size of 2,658 students. The 1,489 females (56%) and the 1,169 males (44%) were analyzed separately. Out of these, the number of students that reported to have no current religion was 247 (9.4%), while the number of students who reported one of the predetermined religions on the questionnaire as their current religion was 2,229 (84%). Only 182 (6.8%) said they had a religion not listed among the 13 categories on the questionnaire. These were recoded or grouped in the category “others”.

The binary dependent variable used in the logistical regressions is (0) has not had sexual intercourse or (1) has had sexual intercourse and was applied to all of the sample in univariate and multivariate models.

The variable of interest is religious participation, which combines the six categories of responses about religious denomination with the frequency with which the adolescent attended religious ceremonies: committed (one time per week or more) and occasional/nominal (sometimes, special occasions, less than one time a week, rarely, or never). Unfortunately, the design of the questionnaire did not include other variables, such as daily reading of the Bible and evangelization of strangers on the street, which could be used to construct a multidimensional variable of religiosity, as suggested by Coutinho (2011).

Thus the new variable “religious participation” has 10 categories⁹:

- Committed Catholics;
- Occasional/Nominal Catholics;
- Committed Traditional Protestants;
- Occasional/Nominal Traditional Protestants;
- Committed Pentecostal Protestants;
- Occasional/Nominal Pentecostal Protestants;
- Committed Neo-Pentecostal Protestants;
- Occasional/Nominal Neo-Pentecostal Protestants;
- Other religions;
- No religion.

The sociodemographic and lifestyle variables analyzed in this study, chosen based on the literature review, are distributed throughout the entire survey questionnaire and relate to

⁹ For more details about methodology and recoding of the variables and religious categories, see Coutinho (2011).

religion and religiosity, sociodemographic characteristics and household, educational, lifestyle, individual experiences, and sexuality.

The analyses include descriptive statistics and logistic regression models that allow for us to observe whether or not religious participation has an effect on adolescent sexual initiation. The logistic regression is a statistic model that aims to describe the relationship between a dependent variable and one or more independent variables from a set of observations, predicting the probability of an event – the dependent variable – happening (Hosmer & Lemeshow, 2000). Variable transformation and data analysis were done using SPSS 15.0.

4 Results

The relative distribution of the religious participation categories by gender can be found in Table 1. Note that the greater part of the sample is composed of females (56%).

TABLE 1: Frequency distribution, religious participation by gender, 2008

Participação Religiosa		Feminino (%)	Masculino (%)
<i>Católicos Praticantes (n=471)</i>		65,82	34,18
<i>Católicos Esporádicos (n=837)</i>		50,18	49,82
<i>Protestantes Históricos Praticantes (n=211)</i>		58,77	41,23
<i>Protestantes Históricos Esporádicos (n=88)</i>		57,95	42,05
<i>Protestantes Pentecostais Praticantes (n=393)</i>		62,09	37,91
<i>Protestantes Pentecostais Esporádicos (n=147)</i>		47,62	52,38
<i>Protestantes Neopentecostais Praticantes (n=106)</i>		64,15	35,85
<i>Protestantes Neopentecostais Esporádicos (n=49)</i>		57,14	42,86
<i>Outras (n=107)</i>		52,34	47,66
<i>Nenhuma (n=249)</i>		47,39	52,61
Total (n=2658)	N	1489	1169
	%	56,02	43,98
Qui-Quadrado= 57.02			
Gl= 9, p<0.001, α = 0.05			

Fonte dos dados brutos: Pesquisa Jovem, 2008, elaboração própria.

Females are the majority in practically all the categories of religious participation, with the exception of the categories “None” (52.6% are male) and “Occasional/Nominal Pentecostal Protestants” (52.4% are male). In the category with the greatest sample size, “Sporadic Catholics”, the percentage is practically the same for both genders. (TAB. 1).

The category “Committed Catholic” stands out with the greatest percentage of females (65.82% against 34.18% of males), followed by “Committed Neo-Pentecostal Protestant” (64.15% against 35.85% that are males) and “Committed Pentecostal Protestant” (62.09% against 37.91% males) (TAB. 1).

TABLE 2: Proportion of individuals according to religious participation in the sample and frequency to religious service, 2008

Participação Religiosa	Total
Católicos (n=1308)	
<i>% na amostra</i>	49,21
<i>% praticante</i>	36,01
Protestantes Histórico (n=299)	
<i>% na amostra</i>	11,25
<i>% praticante</i>	70,57
Protestantes Pentecostais (n=540)	
<i>% na amostra</i>	20,32
<i>% praticante</i>	72,78
Protestantes Neopentecostais (n=155)	
<i>% na amostra</i>	5,83
<i>% praticante</i>	68,39
Outras (n=107)	
<i>% na amostra</i>	4,03
Nenhuma (n=249)	
<i>% na amostra</i>	9,37

Fonte dos dados brutos: Pesquisa Jovem, 2008, elaboração própria.

