

Educational Attainment in the United States by Sex and Religious Tradition

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Abstract

Since the 1980s, women have outpaced men in postsecondary educational attainment in the United States. The resulting reversal of the gender gap—which had historically favored men—is generally treated as a “social fact.” However, the gap may differ in informative ways across social contexts. This study asks: How does religious affiliation influence the gender gap in education? Using nationally representative data on adults age 25+ from the Pew Research Center 2014 Religious Landscape Study, I estimate OLS regression models to assess the education gap between women and men across cohorts and 15 religions. The gap has been closing within traditionally patriarchal religions, but at slower pace than the national level. Mormonism is a notable exception, with men continuing to outpace women in educational attainment. Results underscore the important yet underappreciated ways that religion shapes the education gap, and caution against inferring that the national gap applies across social contexts.

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Introduction

Since the early 1980s, women have outpaced men in postsecondary educational attainment in the United States (Charles and Luoh 2003; DiPrete and Buchmann 2013). An increase in educational opportunities (Woyshner and Tai 1997) and the growing recognition that education is strongly related to economic security (Tembon and Fort 2008), robust social networks and increased mortality, especially among women (Montez and Barnes 2016), explicates this trend. Although the gender gap in education has closed at the national level, it remains vital in today's environment of increasing social and economic inequality to identify institutions that continue to influence educational inequalities between the sexes. Religion is one of these institutions.

In this paper, I ask the question "How does religious affiliation influence the gender gap in education?" I hypothesize that, as conservative religious traditions are both patriarchal and paternalistic, men in conservative "family-centered" faiths will seek higher levels of education than women, who assume a lifetime trajectory of family caregiving.

Literature Review

Educational attainment is a strong indicator of lifetime economic success. Human capital theory provides a convincing framework for how educational attainment enhances the marketability of laborers, resulting in more efficient production and higher wages (Becker 1993). Although there have been significant critiques (Oliveira and Holland 2012), the theory remains paramount in explaining this continuing phenomenon.

As the roles of men and women in the United States have shifted, education has become as important for women as it is for men. Women now make up approximately 57.3% of the workforce, down from 60% in 2000 (Burke 2017), and in 2010, women received 58% of college bachelor's degrees and 60% of master's degrees (DiPrete and Buchmann 2013:39–40). Even as workforce participation is decreasing, educational attainment continues to rise. Research shows that education has a protective effect for women. For example, women with low levels of education report significantly worse health than men at the same education level (Montez, Zajacova, and Hayward 2016), and die younger than women with more education (Montez and Barnes 2016). Women with at least a bachelor's degree are less likely to divorce (Martin 2006). And single women with children are less likely to experience poverty (Van Damme and Kalmijn 2014). Beyond earnings considerations, and in alignment with traditional feminine roles, having an educated mother is especially influential in the lives of children as mothers are more likely to interact with educational and medical gatekeepers on behalf of their children (Carter 2005; Lareau 2011).

Among members of conservative faith traditions, though, the expectation that men provide financially for their families imparts a strong motivation for men to pursue education. Women have traditionally not received the same encouragement. For example, the Church of Jesus Christ of Latter-Day Saints (the Mormons) has published in their statement “The Family: Proclamation to the World,” that “by divine design, fathers are to preside over their families in love and righteousness and are responsible to provide the necessities of life and protection for their families. Mothers are primarily responsible for the nurture of their children” (The First Presidency and Council of the Twelve Apostles of The Church of Jesus Christ of Latter-day Saints 1995). The Mormon church does not overtly discourage women from

attaining high levels of education. On the contrary, leaders impress upon their members the importance of education and rely upon the teaching that “the glory of God is intelligence” (Smith Jr. et al. 1835), but the expectation that women find their purpose as mothers may discourage them from pursuing advanced education. Similar arguments can be made for all patriarchal religious traditions. Unfortunately, religious culture is rarely considered in research concerning women and education. How does religious affiliation affect differences in educational attainment between men and women in the United States?

Methods

Using nationally representative data on adults age 25+ from the Pew Research Center 2014 Religious Landscape Study (n=35,071), I estimate a series of OLS regression models to compare gender education gaps between members of 15 religion categories using years of educational attainment as the dependent variable. Although educational attainment is an ordinal variable with eight levels in the survey, I operationalize it as continuous (1 to 16 years) to improve the interpretability of the results. The independent variables are sex, age (in 2014) and 15 religious traditions, including an “unaffiliated” category for subjects who responded that they were atheist, agnostic or “nothing in particular.” All models control for race - white non-Hispanic, black non-Hispanic, Hispanic and other. I exclude individuals less than 25 years of age at the time of the survey (nearly 10%) to limit the number who have not completed their educations. I also eliminate the small number of individuals with missing values for any of the variables of interest (< 5%). The resulting sample size is 30,038. When providing descriptive statistics, I use weighed values to align with 2014 census data.

