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# Religiosity and Sexual Risk Behaviors Among Latina Adolescents: Trends from 1995 to 2008

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## Abstract

The purpose of this study was to determine trends in the influence of religiosity on sexual activity of Latina adolescents in the United States from 1995 to 2008 and to determine if differences existed between the Mexican American and other Latina groups. **Methods:** The sample comprised the subset of unmarried, 15–21-year-old (mean 17 years) Latina female respondents in the 1995 (n=267), 2002 (n=306), and 2006–2008 (n=400) National Survey of Family Growth (NSFG) datasets. Associations between religiosity (importance of religion and service attendance) and history of ever having sex, number of sex partners, and age of sexual debut were investigated. **Results:** Less than one half of Latinas in 1995 (44%) and in 2006–2008 (44%) reported that religion was very important to them, whereas in 2002, 50% reported it was important. Only in 1995 did Latinas who viewed religion as very important have a significantly lower level of sexual initiation. In 1995 and in 2006–2008, Latinas who held religion as very important had significantly fewer partners. In all three cohorts, the higher religious importance group had higher virgin survival rates. Across cohorts, approximately one third of respondents reported frequent religious attendance. In all cohorts, frequent attenders were less likely to have had sex, had fewer partners, and had older age at sexual debut. The survival rate as virgins for Mexican origin Latinas was higher in 1995 and 2002 compared to non-Mexican Latinas but was almost

the same in 2006–2008. Conclusions: Religiosity had a protective association with sexual activity among Latina adolescents. The association of importance of religion with sexual activity has diminished from 1995 to 2008, however, whereas the importance of service attendance has remained stable. The influence of religion was more apparent among the Latinas of Mexican origin, but this greater influence also diminished by 2006–2008.

## Introduction

Early and high rates of sexual activity among Latina youth have been identified as significant concerns across the United States.<sup>1,2</sup> In 2007, 46% of adolescent Latinas in grades 9 through 12 reported engaging in sexual intercourse.<sup>3</sup> By 12th grade, 68% of Latinas reported having had sex, and 22% reported having had four or more sexual partners.<sup>4</sup> About 5% of Latinas reported first intercourse before age 13 compared to 3% of white and 7% of African American female students.<sup>4</sup> Latinas experienced disproportionately high rates of HIV infection compared to non-Hispanic white females, and the prevalence rate of sexually transmitted infections (STIs) among Latina adolescents was 1 in 5 (e.g., 18%).<sup>4</sup> Latinas had the highest birth rates of all ethnic groups, with rates declining over the past 15 years about half as fast as those for white and African American teens.<sup>5</sup> Currently, over half, 51%, of Latina adolescents in the United States get pregnant before age 20.<sup>6</sup> Stresses related to premature parenting place young Latina women at increased risk for impaired mental health, lower educational attainment, sexual violence and abuse, family dysfunction, poor self-esteem, and persistent poverty.<sup>6–8</sup>

The potential significant consequences associated with early sexual activity, along with the ethnic disparities in sexual activity found among Latina youth compared to other groups, provide a call for research that examines protective factors for this population.<sup>9–13</sup> Critical to this research is an understanding of values and beliefs that may shape Latina adolescents' views on sexual activity and decision making. Religiosity has been identified by researchers as an important value within Latinas' cultural context that likely influences their sexual behavior.<sup>14–17</sup>

## Influence of religiosity

Religiosity is considered the degree of participation in, or adherence to, the beliefs and practices of a religion.<sup>18</sup> Religiosity has been consistently noted to hold a prominent position in Latino/a culture.<sup>19,20</sup> Most Latino/as in the United States (92%) claimed a religious affiliation, and 68% also indicated that religion was an important component of their everyday life.<sup>21</sup> For Latino/a youth, religiosity is widespread and readily accessible although not moreso than among the wider American population. In comparison, 84% of a nationally representative sample claimed a religious affiliation,<sup>22</sup> and 76% of youths in a nationally representative sample reported that religion was very important to them.<sup>11</sup> Religious doctrine generally discourages premarital sexual behavior.<sup>9,23</sup> These sanctions have been hypothesized to relate to delayed sexual activity among religious Latino/a youth as compared to their less religious peers.<sup>16,17</sup>