The proportion of people in the sample, by religion, can be found in Table 2. The largest proportion of students self-identify as Catholic (49.2%), followed by the Pentecostal Protestants (20.3%), the traditional Protestants (11.3%), those with no religion (9.4%) and the Neo-Pentecostal Protestants (5.8%). Only 4% of the students professed an “other religion”. Combining the three Protestant groups, the total of evangelicals constitutes 37.4% of the sample.

The sample of students from RMBH observed in this study presents a religious distribution less Catholic and more evangelical than the Brazilian population as a whole. According to the 2000 Census, 74% of Brazilians self-identify as Catholics, while Protestants of any affiliation totaled 15% and those with no religion, 7%.

Although Catholics were majority in the sample, they had the lowest proportion of practicing members when compared to their Protestant counterparts. Only 36% of the Catholics identified as committed, in comparison to 72.8% of Pentecostal Protestants, 70.6% of traditional Protestants, and 68.4% of Neo-Pentecostals (TAB. 2).

TABLE 3: Age at interview and age at first sexual intercourse, 2008

Categoria	Tamanho amostral¹	% sexualmente iniciada	Média	Desvio padrão
IDADE À ENTREVISTA				
<i>Mulheres</i>	1489		16,62	0,88
<i>Mulheres sexualmente iniciadas</i>	572	38,42	16,87	1,00
<i>Homens</i>	1169		16,87	0,95
<i>Homens sexualmente iniciados</i>	689	58,94	17,05	0,98
IDADE À PRIMEIRA RELAÇÃO SEXUAL²				
<i>Mulheres sexualmente iniciadas</i>	565		15,26	1,36
<i>Homens sexualmente iniciados</i>	677		14,57	1,55

Fonte dos dados brutos: Pesquisa Jovem, 2008.

Notas:

(1) Foram excluídos os casos para os quais o respondente anulou sua resposta ou não a forneceu corretamente.

(2) Quatro mulheres e 21 homens relataram ter tido a primeira relação antes dos 11 anos. No cálculo da idade média à primeira relação, foi dado a eles o valor 11 como idade, de modo a não subestimar a média.

Table 3 shows the percent sexually initiated, their mean age, the mean age of the total population, and the mean age at the time of their first sexual debut. While 38.4% of the females were already sexually initiated at the time of the interview, the percentage for males was 58.9%.

The mean age at the time of first sexual relation was 15.26 years for females and 14.57 for males (TAB. 3). Both females and males who had already had their first sexual intercourse at the time of the interview were, on average, slightly older than their non-sexually initiated peers. While the mean age of the total female sample was 16.6 years old, for the initiated female population this age was 16.9. Sexually initiated males were, on average, 17.1 years old, while the mean age of the total male population was 16.9 (Tab. 3). This fact is possibly correlated with the age of the respondents, since the probability of being sexually initiated increases with age, independent of gender. Indicative of this is the distribution of sexually initiated by age at interview and gender (TAB. 4):

TABLE 4: Proportion sexually initiated according to age at interview, 2008

		Idade à entrevista					Total
		15	16	17	18	19	
Total	% <i>sexualmente iniciada</i>	30,8	38,9	47,7	71,8	80,0	48,1
	<i>N amostra</i> ¹	78	1191	858	358	135	2620
Mulheres	% <i>sexualmente iniciada</i>	27,5	32,0	37,6	65,2	74,2	38,9
	<i>N amostra</i> ¹	51	744	460	155	62	1472
Homens	% <i>sexualmente iniciada</i>	37,0	50,3	59,3	76,8	84,9	60,0
	<i>N amostra</i> ¹	27	447	398	203	73	1148

Fonte dos dados brutos: Pesquisa Jovem, 2008.

Notas: Todas as categorias foram significantes a 5% no teste do Qui-quadrado.

(1) Foram excluídos os casos para os quais o respondente anulou sua resposta ou não a forneceu corretamente.

Independent of age, the probability of being sexually initiated and of having had a high degree of motivation for that first relation is greater among males (2.36), than females (TAB. 5):

TABLE 5: Odds ratio – sexual initiation and high motivation to sexual initiation, females and males, 2008

	Ter se iniciado sexualmente	Ter tido alto grau de motivação
<i>Mulher</i>	1,00	1,00
<i>Homem</i>	2,36 ****	3,00 ****

Fonte dos dados brutos: Pesquisa Jovem, 2008.