Results

Educational attainment by religious tradition is shown in Figure 1. Members of the Jehovah's Witness faith are the least educated among the religious tradition groups presented in this study, with about 12% having earned bachelor's degrees or higher. Those of the Hindu faith are the most educated, as 77% have achieved at least a bachelor's degree. Those who profess membership in a Christian faith tend to be less educated than those who claim faiths more prominent outside the United States. Table 1 provides demographic characteristics and average educational attainment by sex and religious tradition with figure 2 providing a graphical representation of the same. Notably, on average women have more years of education than men among every religious tradition except Jehovah's Witness, Evangelical Protestant and Mormon.

The results of the OLS regression analysis are outlined in Table 1. All models are statistically significant at the $p < .001$ level. Model 1 shows how educational attainment differs, on average, by both sex and age after controlling for race. On average, men over the age of 25 are still slightly more educated than women (0.2 years). Younger people receive more education than their older counterparts at the rate of about 0.015 years of education per year of life.

In Model 2, the significant coefficient for the interaction between sex and age demonstrates that the rate of change in education per year of age differs for men and women. Figure 3 illustrates this finding. By making the assumption that age acts as a cohort variable – meaning the majority of people of a certain age will have experienced similar educational opportunities and constraints, I can equate age and time and conclude that, over time, men's education attainment has remained nearly stagnant, with an estimated increase of less than 2% between 1939 and 2014. Women have increased education attainment by 14.7% over the same

period, and are now receiving more education, on average, than men. This result aligns with the findings of DePrete & Buchanan (2013).

Model 3 introduces religious tradition and model 4 adds the interactions between religious tradition and sex. In model 4 I find that, on average, women significantly outperform men in only one religion category: “other faiths.” This category contains Native American beliefs, new age beliefs, and Unitarianism. Model 5 completes the analysis by considering the three-way interactions between sex, age and religious tradition. After stratifying by religious tradition, these interactions are graphically interpretable (see Figure 4). Evangelical protestants, historically black protestants, Catholics, Mormons and “other faiths” interact significantly with age and sex. Among Evangelical protestants, women reached parity with men in educational attainment in approximately 2005. Historically black protestant women overtook historically black protestant men in about 1980. Mormons appear to be the anomaly, as men continue to outpace women in religious attainment. Younger cohorts of “other faiths” are receiving less education than older cohorts in an interesting and contradictory trend.

Limitations

The main limitation of this study is the fact that the data are cross-sectional. This means there is a possibility for survival bias. Because, on average, women live longer than men, and because educational attainment is positively correlated with life expectancy, there is a possibility that highly educated older men were oversampled. In an attempt to ameliorate these concerns, I reran the OLS models using only the survey results of individuals between the ages of 25 and 65. Although the power of the analysis decreased, the findings of the analysis did not change.

Another major consideration concerns the unexpectedly large educational advantage women of Muslim and Hindu faiths have over their male counterparts in the United States – which differs in important ways from populations in other predominantly Muslim and Hindu nations. These results may be due to selective immigration practices after the 1965 Immigration and Naturalization Act of 1965 was passed, opening the immigration floodgates to educated individuals from every nation. This result is an indicator that women of many faiths, given the opportunity, seek education its economic returns, for the good of themselves, their families, and society. This finding and its implications needs to be considered in more depth.

Conclusions

Although women have reached, and in some cases exceeded men in educational attainment, this growth has not been standard across all religious traditions. U.S. based religious traditions that are patriarchal and paternalistic, including the Evangelical protestant faith, can only recently claim educational parity between women and men. Mormons are not yet at parity, and do not appear to be moving towards that achievement. Among Mormons both men and women are getting more education, but men continue to outpace women. I theorize that, as online educational opportunities flourish this anomalous finding will reverse. In 2015 greater than 70% of online students were women, and many claimed that balancing school and family was their main reason for pursuing an online degree (Clinefelter and Aslanian 2015).