In addition, gender has been noted to be important in shaping sexual patterns and influencing youth's sexual behavior.<sup>14,15</sup> The Latina female gender role of *marianismo* is based on characteristics of the Virgin Mary from Christian theology. *Marianismo* emphasizes that women should be virginal, self-sacrificing, and pure, while also acquiescing to men's sexual desires.<sup>20</sup> Paramount to this cultural value is virginity, while at the same time there is a reverence of motherhood, which requires a loss of

virginity.<sup>24</sup> These opposing messages have been proposed to contribute to the complexity of the influence of gender and religiosity on sexual activity. Studies that combine males and females in their sample may obscure the role of religiosity in females in particular. The current study, therefore, sought to explore the role of religiosity over the past 13 years in Latinas to better understand their unique gender and cultural context.

The protective effects of religiosity on sexual risk behaviors, such as early debut and multiple partners, have been noted in multiple studies.<sup>10,11–13,16</sup> In a recent study using data from the 2002 National Survey of Family Growth (NSFG), the association between religiosity, gender, and language preference acculturation and sexual activity among Latino/a adolescents was investigated.<sup>13</sup> Religiosity was associated with decreased and delayed sexual risk behaviors among this sample. Those adolescents who held religion as important, attended religious services at least once a week, and had traditional attitudes on sexuality had fewer sexual partners and an older age of sexual debut.<sup>13</sup> These findings supported the protective nature of religiosity on sexual activity among Latino/a youth as found in a 2002 population-based dataset. What is not known is if this protective relationship between religiosity and sexual activity existed in an earlier (1995) and most recent (2006–2008) dataset and if this relationship has become stronger or weaker over the years. Furthermore, as Latino/a adolescents in the United States are not homogeneous in their geographic and cultural backgrounds and researchers have noted that it is important not to examine them only as a collective group,<sup>25</sup> it is of interest to analyze differences in religiosity between the largest Latino/a population in the United States (i.e., Mexican) and other Latino/a groups. A protection-risk conceptual framework<sup>26</sup> suggests that religiosity may be considered a protective factor against early sexual activity because it provides models of positive behavior, has sanctions against problem behavior, and often fosters a supportive environment.

Scholars have noted that traditional sexual values are less emphasized within formal religions and that even when these values are stressed, younger persons are not holding to the tenets of their faith on human sexuality when compared to previous generations.<sup>27,28</sup> It is not known if this trend also exists among Latina adolescents in the United States and especially among the dominant Mexican Latina subgroup.

Thus, the purposes of this study were to determine the trends in the influence of religiosity on sexual activity of Latina adolescents in the United States across three cohorts (1995, 2002, and 2006–2008) and to determine if there were differences between the Mexican American and other Latina subgroups. The following hypothesis was proposed: Across all cohorts, Latina adolescents who are more religious will have less and later initiation of sexual intercourse and fewer partners than their less religious peers.

## Materials and Methods

### Design and participants

This study was a secondary analysis of three cross-sectional U.S. population-based surveys. Data were obtained from the 1995 (Cycle 5), 2002 (Cycle 6), and 2006–2008 (Cycle 7) NSFG. The NSFG is a periodic survey conducted by the National Center for Health Statistics. Data were collected in all cycles via voluntary and confidential in-person interviews. In 1995, 10,847 women aged 15–44 years were

interviewed. In 2002, 12,571 respondents 15–44 years of age, including 7,643 females and 4,928 males were interviewed. In 2006–2008, 7,354 women aged 15–44 were interviewed.

Participants in the current study comprised the subset of unmarried, 15–21-year-old Hispanic female respondents in the 1995 ( $n=267$ ), 2002 ( $n=306$ ), and 2006–2008 ( $n=400$ ) datasets. There were 10,847 females in the 1995 dataset, and of these, 1,805 (16.6%) were between the ages of 15 and 21, and of these, 267 (14.7%) were identified as never married and of Hispanic origin. There were 7,643 females in the 2002 dataset. Of these, 1,675 (21.9%) were between the ages of 15 and 21, and of these, 306 (15.6%) were never married young women of Hispanic origin. There were 7,354 females in the 2006–2008 dataset. Of these, 1,882 (25.6%) were between the ages of 15 and 21, and of these, 400 (21.2%) were never married young women of Hispanic origin. Ever married young women were excluded, as initiation of intercourse would be expected in married couples.