Nota:

**** Valor de $p < 0,001$.

In order to investigate sexual initiation behavior in relation to religious participation, we ran a multivariate logistic regression analysis, controlling for sociodemographic and lifestyle variables. Blocks of variables were inserted one by one, and their effects were observed on the coefficients of interest. The results for females can be found in TAB. 6 and the results for the males in TAB. 7.

Model 1 is a univariate logistic regression between religious participation and the dependent variable “has had a sexual relation”.

In the second model, seven socioeconomic, demographic, and household variables were added to religious participation: age at time of interview, race/color, family composition, employment and financial support, whether anyone follows their academic life, age of mother at the birth of her first child, and self-evaluated grades which serve as a proxy for scholastic achievement, since all the students in the interview have the same level of education (unfinished high school). The variable “age at menarche” was added to this block of variables for female respondents.

In the third model, lifestyle variables were added that measure the permissiveness of the students in addition to religious participation. These variables are: likes school, cigarette use, alcoholic beverage use, marijuana use, religious conversion, and age, since it is necessary to use the student’s age to control for exposure to the risk of these events. In the third model, the variable “has ever been to the gynecologist” was added for females.

The fourth model attempts to combine the three previous models: the “religious participation” variable, the block of socioeconomic, demographic, and household variables, and the block of lifestyle variables. The results will be discussed separately for females and males.

Females

In the female models (TAB. 6), the insertion of socioeconomic, demographic, and household variables (model 2) weakens the significance of the odds ratio of religious participation variables. For example, the groups “Occasional/Nominal Catholics”(with the greatest sample size) and “Other religions” completely lose significance. The odds ratio for “Committed Catholics” increases from 0.45 to 0.53; however it loses a little significance, passing from $p < 0.000$ to $p < 0.05$. The odds ratios for other denominations remain constant, with slight decreases in significance levels.

After adding the controls of model 2, some variables lose their significance entirely in the multivariate model. This is the case for the variables of race/color, employment and financial situation, and self-evaluated grades.

Age at the time of interview (categories 18 and 19 years) maintain their strong effect on sexual initiation, without losing the significance level of $p < 0.000$. Older age at menarche (over 13 years) also remains linked to sexual initiation, although with a slightly higher significance level.

Household composition loses a little of its effect when controlling for socioeconomic variables. The probability of sexual initiation in those with just the mother or neither parent at home, which was 2 times greater than the probability of those that had both parents at home, decreases in the multivariate model to 1.63 (only mother $p < 0.000$) and 1.97 (neither parent $p < 0.05$).

Table 6: Odds Ratio, Sexual Initiation, Females, RMBH, 2008

Characteristics	Modelo 1	Modelo 2	Modelo 3	Modelo 4
Variable of interest				
Religious participation				
<i>Committed Catholics</i>	0,45 ****	0,53 **	0,48 **	0,46 **
<i>Occasional/Nominal Catholics</i>	0,67 *	0,78	0,64	0,65
<i>Committed Mainline Protestants</i>	0,35 ****	0,33 ****	0,51 **	0,42 **
<i>Occasional/Nominal Mainline Protestants</i>	0,63	0,65	0,74	0,74
<i>Committed Pentecostals</i>	0,28 ****	0,29 ****	0,45 ***	0,43 ***
<i>Occasional/Nominal Pentecostals</i>	0,93	0,84	0,93	0,87
<i>Committed Neopentecostals</i>	0,40 ***	0,40 **	0,58	0,55
<i>Occasional/Nominal Neopentecostals</i>	1,10	1,04	0,88	0,87
<i>Others</i>	0,53 *	0,65	0,41 **	0,47
<i>None</i>	1,00	1,00	1,00	1,00
Socioeconomic, demographic, and household				
Age at interview				
15		0,63	0,66	0,63
16		1,00	1,00	1,00
17		1,26 *	1,03	1,01
18		3,19 ****	2,79 ****	2,46 ****
19		4,41 ****	4,10 ****	3,36 ***
Age at menarche				
10 or less		1,00		1,00
11-12		0,85		0,93
13-14		0,61 **		0,82
15 or more		0,45 **		0,57
Race/Color				
White		1,00		1,00
Black+Brown		1,16		1,09
Indigenous or Yellow (Asian)		1,37		1,29
Family in the household				
Mother and father		1,00		1,00
Only mother		1,63 ****		1,46 **
Only father		0,78		0,67
None		1,97 **		2,00 **
Work				
<i>I don't work but get help from family or social benefits</i>		1,00		1,00
<i>I work and get help from family</i>		1,09		0,98
<i>I work and help support my family</i>		1,15		1,11
Supervision of educational life				
Yes		1,00		1,00
No		1,61 **		1,31
Age of mother at first child				
<i>Don't know/don't remember</i>		1,22		1,57
13-14		5,82 ***		6,68 **
15-19		2,16 ***		2,37 ***
20-24		1,77 **		2,19 **
25-29		1,69 *		1,63
30-49		1,00		1,00
Grades, Self-evaluation				
Bad		1,00		1,00
Medium		1,18		1,26
Good		0,82		0,96
Lifestyles				
Likes school				
Little			1,00	1,00
Medium			0,72	0,77
A lot			0,84	0,92
Smoking				
<i>I smoke or have smoked</i>			2,79 ****	2,70 ***
<i>No, but I have tried</i>			1,80 ****	1,75 ***
No			1,00	1,00
Drinking				
<i>I drink or have drunk</i>			3,00 ****	3,06 ****
<i>No, but I have tried</i>			1,48 **	1,33
No			1,00	1,00
Marijuana				
Yes			2,18 **	2,24 *
No			1,00	1,00
Religious conversion				
Yes			0,92	0,88
No			1,00	1,00
Ever been to the gynecologist				
Yes			1,00	1,00
No			0,31 ****	0,33 ****
Fit				
(- 2 Log likelihood)	1912,09	1572,172	1503,011	1318,316