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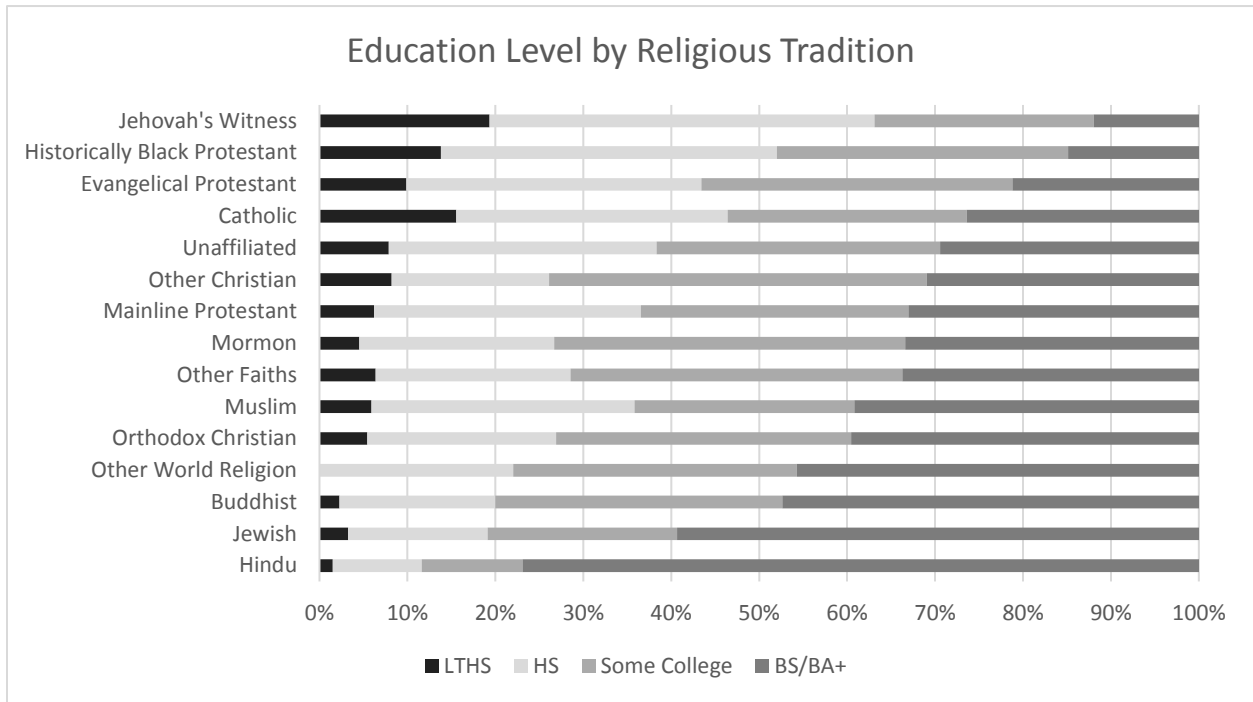
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Table 1. Average educational attainment in years by sex, race and religious tradition. Age 25 and above. Pew Research Center 2014 Religious Landscape Study. Weighted by 2014 census data.