### Operational definitions of variables

This study included three dependent variables: ever been sexually active, number of sexual partners in a lifetime, and age of sexual debut. In the NSFG dataset, for females being sexually active referred to having sexual intercourse with a male. Independent variables included two measures of religiosity. Independent variable measures were created by the investigators from items on the NSFG.

The two religiosity variables were: importance of religion and frequency of attendance at religious services. Participants rated the importance of religion in their lives as very, somewhat, or not important. For analysis purposes, these responses were dichotomized into two categories: very important and not very important. The not very important category included the responses somewhat and not important. Participants indicated their frequency of religious service attendance as more than once a week, once a week, 1–3 times per month, less than once a month, or never. For analysis, these responses were also dichotomized into two categories. Frequent attendance at religious services included one or more times per week, and infrequent attendance was less than once per week.

### Weighting of variables

Descriptive statistics, such as means and standard errors (SEs), are commonly reported in data analysis. However, when using survey data such as that from the NSFG, the standard errors must be computed in such a way as to account for the complex sampling design. When standard errors are generally calculated, it is under the assumption that the data were collected through a simple random sample. In a simple random sample, every object in the population has an equal probability of selection. If the standard error for a survey with a complex sampling method is calculated under the assumption of a simple random sample, the standard errors will underestimate the population value. Because of this, any confidence intervals (CIs) and statistical tests would be invalid.<sup>29</sup>

In this dataset, instead of calculating the standard error while assuming a simple random sample, the standard error was calculated to account for multiple stages of sampling, stratification, and clustering. Weights were assigned to each observation in the survey according to their probability of selection. Observations with a higher probability of selection had larger weights than those with a lower probability of selection. The standard errors were calculated using these weights.<sup>29</sup>

## Statistical analysis

Means, standard deviations (SDs), frequencies, and percentages were used to describe the cohorts from the 1995, 2002, and 2006–2008 datasets generated by the 15.0 version of SPSS. To determine the association of importance of religion and religious service attendance frequency with sexual activity, chi-square and relative risk ratios (RR) were used. Student *t* tests were used to determine the differences in the mean number of sexual partners. Survival analysis was used to determine the cumulative survival as virgins at the age of 21.<sup>30</sup> The minimal level of statistical significance was  $p < 0.05$ .

## Results

### Participants

There were no significant differences in demographics between the three cohorts ([Table 1](#)). Participants in all groups were 15–21 years old, with a mean age of 17.7 years (SE 0.17) in 1995, 17.8 years (SE 0.12) in 2002, and 17.9 years (SE 0.12) in 2006–2008. Religious denomination affiliation and distribution of level of education were similar in all groups. In all groups, more than one half of participants were of Mexican origin. A description of where the non-Mexican origin Latinas were from was not available for all of the NSFG datasets and, therefore, was not included in these analyses.

**Table 1. Demographic Variables of Latina Female Adolescents: 1995, 2002, and 2006–2008 Datasets**

<b>Variable</b>	<b>1995 (n=267)</b>		<b>2002 (n=306)</b>		<b>2006–2008 (n=400)</b>	
	<b>Mean (SE)</b>	<b>Frequency %</b>	<b>Mean (SE)</b>	<b>Frequency %</b>	<b>Mean (SE)</b>	<b>Frequency %</b>
Age, years	17.7 (0.17)		17.8 (0.12)		17.9 (0.12)	
15–17	121	49	139	47	180	46
18–21	146	51	167	53	220	54
Religious denomination						
Catholic	173	62	199	66	229	56
Protestant	54	20	69	21	98	28
No religion	30	14	32	11	51	9
Non-Christian	10	4	6	2	22	6
Hispanic/Latino/a origin group						
Mexican	157	57	176	63	245	74
Other Latino/a	110	43	129	37	151	26
Highest grade completed						
≤9th grade	79	33	77	26	87	27
10th or 11th grade	90	32	112	35	158	37
High school graduate	58	20	69	24	89	22
Some college	40	15	48	14	66	15

SE, standard error.