Source: Pesquisa Jovem, 2008.

* p-value < 0,1

** p-value < 0,05

*** p-value < 0,01

**** p-value < 0,001

Having someone following the student's academic life continues to significantly delay sexual initiation, even after controlling for socioeconomic, demographic, and household variables. Age of mother at first birth loses a little significance, but its effect remains: daughters of teenage mothers have a 5 times greater probability of being sexually initiated relative to daughters of mothers over 30 at first birth. Not knowing or remembering the age of their mother at the birth of her first child is not associated with sexual initiation.

Model 3, which adds lifestyle characteristics, increases the odds of being sexually initiated among all the categories of religious practitioners. This suggests that religion does indeed have an association with sexual initiation and that its effect increases after controlling for lifestyle variables (comprised entirely of personal characteristics of the students and depending solely on the respondent). The odds for committed Pentecostals, for example, increase from 0.28, without lifestyle controls, to 0.45 with controls, although the significance level changes from <0.000 to <0.01 . Age remains strongly associated with sexual initiation, even after inserting lifestyle variables. Liking school and having changed religion lose significance. The use of cigarettes, alcohol, and marijuana remain linked, with a lower probability for those who have never used. For those who have already been to the gynecologist at least once, the probability of having had their first sexual intercourse is greater than the probability for those who have never been (0.31).

Model 4 describes the changes when adding blocks 2 and 3 at the same time. In this case, only the categories "Committed Catholics", "Traditional Protestants", and "Pentecostals" maintain significant effect on sexual initiation. The other categories lose significance. The following variables also lose significance: age at menarche, race/color, education and financial situation, having someone follow their academic life, self-evaluated grades, liking school, and if they had changed religion. All other variables are significant.

