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Matthew Chupack

Name

4/9/2024

Today's Date

“God Didn’t Bring Me This Far for Me to Fail”: The Relationship between Religiosity and Academic Performance

By

Matthew Chupack

Jeff Mullis

Adviser

Sociology

Jeff Mullis

Adviser

Pamela Hall

Committee Member

Katherine Rosenblatt

Committee Member

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Matthew Chupack

Jeff Mullis

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An abstract of
a thesis submitted to the Faculty of Emory College of Arts and Sciences
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Abstract

"God Didn't Bring Me This Far for Me to Fail": The Relationship between Religiosity and Academic Performance
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Using both quantitative and qualitative data, this study explores the relationship between religiosity and academic performance among undergraduate students at Emory University. I employ the Duke University Religion Index (DUREL) and the Intrinsic Religious Motivation Scale (IRMS) to measure religiosity and use GPA to measure academic performance. I hypothesize that there is a positive correlation between religiosity and academic performance. This hypothesis is tested using survey data on 111 Emory undergraduates. Univariate, bivariate, and multivariate analyses of the survey data are presented. Additionally, I conducted several in-depth interviews with students to further understand the role religion plays in their lives and how it might influence their academic performance. Quantitative findings include an unexpected negative relationship between the DUREL and GPA, albeit the effect is only marginally significant ($p < 0.10$) and sensitive to one outlier as well as to different specifications of the regression model. Qualitative findings suggest that religious students rely on religion as a coping mechanism for the stress associated with test-taking and other academic demands. The strengths and weaknesses of my research and implications for future research are discussed.

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INTRODUCTION

In this study, I will explore the key question: How does religiosity influence Emory University undergraduate students' academic performance? I begin by tracing historical trends in religion and higher education. Next, I will conduct a literature review, where I discuss previous studies on the relationship between religiosity and academic performance. This section will also include a conversation on how various demographic variables are associated with religiosity and academic performance. Next, I will address my methodological approach. This will include how I conceptualized my independent and dependent variables: religiosity and GPA, respectively. Additionally, I will explain my study format, including my sampling process, how I developed and carried out the survey portion of the study, and my approach to the in-depth interviews. I will then analyze my quantitative results and qualitative interview findings. Specifically, I will detail the statistical processes I used to test the correlation between religiosity and academic performance and share my results. I will conclude the paper by discussing my findings, limitations of my study, and suggestions for future research.

Religion and Higher Education: Historical Backdrop

Higher education in the United States was initially intended for religious individuals, specifically the white male Protestant elite. Women were excluded from attending college, even if they were Christian. All nine prominent colonial era colleges, which were founded between 1636 and 1769, had Protestant ties. Eight of the colleges were founded under a particular Protestant denomination: New College, now Harvard University (Puritan); College of William &

Mary (Church of England); Collegiate School, now Yale University (Congregationalist); College of New Jersey, now Princeton University (Presbyterian); King's College, now Columbia University (Church of England); College of Rhode Island, now Brown University (Baptist); Queen's College, now Rutgers University (Dutch Reformed Church); and Dartmouth College (Congregationalist) (Jacobsen and Hustedt Jacobsen 2012). College of Philadelphia, now University of Pennsylvania, was the exception. The school initially maintained strong ties to the Church of England but was not founded under a particular denomination. Still, three-fourths of the original trustees were affiliated with the Church of England, and William Smith, the first person to lead the college, was an Anglican priest (Cheyney 1940; Kleiser 2016).

Today, a few elite colleges in the United States maintain religious affiliations, albeit some of these institutions' ties are fairly minimal and primarily symbolic. Specifically, five of the top 40 colleges in the 2024 U.S. News & World Report's best national universities list are religiously affiliated: Duke University maintains ties to the United Methodist Church, Georgetown University to Catholicism (Jesuit), University of Notre Dame to Catholicism (Congregation of Holy Cross), Emory University to the United Methodist Church, and Boston College to Catholicism (Jesuit) (Association of Jesuit Colleges & Universities 2024; Congregation of Holy Cross 2024; U.S. News & World Report 2023; United Methodist Church 2024). Each of these institutions welcomes students of all religious backgrounds.