There were no significant differences in the likelihood of sexual activity among the three cohorts. The 1995 cohort had more lifetime partners (mean 2.1, SE 0.19) than the 2002 cohort (mean 1.4, SE 0.18,  $t(100)=2.75, p<0.01$ ). The rate of survival as a virgin at age 21 was 29% in 1995, compared to 20% in 2002 and 23% in 2006–2008. The mean age for sexual debut for the three groups was 16.1, 16.4, and 16.3 years, respectively.

In 1995, the Mexican origin Latinas had a higher survival rate as virgins (36%) than the non-Mexican origin Latinas (21%). In 2002, the survival rate for Mexican origin Latinas was 22% compared to 10% of non-Mexican Latinas. Finally, in 2006–2008, the survival rate for Mexican origin Latinas (24%) was almost the same as for non-Mexican Latinas (23%). The distribution of Mexican origin and non-Mexican origin Latinas was significantly different between 1995 and 2006–2008 (chi square=6.30,  $p<0.05$ ), with significantly more Mexican origin Latinas in 2006–2008. [Tables 2, 3, and 4](#) provide results of the analyses for each of the three dependent variables.

**Table 2. Percent of Cohort Who Ever Had Sex**

<i>Dependent variable</i>	<b>1995</b>		<b>2002</b>		<b>2006–2008</b>	
	<i>%</i>	<i>RR (95% CI)</i>	<i>%</i>	<i>RR (95% CI)</i>	<i>%</i>	<i>RR (95% CI)</i>
Importance of religion						
Very important	42		44		45	
Not very	67	1.57 (1.2-2.1)**	67	1.2 (0.9-1.5)	58	1.3 (1-1.7)
Attendance at services						
Frequent	40		39		43	
Infrequent	65	1.6 (1.2-2.2)**	53	1.4 (1-1.8)*	60	1.4 (1-2)*

\* $p<0.05$ ; \*\* $p<0.001$ .

CI, confidence interval; RR, relative risk.

**Table 3. Mean Numbers of Lifetime Sexual Partners Among 1995, 2002, and 2006–2008 Latina Adolescents**

<i>Dependent variable</i>	<b>1995</b>	<b>2002</b>	<b>2006–2008</b>
	<i>Mean (SE)</i>	<i>Mean (SE)</i>	<i>Mean (SE)</i>
Importance of religion			
Very important	1.3 (0.32)	1.1 (0.16)	0.98 (0.15)
Not very	2.8 (0.31)***	1.7 (0.34)	3.2 (0.67)**
Attendance at services			
Frequent	1 (0.19)	0.9 (0.13)	0.89 (0.13)
Infrequent	2.7 (0.27)***	1.7 (0.26)*	2.9 (0.52)**

\* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p<0.001$ .

**Table 4. Cumulative Proportion of Latinas Remaining a Virgin at Age 21**

	1995 (n=267)			2002 (n=306)			2006–2008 (n=400)		
	n	%	Mean age virgin debut in years	n	%	Mean age virgin debut in years	n	%	Mean age virgin debut in years
Importance of religion									
Very	115	43	16.8	132	23	16.4	146	34	16.8
Not very	152	16	15.5	142	20	16.5	202	21	16
Service attendance									
Frequent	92	49	16.8	108	22	16.4	118	35	16.6
Infrequent	175	18	15.7	197	19	16.3	281	18	16.2

#### Importance of religion

Less than one half of Latinas in 1995 (44%) and in 2006–2008 (44%) reported that religion was very important to them, whereas in 2002, 50% reported it was important. In 1995, Latinas who held religion as very important had less sexual initiation (chi-square=13.43,  $p<0.001$ ), significantly fewer partners (mean=1.3, SE=0.32 vs. mean=2.8, SE=0.31, respectively,  $t(52)=3.29$ ,  $p<0.001$ ), and a 43% survival rate as virgins at the age of 21 compared to a 16% rate among Latinas who viewed religion as not very important. Adolescents who viewed religion as less important were 1.6 times more likely to ever have had sex (RR 1.6, 95% CI 1.2-2.1).