Males

Table 7: Odds Ratio, Sexual Initiation, Males, RMBH, 2008

Characteristics	Model 1	Model 2	Model 3	Model 4
Variable of interest				
Religious participation				
<i>Committed Catholics</i>	0,42 ***	0,62 *	0,61	0,74
<i>Occasional/Nominal Catholics</i>	0,59 **	0,70	0,67	0,70
<i>Committed Mainline Protestants</i>	0,23 ****	0,23 ****	0,38 ***	0,35 ***
<i>Occasional/Nominal Mainline Protestants</i>	0,82	0,93	0,66	0,68
<i>Committed Pentecostals</i>	0,23 ****	0,27 ****	0,43 ***	0,47 **
<i>Occasional/Nominal Pentecostals</i>	0,53 **	0,56 *	0,74	0,78
<i>Committed Neopentecostals</i>	0,27 ****	0,31 ***	0,53	0,60
<i>Occasional/Nominal Neopentecostals</i>	0,61	0,68	0,65	0,61
<i>Others</i>	0,23 ****	0,28 ****	0,26 ***	0,32 ***
<i>None</i>	1,00	1,00	1,00	1,00
Socioeconomic, demographic, and household				
Age at interview				
15		0,60	0,63	0,63
16		1,00	1,00	1,00
17		1,19	1,19	1,05
18		2,46 ****	3,11 ****	2,34 ****
19		4,02 ****	4,39 ****	3,11 ***
Race/Color				
<i>White</i>		1,00		1,00
<i>Black+Brown</i>		1,25		1,20
<i>Indigenous or Yellow(Asian)</i>		1,76 *		1,72 *
Family in the household				
<i>Mother and father</i>		1,00		1,00
<i>Only mother</i>		1,24		1,24
<i>Only father</i>		1,59		1,78
<i>None</i>		1,22		1,08
Work				
<i>I don't work but get help from family or social</i>		1,00		1,00
<i>I work and get help from family</i>		1,68 ***		1,75 ***
<i>I work and help support my family</i>		2,52 ****		2,44 ****
Household tasks				
<i>Yes</i>		1,00		1,00
<i>No</i>		1,19		1,22
Supervision of educational life				
<i>Yes</i>		1,00		1,00
<i>No</i>		1,07		1,04
Grades, Self-evaluation				
<i>Bad</i>		1,00		1,00
<i>Medium</i>		0,94		1,17
<i>Good</i>		0,68		1,01
Lifestyles				
Likes school				
<i>Little</i>			1,00	1,00
<i>Medium</i>			0,72	0,73
<i>A lot</i>			0,68	0,75
Smoking				
<i>I smoke or have smoked</i>			3,15 **	3,10 **
<i>No, but I have tried</i>			1,40 *	1,35
<i>No</i>			1,00	1,00
Drinking				
<i>I drink or have drunk</i>			3,39 ****	3,30 ****
<i>No, but I have tried</i>			1,11	1,12
<i>No</i>			1,00	1,00
Marijuana				
<i>Yes</i>			3,39 ***	3,59 ***
<i>No</i>			1,00	1,00
Religious conversion				
<i>Yes</i>			0,97	0,92
<i>No</i>			1,00	1,00
Fit				
<i>(-2 Log likelihood)</i>	1483,69	1303,10	1228,11	1145,02

Source: Pesquisa Jovem, 2008.

* p-value < 0,1

** p-value < 0,05

*** p-value < 0,01

**** p-value < 0,001

For males, Model 2, which adds socioeconomic, demographic, and household variables, loses significance for Occasional/Nominal Catholics and Pentecostals, although committed Catholics retain their significance $p < 0.1$ and increase their odds from 0.42 to 0.62 (TAB. 7).

Many variables in Model 2 lose significance when added together. Among these are: family composition, helping with household tasks, if someone follows their academic life, and self-evaluated grades. Age (18 and 19) remain a strong associated factor. The category of indigenous or “yellow” (Asian) race/color continues to demonstrate a positive effect on sexual initiation. People of those groups had a 76% greater chance of being sexually initiated than their peers who self-identify as white ($p < 0.05$). It should be noted that self-administered nature of the questionnaire may have caused confusion in regards to the category “yellow”. Finally, employment and financial situation continue to show a strong effect on initiation. Those who work and help sustain their households have a greater probability of being sexually initiated (odds are 1.68 and 2.52 respectively in the multivariate model, while they were 1.9 and 3.05 in the univariate model – not shown).

In Model 3, the adding of lifestyle variables affects the odds of sexual initiation from religious participation variables to an even greater extent than Model 2. As with the female results, the odds of practitioners of any religion increase with the addition of these variables.

Liking school and having changed religion also lose significance. Age remains, with a high significance level, a good indicator of sexual initiation, as does the use of cigarettes, alcohol, and marijuana. The probability of sexual initiation triples among those that have already experimented with cigarettes, alcohol or marijuana.

Finally, Model 4 further increases the odds of sexual initiation among religious participants; however only three categories remain significant: “Traditional Protestants”, “Committed Pentecostals”, and “Other religions”. The variables in Model 4 that lose

significance are the same that lose effect in models 2 and 3. Compared with their odds in the univariate models, there is not much change in the sign of the effect of the variables on sexual initiation. For age, however, adding sociodemographic and lifestyle controls, slightly decreases significance and odds decrease from 4.94 (at 19 years) and 3.72 (at 18 years).

There is almost no change in the odds and significance levels in models 2 and 4 for the race/color and employment status variables, nor in models 3 and 4 for the variables use of cigarettes and experimentation with marijuana. Despite the use of cigarettes not undergoing changes between models 3 and 4, it loses its significance after sociodemographic controls are added (Model 4).

5. Discussion and Concluding Remarks

[Forthcoming]

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