It is essential to consider Emory's Methodist affiliation because my study focuses on Emory undergraduate students. Emory is named after former Methodist Bishop John Emory, and many contemporary elements of the university illustrate the institution's Methodist ties. In fact, the preamble of the University Bylaws states, "Emory University has its roots in the founding of Emory College by the Georgia Conference of the Methodist Episcopal Church in 1836 and

maintains a historical affiliation with that denomination's descendant, the United Methodist Church" (Emory University 2024g). Sanford S. Atwood's tenure as Emory University president from 1963 to 1977 marked the first time Emory did not have a Methodist leading the institution (Emory University 2024e). Additionally, the Southeastern Jurisdictional Conference of the United Methodist Church is required to confirm new members to Emory University's Board of Trustees, according to the University Bylaws. The Southeastern Jurisdictional Conference of the United Methodist Church is also authorized to remove members from the Board of Trustees, but the trustee still has the right to be heard before removal (Emory University 2024g). Furthermore, it is customary to have active United Methodist Church bishops serve on the Board of Trustees. Currently, five trustees are bishops (Emory University 2024f).

Emory also offers a United Methodist Ministerial Tuition Benefit program to incoming Emory College of Arts and Sciences and Oxford College students. Dependent children of United Methodist ministers or missionaries are eligible for a 45% tuition benefit through this program (Emory University 2024a). Moreover, Emory is home to Glenn Memorial United Methodist Church and funds the building's upkeep (Davis 2022). Additionally, Cannon Chapel sits in the heart of campus. This building was intended to be an interfaith space and is frequently used for many different religious groups' events. There is no religious imagery within the building. However, the building features a large cross extending beyond the roof's height and is named after William R. Cannon, who became a Methodist bishop after serving as dean of the Candler School of Theology (Emory University 2024b). Thus, while the United Methodist Church does not control the university, the fabric of present-day Emory is woven by the campus' prolific Methodist symbols, honors, and initiatives.

Despite persistent Methodist ties, the university is religiously diverse, which makes Emory an ideal institution to conduct my study. In fall 2023, 3,352 Emory College of Arts and Sciences and Oxford College students self-reported their religion in their Online Pathway for University Students (OPUS) portal. This information is public on the Office of Spiritual and Religious Life website. Based on these data, 36.8% of Emory College and Oxford College students are Protestant, 19.2% Catholic, 18.5% Jewish, 9.9% Hindu, 6.1% Muslim, 3.3% atheist/agnostic, 3% Buddhist, 2.6% other, and 0.6% Orthodox Christian (Emory University 2023b). Compared to national percentages, Emory is more religiously diverse. According to the Freshman Survey, which I discuss in further detail later, 20.8% of college freshmen in 2019 were Catholic, 20.6% Protestant, 17.1% atheist/agnostic, 16.5% no religious preference, 15% other Christian, 3% other, 2.6% Muslim, 2% Jewish, 1.3% Buddhist, and 1.1% Hindu (Bara Stolzenberg et al. 2020). Although Emory's data give a glimpse of the student religious landscape at Emory, the data set is limited, as 3,348 (50%) Emory College and Oxford College students did not self-report their religion, so they were categorized as "no preference/not stated." Thus, Emory's published religious demographics do not clearly indicate the percentage of nonreligious students. It is possible that students who identify with a religion are included in the "no preference/not stated" category if they did not indicate their religious preference on OPUS. Additionally, these percentages only represent undergraduate students in Emory College and Oxford College. The dataset did not separate undergraduate students from graduate students in the Goizueta Business School or the Nell Hodgson Woodruff School of Nursing, so there are 1,609 undergraduates not accounted for between those two schools (Emory University 2023a).

A myriad of opportunities for religious engagement support Emory's diverse religious composition. As a brief overview, within the Office of Spiritual and Religious Life, there are

specific Buddhist, Christian, Hindu, and Jewish chaplains, as well as a Muslim religious life scholar. Emory is currently looking to hire a Muslim chaplain (Emory University 2024c). There are many student organizations dedicated to specific faith traditions, including the Hindu Students Association, Emory Buddhist Club, Muslim Students Association, Sikh Students Association, Jain Students Association, Chabad (Jewish), Hillel (Jewish), Meor (Jewish), Beloved Community (Protestant), Catholic Student Union, College Black Christians, and Emory in Via (Christian). Emory also offers many interfaith opportunities, including the Inter-Religious Council, Journeys of Reconciliation, Welcoming Interfaith and Spiritual Awareness pre-orientation program, and the Emory Interfaith Center (Emory University 2024d).