In 2002, those in the high importance group also had higher virgin survival rates (23%) than the low importance group (20%). Adolescents who viewed religion as less important were 1.2 times more likely to ever have had sex (RR 1.2, 95% CI 0.9-1.5). In 2006–2008, those in the high importance group had significantly fewer partners (mean=0.98, SE=0.15 vs. mean=3.2, SE=0.67,  $t(63)=3.27$ ,  $p<0.01$ ) and had a 34% survival rate as virgins at the age of 21 compared to a 21% rate among Latinas who viewed religion as not very important. Adolescents who viewed religion as less important were 1.3 times more likely to ever have had sex (RR 1.3, 95% CI 1-1.7).

#### Religious service attendance

Frequency of religious service attendance was similar in all cohorts, with 35% of Latinas in 1995, 36% in 2002, and 34% in 2006–2008 reporting frequent attendance. In the 1995 cohort, participants with frequent service attendance were less likely to have had sex (chi-square=12.02,  $p<0.001$ ), had fewer partners (mean=1, SE 0.19 vs. mean=2.7, SE=0.27,  $t(63)=4.92$ ,  $p<0.001$ ), and had a 49% survival rate as virgins at the age of 21 compared to an 18% rate among those who attended services infrequently. The infrequent attenders were 1.6 times more likely to ever have had sex compared to those who attended at least once a week (RR 1.6, 95% CI 1.2-2.2).

In 2002, participants with frequent service attendance were less likely to have had sex (chi-square=4.48,  $p<0.05$ ), had fewer partners (mean=0.9, SE 0.13 vs. mean=1.7, SE=0.26,  $t(51)=2.46$ ,  $p<0.05$ ), and had a 22% survival rate as virgins at the age of 21 compared to an 19% rate among those who attended services infrequently. The infrequent attenders were 1.4 times more likely to ever have had sex compared to those who attended at least once a week (RR 1.4, 95% CI 1-1.8).

In 2006–2008, participants with frequent service attendance were less likely to have had sex (chi-square=4.13,  $p<0.05$ ), had fewer partners (mean=0.89, SE=0.13 vs. mean=2.9, SE=0.52,  $t(53)=3.15$ ,  $p<0.01$ ), and had a 35% survival rate as virgins at the age of 21 compared to an 18% rate among those who attended services infrequently. The infrequent attenders were 1.4 times more likely to ever have had sex compared to those who attended at least once a week ( $RR\ 1.4$ , 95% CI 1-2).

## Discussion

The aim of this study was to determine the trends in the relationships between religiosity and sexual behaviors of three cohorts of Latina adolescents in the United States from 1995 to 2006–2008, using a nationally representative sample. In this study, importance of religion and religious service attendance were positively associated with less risky behaviors in all cohorts, which was consistent with previous research.<sup>10–13,16</sup> The proportion of Latinas who identified a denomination affiliation, held religion as very important, and had frequent attendance was stable from 1995 to 2006–2008. However, differences existed in the influence of importance of religion and service attendance across the three cohorts. Holding religion as very important was protective in all years but appeared to be most protective across most dependent variables in 1995. In 1995, the relationships were stronger, and the differences between number of partners and proportion who were virgins at age 21 were greatest.

In contrast, frequent service attendance was protective in all years across all dependent variables (likelihood of having sex, number of partners, and survival to virgin rate). Thus, it appears that church attendance is a more influential variable with respect to sexual attitudes and behaviors than valuing religion as important. The findings of this study and others suggest that young Latinas are not strictly following religious teachings about sexual activity. Traditional sexual values have become less emphasized within formal religions, and young people are not holding to the tenets of their faith on human sexuality when compared with older generations.<sup>27,28</sup> The changes in the relationship between importance of religion and sexual behaviors may be related to these changes in religious doctrine and personal values. With respect to the influence of religious service attendance, the social connections afforded by participation in faith communities might lead to increased social support, time with family, and parental monitoring, all of which play an important role in protecting young Latinas from risky sexual behaviors (i.e., early debut and multiple partners).<sup>31</sup>

The results of this study indicated that between 1995 and 2006–2008, young women remained connected to their religions at equivalent rates, at least in terms of affiliation, religious service attendance, and importance of religion. It seems that the influence of the importance of religion and service attendance on sexual activity was weakest in 2002, but this might be an artifact of the sampling procedures in the NSFG dataset for that year. Instability of the Latino adolescent data in the NSFG, which may be due to sample size or heterogeneity of participants with respect to national origin and sexual mores, has been reported.<sup>32</sup>