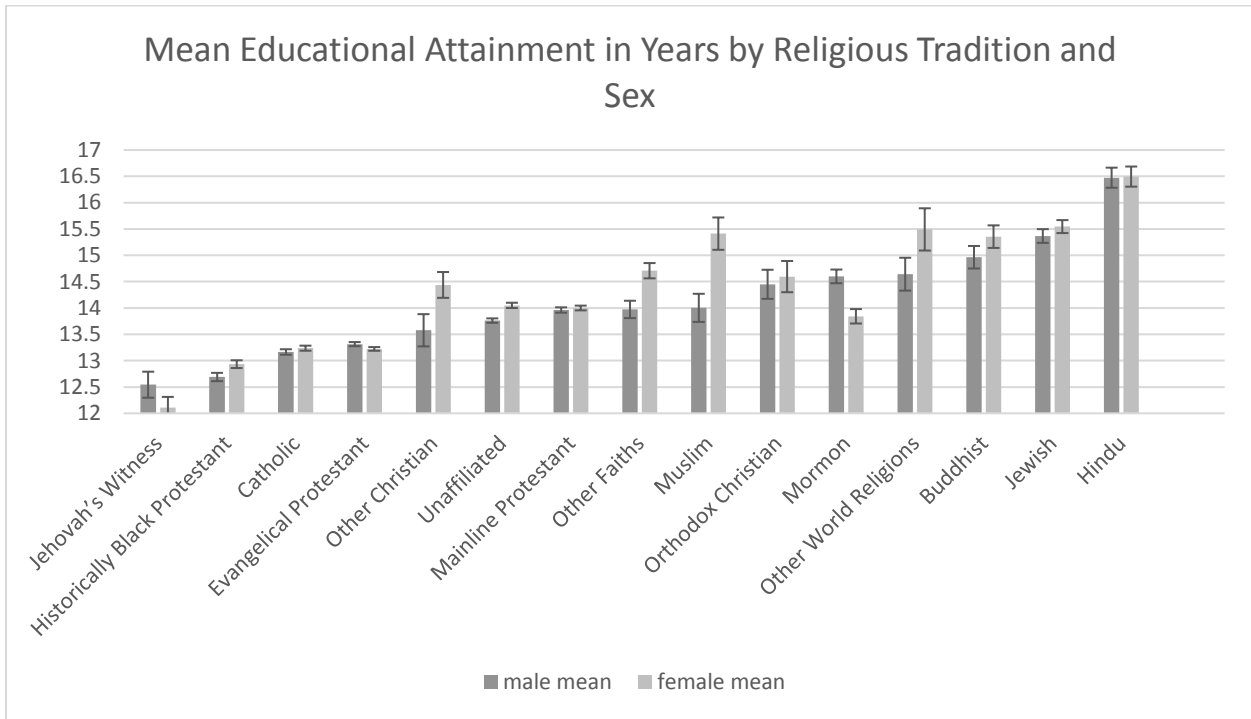
	Proportion of Sample	Average Educational Attainment in Years	
		Men	Women
Male	0.49		
Race			
White non-Hispanic	0.74	13.89371	13.8866
Black non-Hispanic	0.095	12.92958	13.19423
Hispanic	0.1	11.88442	12.00173
Other	0.007	14.54947	14.48183
Religious Tradition			
Evangelical Protestant	0.2516	13.30523	13.21684
Mainline Protestant	0.1808	13.95356	14.00694
Historically Black Protestant	0.0553	12.68074	12.92923
Catholic	0.2115	13.15585	13.21194
Mormon	0.0191	14.56673	13.82544
Orthodox Christian	0.0052	14.45039	14.66041
Jehovah's Witness	0.007	12.51527	12.1106
Other Christian	0.0048	13.42803	14.40693
Jewish	0.025	15.37965	15.55514
Muslim	0.0056	14.01942	15.51242
Buddhist	0.0071	14.9735	15.33316
Hindu	0.0058	16.48023	16.41473
Other World	0.0024	14.64231	15.49247
Other Faiths	0.0173	13.95645	14.71481
Unaffiliated	0.2016	13.74869	14.04045

Figure 1. Education level by religious tradition (less than high school, high school degree, some college, college degree). Pew Research Center 2014 Religious Landscape Study.



Note: Samples weighted to match 2014 U.S. Population Demographics

Figure 2. Mean educational attainment in years by religious tradition and sex. Pew Research Center 2014 Religious Landscape Study.



Note: Samples weighted to match 2014 U.S. Population Demographics

Table 1.

Level of educational attainment regressed on sex and year (Model 1), their interaction (Model 2), religious affiliation (Model 3), the interaction between sex and religious affiliation (Model 4) and the interaction of sex, year with religious affiliation (Model 5), controlling for race: Pew Research Center 2014 Religious Landscape Study 2014

Model	1	2	3	4	5
Sex (1=male)	.200*** (.029)	-1.026*** (.101)	-1.094*** (.099)	-1.207*** (.108)	-1.649*** (.151)
Age	-.015*** (.001)	-.026*** (.001)	.025*** (.001)	.025*** (.002)	-.025*** (.001)
Sex × Age		.022*** (.002)	.022*** (.002)	-.023*** (.002)	.031*** (.003)
Religious Tradition					
Unaffiliated			reference		
Evangelical Protestant			-.749*** (.043)	-.938*** (.063)	-.938*** (.063)
Mainline Protestant			.086† (.047)	.005 (.067)	.005 (.067)
Historically Black Protestant			-.877*** (.090)	-.869*** (.111)	-.871*** (.110)
Catholic			-.240*** (.045)	-.367*** (.066)	-.366*** (.066)
Mormon			.018 (.106)	-.431** (.154)	-.431** (.158)
Orthodox Christian			.392* (.199)	.158 (.303)	.158 (.212)
Jehovah's Witness			-1.427*** (.172)	-1.552*** (.212)	-1.551*** (.212)
Other Christian			.337† (.206)	.596* (.212)	.696* (.278)
Jewish			1.398*** (.095)	1.316*** (.136)	1.316*** (.136)
Muslim			.637** (.192)	.984** (.329)	.984** (.328)
Buddhist			1.095*** (.170)	1.329*** (.242)	1.329*** (.244)
Hindu			1.796*** (.194)	1.364*** (.347)	1.366*** (.346)
Other World Religions			.910** (.289)	1.489*** (.465)	1.490*** (.465)
Other Faiths			.398*** (.111)	.707*** (.156)	.707*** (.156)
Sex × Religious Tradition					
Sex × Unaffiliated				reference	
Sex × Evangelical Protestant				.363***	1.574