Although Emory, as well as many other universities, fosters a religiously heterogeneous population accompanied by numerous opportunities for religious engagement, contemporary college students are studying amid a century-old debate on the extent to which college is—or should be—a secularizing force. This conversation began with religious privatization in higher education throughout the 20th century (Jacobsen and Hustedt Jacobsen 2012). During this time, religion, largely Protestantism, at many institutions shifted from the public educational sphere to the personal sphere. For instance, universities began to cut legal ties to their founding denomination, foundations like the Carnegie Endowment only offered funding to nonsectarian schools, science became more prioritized at institutions, and the advent of religious studies departments allowed religion to be studied through a secular lens rather than the traditional theological approach (Marsden 1994). Consequently, some people began to view higher education as secular institutions that emphasized nonbelief. However, as Christianity became more covert, students of other religious backgrounds were able to attend universities with greater ease (Jacobsen and Hustedt Jacobsen 2012). For instance, Yale, which was founded under

Congregationalism, recorded its first Buddhist, Muslim, Hindu, and Baha'i students between the 1930s and 1950s (Yale University 2024). Religious bigotry still permeated higher education during this time, such as multiple Ivy League institutions' attempts to limit Jewish enrollment (Karabel 2005).

While universities have become more secular over the past several decades, the student body has as well. The Freshman Survey, organized by the Cooperative Institutional Research Program at the Higher Education Research Institute (HERI) at the University of California, Los Angeles, is arguably the most extensive publicly available study on college students that includes questions on religion. The 2019 Freshman Survey is the most recent iteration accessible on the HERI website. According to the survey, the percentage of freshmen who had no religious preference significantly increased throughout the past few decades. In 1974, 10.9% of respondents indicated having no religious preference, followed by 8.8% in 1984, 13.4% in 1994, 17.5% in 2004, and 27.5% in 2014 (Eagan et al. 2016). The rise in having no religious preference is most notable in the last two decades, as the percentage of freshmen indicating no religious preference first surpassed 20% in 2008, when 21.2% of respondents indicated not identifying with a religion. The Freshman Survey began offering "atheist" and "agnostic" as response options for the religious preference question in 2015 (Eagan et al. 2016). The number of students who indicated that they had no religious preference, were atheist, or were agnostic increased from 29.6% in 2015 to 33.6% in 2019, which is the highest percentage of respondents indicating that they had no religious preference, were agnostic, or were atheist in the survey's history (Eagan et al. 2016; Bara Stolzenberg et al. 2020). Evidently, the contemporary college student is attending school in an environment marked by increasing numbers of nonreligious peers.

Considering these trends in higher education—the secularization of institutions and the increasing percentage of students identifying as not religious—as well as the historic backdrop of American colleges initially being religiously affiliated, it is important to examine the relationship between college students' religiosity and their academic performance. This is particularly relevant to Emory, as the university has a religiously diverse undergraduate student body where thousands of students identify with a religion. Therefore, my research may prompt people to consider college students' approach to school in a different way, as it brings religion into the equation for understanding college students' academic performance. Likewise, my study may have practical implications for universities. While I will not make causal statements on religiosity and academic performance, statistical correlations, or lack thereof, and qualitative commentary may inform institutional programming or support related to student religious life.

LITERATURE REVIEW

While researchers have published multiple studies on the relationship between religiosity and academic performance, it is important to note that literature on this topic is still relatively limited. This is especially true in comparison to research on the correlation between college students' religiosity and alcohol and drug use, sexual activity, and mental health, among other hallmarks of the college experience. Additionally, within the limited literature on religiosity and academic performance, undergraduate students are not the subject in many of the studies. Instead, numerous studies examine the relationship between religiosity and academic achievement among high school students (Butler-Barnes, Williams, and Chavous 2011; McKune and Hoffmann 2009; Park 2009). Furthermore, many studies focus on correlations between

religiosity and academic performance among college students in foreign countries, including Ghana, South Africa, and Malaysia (Amponsah, Dey, and Oti-Boadi 2021; Peltzer, Malaka, and Phaswana 2002; Zubairu and Sakariyau 2016). While studies that focus on students in foreign countries may provide a helpful context, religion in the United States has a distinct history and a nuanced sociopolitical context, hindering the direct applicability of foreign studies. Moreover, some studies on religiosity and academic performance only surveyed students in a particular major or academic field, such as accounting and medicine (Henning et al. 2015; Zubairu and Sakariyau 2016). This impairs these studies' generalizability, as findings only pertain to students in a particular discipline.