Of interest is that the Latinas of Mexican origin had a longer survival rate as virgins and attended religious services more frequently compared to the non-Mexican Latinas in the 1995 and 2002 cohorts, but these differences no longer existed in the 2006–2008 cohort. For Latina Mexican Americans, religion, particularly Catholicism, may be more integrated in their identities because of the strong cultural connection to the virgin of Guadalupe within Mexico.<sup>20,33</sup> Latinas of Mexican origin might also be more connected to family members in Mexico because of the migrant nature of their jobs or the

travel of family members and relatives across the border. In the United States, Puerto Ricans are the second largest subgroup of Latinos. They are U.S. citizens and, thus, might be more influenced by the U.S. culture, whereas the Latinas of Mexican origin might be more influenced by their country of origin and their religious practices and beliefs. Lack of differences in the 2006–2008 cohort may be a result of the general decline in holding to religious tenants on human sexuality in the U.S. culture. This has occurred at a faster pace in the last decade because of globalization, that is, connection to the internet, cell phones, and other electronic media devices. Level of acculturation, which was not able to be ascertained in the participants in this dataset, may influence the relationships for certain outcome variables. Moderating variables, such as acculturation or familism, may help to define the conditions under which holding religiosity as more important may be related to delay of sexual initiation and having fewer sexual partners.<sup>34</sup>

Further research to explore cultural variables and their association with religiosity is warranted. Religiosity, particularly service attendance, appears to be protective against risky sexual behavior among Latinas. It is important for future research to identify the aspects of service attendance that are most influential on sexual activity. Qualitative studies, with their focus on examination of an individual's meaning of a construct created through his or her social interactions,<sup>35</sup> would be well suited for understanding young Latinas' perspectives on what they gain from service attendance that relates to their sexual values and activity.

It would also be interesting to prospectively follow a group of adolescent Latinas who have varying levels of religiosity and test whether supporting and strengthening their religious faith within a cultural context contributes to less involvement in risky sexual behaviors. More descriptive measures of religiosity are indicated, given that composites of brief items may not fully capture these constructs. It would also be of interest to see what trends exist among Latino male adolescents who tend to be less religious than Latina adolescents.<sup>36</sup>

Finally, exploring the trends in the influence of religiosity on contraceptive use over the past years would also be an important area of future investigation. Religiosity has been suggested as a reason why Latinas are less likely to adhere to or to use contraception as much as their non-Latina peers.<sup>37</sup> The relationship between religiosity and contraception use among teens and among Latinas, however, is not clear. Among teens, some evidence indicates that adolescents with higher religiosity report less contraceptive use than their less religious peers.<sup>38,39</sup> Other researchers have found no relationship between religiosity and contraceptive use among adolescents.<sup>40</sup> In at least one study, religiosity was a protective factor in terms of contraceptive use; family religiosity had an indirect, positive effect on consistent contraceptive use among sexually active adolescent females.<sup>41</sup> In actual practice, 52% of currently sexually active adolescent Latinas used a condom at last intercourse compared to 54% of white teens and 60% of African American young women.<sup>4</sup> They did, however, have lower use rates of birth control pills at last intercourse (9%) as compared to 24% of white and 12% of African American female adolescents.<sup>4</sup> Reasons for less contraceptive use among Latinas may be related to religiosity but also may be related to many other issues, such as access to healthcare, fear of parents finding out, desire for pregnancy, or fear of side effects.

## Limitations

It is important to note limitations in the current study. In self-reported data based on recall, there is always the possibility that responses may have been minimized or inflated by the participants.<sup>42</sup> The measurement of religiosity was limited to items in the dataset. Important aspects of religiosity, such as faith, intrinsic religiosity, and religious well-being, were not assessed; thus, the nature of this construct was not fully captured.

## Conclusions

Religiosity had a protective association with sexual activity among Latina adolescents in 1995, 2002, and 2006–2008 cohorts. However, the association of importance of religion with sexual activity has diminished during that time period while the importance of service attendance has remained stable. The influence of religion was more apparent among the Latinas of Mexican origin, but this greater influence also diminished by 2006–2008. There is a need for future studies that further explore the cultural context of sexual behavior and religiosity and changes over time.

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