	(.086)	(.207)
Sex × Mainline Protestant	.129	.059
	(.094)	(.207)
Sex × Historically Black Protestant	.084	.684
	(.137)	(.366)
Sex × Catholic	.227*	.848
	(.089)	(.219)
Sex × Mormon	.847***	1.83*
	(.213)	(.499)
Sex × Orthodox Christian	.404	.940
	(.400)	(.937)
Sex × Jehovah's Witness	.246	1.767
	(.360)	(1.069)
Sex × Other Christian	-.629	-2.665*
	(.414)	(1.279)
Sex × Jewish	.135	.305
	(.189)	(.484)
Sex × Muslim	-.454	-.658
	(.403)	(.815)
Sex × Buddhist	-.494	.185
	(.340)	(.888)
Sex × Hindu	.637	1.844
	(.410)	(.822)
Sex × Other World Religions	-.933	.785
	(.593)	(1.31)
Sex × Other Faiths	-.684**	-1.774*
	(.223)	(.562)
Three-way Interactions		
Sex × Age × Unaffiliated		reference
Sex × Age × Evangelical Protestant		.023***
		(.004)
Sex × Age × Mainline Protestant		.000
		(.004)
Sex × Age × Historically Black		.016*
		(.007)
Sex × Age × Catholic		.012*
		(.004)
Sex × Age × Mormon		-.020*
		(.009)
Sex × Age × Orthodox Christian		-.011
		(.016)
Sex × Age × Jehovah's Witness		-.030
		(.019)
Sex × Age × Other Christian		.035†
		(.022)

Sex × Age × Jewish						-0.004 (.008.)
Sex × Age × Muslim						.006 (.016)
Sex × Age × Buddhist						-.014 (.016)
Sex × Age × Hindu						-.028 (.017)
Sex × Age × Other World Religions						-.003 (.023)
Sex × Age × Other Faiths						.022* (.080)
Constant	15.370	15.980	16.115	16.184	16.185	
R ²	.068	.073	.108	.110	.112	

Notes: N=30,038 †p ≤ .10; *p ≤ .05; **p ≤ .01; ***p ≤ .001.
Controlling for race.

Figure 3. Average Educational Attainment by Sex and Year, two-way interaction plots, controlling for race. Pew Research Center 2014 Religious Landscape Study.

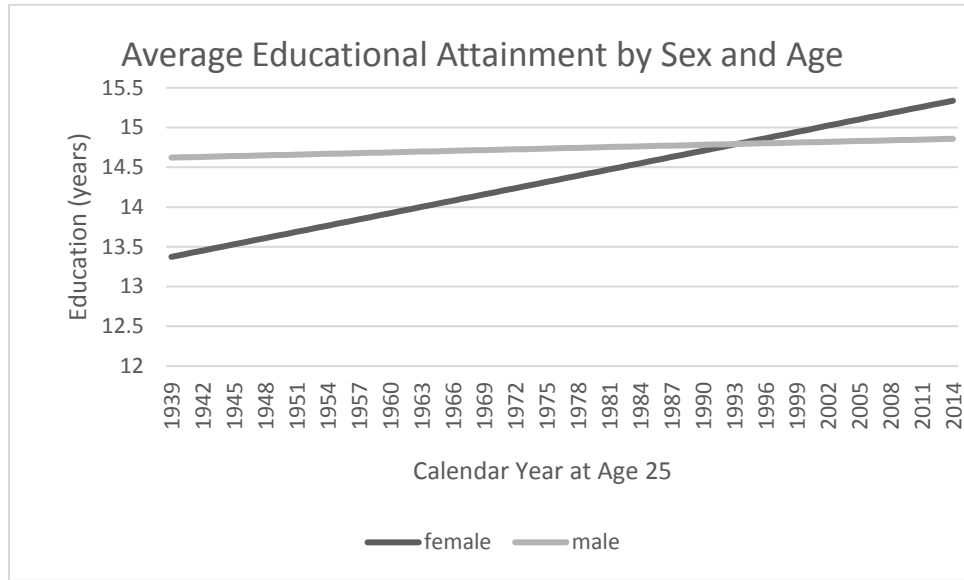


Figure 4. Average Educational Attainment by Sex and Year stratified by religious tradition – two-way interaction plots, controlling for race. Pew Research Center 2014 Religious Landscape Study.