It is crucial to acknowledge these limitations in the existing literature base because they contribute to my studies' significance. While my study solely focuses on Emory University undergraduate students, it does not presuppose that study participants are religious like other studies do, and my research represents students coming from numerous disciplines, including chemistry, Spanish, film and media studies, nursing, and business. Therefore, my study will be a valuable contribution to this important topic's limited existing literature.

Religiosity and Academic Performance

Studies reveal divergent ways in which religiosity affects students' academic performance. Some studies emphasize that religiosity is correlated with enhanced academic performance, but other studies stress that religiosity is correlated with hindered academic performance. It is vital to distinguish how religiosity and academic performance are conceptualized and operationalized in different studies.

Mooney (2010) used more traditional religiosity indicators when examining college grades and satisfaction among students at elite universities. Specifically, she analyzed students' frequency of religious service attendance and their self-rated level of religious observance based on their adherence to religious ceremonies and customs. Mooney (2010) found that religious service attendance, but not students' self-reported level of religious observance, had a statistically significant positive effect on GPA.

It is important to note that Mooney's (2010) study is one of the most comprehensive examinations of religiosity and academic performance among college students. She analyzed data from undergraduate students at 28 elite universities in the United States, including Emory. This is an important distinction from many other studies, which only sample students from one or two schools (see, e.g., Cannon et al. 2005; Daugherty and Han 2016; Schubmehl, Cubbellotti, and Van Ornum 2009). Mooney (2010) used longitudinal data derived from the National Longitudinal Survey of Freshman. National Longitudinal Survey of Freshman researchers used a probability sample, as the study participants were randomly selected. By analyzing data collected through probability sampling and representing students from numerous universities, Mooney's (2010) results are more reliable and generalizable than multiple other studies on this topic.

Horwitz's (2022) study is also among the most comprehensive and recent literature on the topic. However, she explored the relationship between religion and academic performance among high school students. She primarily analyzed this relationship by doing secondary analysis of survey and interview data derived from the National Study of Youth and Religion (Horwitz 2022). Despite her focus on high school students, Horwitz's (2022) explanations for how religion may influence academic performance may apply to college students as well.

Horwitz (2022) proposed that there is a "synergy" between school and religion, as "both institutions strive to maintain social order" (Horwitz 2022:49). Consequently, it is not that religious individuals are simply more intelligent than nonreligious individuals, but schools have a hidden curriculum that favors traits one develops in religious contexts, such as cooperation and self-discipline. Students practice these traits through completing homework, respecting teachers' authority, and being attentive in class. These norms are also taught in religious contexts, such as by respecting the authority of God (Horwitz 2022). Horwitz (2022) also explained that religiosity is tightly associated with conscientiousness, which entails controlling impulses, being goal-oriented, and desiring order. These characteristics are correlated with earning higher grades (Horwitz 2022). Additionally, Horwitz (2022) described delayed gratification as a component of the hidden curriculum. Delayed gratification entails putting off short-term satisfactions, such as earning a good grade on a test, in exchange for long-term gratification, like getting into college. This can apply to college students as well, with their long-term gratification being securing a good job or getting into a graduate school program. Religious individuals are better suited to delay gratification, as that is emphasized in many religions through notions like good behavior being rewarded in the afterlife (Horwitz 2022). Thus, the parallel values instilled by religion and emphasized in education's hidden curriculum facilitate patterns where religious students have strong academic performance.

Researchers at Brigham Young University (BYU) conducted a study on the relationship between religiosity and GPA among BYU students, focusing on both intrinsic and extrinsic religiosity (Cannon et al. 2005). Intrinsic religiosity includes actions like reading about one's religion due to personal enjoyment, while extrinsic religiosity includes behaviors like going to church because it helps one make friends. Cannon et al. (2005) found a positive correlation

between intrinsic religiosity and GPA but a negative correlation between extrinsic religiosity and GPA. It is important to recognize that Cannon et al.'s (2005) study is limiting not just because it only focused on students at one university, but because over 98% of BYU students are Mormon (Eyre 2019). Therefore, these findings may not be generalizable to other religious faiths.

Daugherty and Han (2016) used a narrower conception of religiosity, examining the correlation between theodicy, or the perceived control of events by God, and academic performance. They analyzed this relationship through a psychological personality lens, exploring what Five-Factor Model personality dimensions were correlated with reactions to uncertainty and how that may act as context to the relationship between theodicy and student achievement. Daugherty and Han (2016) found that higher theodicy scores were associated with lower openness but higher reluctance to disclose uncertainty, extraversion, and agreeableness. Additionally, they found that theodicy is correlated with lower GPAs (Daugherty and Han 2016). Applied to this study, theodicy suggests that students think God controls how they perform academically, which implies an external locus of control. Therefore, students with high theodicy scores may not put as much effort into studying. Daugherty and Han's (2016) study is also limiting because they only sampled students from two colleges and did not explain their sampling methodology.

Although not specifically about academic performance, Zuckerman, Silberman, and Hall (2013) proposed theories about religiosity and intelligence among college students. Their theories contrast with studies that found a positive relationship between religiosity and academic performance (Cannon et al. 2005; Horwitz 2022; Mooney 2010). Zuckerman et al. (2013) conducted a meta-analysis of 63 studies, which revealed a negative correlation between intelligence and religiosity. This relationship was especially strong for college students.

According to the meta-analysis, individuals with higher intelligence tended to resist conformity and expressed a greater propensity to challenge religious doctrines. Moreover, intelligent individuals favored analytical ways of thinking, which may subvert religious beliefs (Zuckerman et al. 2013). Thus, these findings suggest an incompatibility between religion and strong academic performance.

While many studies found correlations between religiosity and academic performance, Schubmehl et al. (2009) did not find any relationship. Their study, which only focused on Marist College, examined the relationship between college students' spirituality, campus ministry involvement, and GPA. Schubmehl et al. (2009) hypothesized that higher scores on the Index for Core Spiritual Experiences and greater involvement in campus ministry activities would be correlated with higher GPAs. However, their hypothesis reveals a limitation to their study: Their population only included students involved in the campus ministry, which implies that study participants are religious. They did not find a statistically significant relationship between students' involvement in the Campus Ministry organization and their GPA. Likewise, they did not find a statistically significant relationship between students' spirituality and their GPA. According to Schubmehl et al. (2009), this may be due to various limitations to their study, including the authors using nonprobability sampling, the sample being overwhelmingly female, and the sample solely consisting of Marist College Campus Ministry members.

Religiosity, Academic Performance, and Other Variables

While my study's focus is on religiosity and academic performance, it is important to acknowledge that other variables, including sex and gender, sexual orientation, race, and

socioeconomic status, may influence a college student's religiosity and academic performance. Therefore, I will explore existing literature on these variables because they may need to be held constant to better understand the relationship between religiosity and academic performance.

Sex, Gender, and Academic Performance

There are inconclusive results on how sex and gender affect students' academic performance. Although many studies suggest correlations between being a woman and weaker academic performance, other studies indicate that women tend to have stronger academic performance. Female college students are often perceived as less intelligent than their male peers (Bloodhart et al. 2020). This contributed to female students experiencing stereotype threat, which is often used to explain their weaker academic performance (Gonzales, Blanton, and Williams 2002; Good, Aronson, and Harder 2008; Shih, Pittinsky, and Ambady 1999; Spencer, Steele, and Quinn 1999). Spencer et al. (1999) conducted a study on stereotype threat among college women. The researchers gave students two math tests, and they told the students a different statement before each test. One statement indicated that women are worse than men at math, and the other statement suggested that men and women have scored comparably on the test they were about to take. Consequently, women had lower average scores after hearing the former statement compared to the latter statement, suggesting that stereotype threat affects women's academic performance (Spencer et al. 1999). McIntyre, Paulson, and Lord (2003) conducted a similar study on college women being told positive remarks about women's achievements before taking a math test, and their results align with those of Spencer et al. (1999).

Additionally, multiple factors contribute to women's stronger academic performance, such as gender socialization. Female students are more likely to exhibit key skills needed for

learning, such as perseverance and self-discipline. Women also tend to feel a greater sense of fulfillment by doing well on tasks, contributing to academic success (DiPrete and Buchmann 2013). Furthermore, studies have found that fewer women being in a program is significantly associated with them having a higher GPA. Specifically, Sonnert and Fox's (2012) studied academic performance among students receiving science and engineering degrees, and they found that when fewer women were in the physical science field, women earned higher GPAs.

Sex, Gender, and Religiosity

Women are often considered to be more religious than men. For instance, Pew Research Center's extensive U.S. Religious Landscape Study, which was conducted in 2014, found that more than one in four (27%) men described themselves as religiously unaffiliated, while less than one in five women (19%) described themselves as religiously unaffiliated (Pew Research Center 2015). Additionally, women in the United States were more likely than men to indicate that religion was "very important" to them (60% vs. 47%), pray daily (64% vs. 47%), and attend religious services at least once a week (40% vs. 32%) (Pew Research Center 2016). While the overall trends reflected that women were more religious than men, it is important to note that the study found some faith-based discrepancies. For example, Muslim and Orthodox Jewish men attended services more frequently than Muslim and Orthodox Jewish women. This may be due to different faiths' gendered approaches to worship and prayer. Orthodox Judaism, as well as some conservative practices, requires at least 10 men who have had a bar mitzvah to be present for a service to take place. Similarly, many Muslim communities expect men to attend mosque on Fridays for daytime prayer, but women are often permitted to engage in this prayer individually (Pew Research Center 2016).

Furthermore, some scholars, including Miller and Hoffmann (1995), have linked men's propensity to be less religious than women to risk preference theory, citing that men are more inclined to engage in high-risk behaviors. They also described irreligiosity as akin to risky behavior. To elaborate, some prominent religions, such as Christianity, believe in potential punishment after death, so theorists have linked irreligiousness and subsequent punishment in the afterlife to risky behavior. By extension, since women tend to detest risks, they opt to be more religious so they can be rewarded after death (Miller and Hoffmann 1995).

Other scholars have proposed that workforce participation is negatively correlated with religiosity. However, women have lower participation than men in the U.S. workforce; women's participation in the U.S. labor force was 56.8% in 2022, while men's participation in the labor force was 68% (U.S. Bureau of Labor Statistics 2023). This may contribute to gender-based differences in religiosity. In a study examining the relationship between workforce participation and religiosity, de Vaus and McAllister (1987) found that women who worked full-time were less religious than women who did not work. The researchers theorized that occupational work facilitates sociopsychological assets akin to that of religion, helping individuals establish values, social relationships, and identity (de Vaus and McAllister 1987). Additionally, Schnabel (2016) found that women in higher-paying, full-time jobs were less religious because not as much of their social validation came from religious settings. However, women who adhered to traditional gender norms may be more likely to find social validation in religious settings (Schnabel 2016).

Sexual Orientation and Academic Performance

Numerous studies have found that not being heterosexual is correlated with lower academic performance. Oswalt and Wyatt (2011) analyzed American College Health Association

National College Health Assessment responses to explore the relationship between mental health issues and sexual orientation among college students. They found that gay, lesbian, bisexual, and "unsure" college students reported higher levels of mental health issues than their heterosexual counterparts. To elaborate, gay, lesbian, bisexual, and "unsure" college students were statistically significantly more likely than heterosexual students to have felt hopeless, depressed, and anxious. They were also statistically significantly more likely to have engaged in self-injurious behavior, considered suicide, or attempted suicide (Oswalt and Wyatt 2011). Multiple other studies have indicated similar patterns between not being heterosexual and mental health concerns (Cochran, Sullivan, and Mays 2003; Gmelin et al. 2022). Consequently, gay, lesbian, bisexual, and "unsure" students were more likely than their heterosexual peers to experience negative academic impacts due to their mental health conditions (Oswalt and Wyatt 2011). For example, 10.2% of gay or lesbian students, 12.3% of bisexual students, and 10.8% of "unsure" students said that depression contributed to them getting a lower grade on an exam or project. However, only 5.4% of heterosexual students indicated that response. Moreover, 3.6% of gay or lesbian students, 7.1% of bisexual students, and 5.1% of "unsure" students indicated that their depression contributed to them getting a lower grade in a course. By comparison, only 2.7% of heterosexual students had this experience (Oswalt and Wyatt 2011).

Furthermore, heterosexist rhetoric on college campuses may also contribute to non-heterosexual students' tendency to have lower GPAs. Mathies et al. (2019) sought to explore this relationship by analyzing how hearing "that's so gay" and "no homo" influences LGBTQ+ students' academic outcomes. To be clear, "that's so gay" and "no homo" are charged and multifaceted microaggressions that harm sexual minorities. "That's so gay" is often used to negatively cast judgment on something as ludicrous or lame, while "no homo" is frequently used

to minimize being gay and assert heteronormativity. However, these phrases have become normalized, and heterosexual individuals frequently use such phrases without considering how they stem from homophobic sentiments (Mathies et al. 2019). Mathies et al. (2019) found that hearing "that's so gay" and "no homo" were both statistically significantly correlated with developmental challenges. Almost all developmental challenges were related to academic stressors, such as struggling to meet academic expectations, viewing classes as challenging, and discontent with academic performance, reflecting how LGBTQ+ students may be more prone to academic adversity (Mathies et al. 2019). Additionally, although Mathies et al. (2019) did not find a statistically significant relationship between hearing "that's so gay" and GPA, they did find a statistically significant negative correlation between hearing "no homo" and GPA. This illuminates how LGBTQ+ college students may be particularly susceptible to worse academic performance as a byproduct of their lived experiences as a sexual minority on college campuses.

Sexual Orientation and Religiosity

Furthermore, many studies and polls have indicated that Americans who are sexual minorities are less likely to be religious. Gallup Daily tracking interviews revealed that LGBTQ+ Americans were significantly less likely to be more religious than non-LGBTQ+ Americans (Newport 2014). Similarly, compared to straight individuals, gay, lesbian, and bisexual Americans are less likely to believe in God, attend religious services weekly, view religion as very important, and engage in daily prayer (Schwadel and Sandstrom 2019). This is similar to a Pew Research Center (2013) study which found that 65% of LGBTQ+ individuals rarely or never attended religious services, meanwhile just 29% of the general public rarely or never attended religious services. LGBTQ+ individuals tend to have negative perceptions of religion,

which may contribute to these findings. In fact, 55% of the general public expressed that there is a conflict between religious beliefs and homosexuality. Likewise, 93% of LGBTQ+ adults viewed at least one religious institution as "unfriendly" (Pew Research Center 2013). Furthermore, 48% of people who attended religious services at least once a week indicated that homosexuality should be discouraged. The study also found that 60% of LGBTQ+ individuals between 18 to 29 years old were religiously unaffiliated, compared to only 31% of the general public in that age group being religiously unaffiliated (Pew Research Center 2013). This is important to note because this age group encompasses college-age individuals.

Race and Academic Performance

Researchers have extensively studied the relationship between race and academic performance among college students, and most findings indicate that Black and Hispanic students tend to perform worse on tests, earn lower grades, and have lower college completion rates (Ciocca Eller and DiPrete 2018; Espenshade and Walton Radford 2009; Martin, Spenner, and Mustillo 2016; Smith and Reeves 2020; Spenner, Buchmann, and Landerman 2004). Scholars have proposed multiple explanations to elucidate Black and Hispanic college students' weaker academic performance, such as lower quality of high school education and exclusive campus climates (Fletcher and Tienda 2010; Martin et al. 2016; Stevens, Liu, and Chen 2018).

Stereotype threat is also frequently used to explain Black and Hispanic students' weaker academic performance (Brown and Day 2006; Charles et al. 2009; Gonzales et al. 2002; Massey and Owens 2013; Shapiro, Williams, and Hambarchyan 2013). Using data from the National Longitudinal Survey of Freshman, Massey and Owens (2013) found that Black and Hispanic students' externalization of negative stereotypes was correlated with a significant increase in

academic performance burden, which in turn impaired students' GPAs. Externalization refers to minority group members' expectation that majority group members will judge them based on stereotypes, such as Black and Hispanic people being less intelligent (Massey and Owens 2013).

It is important to note that studies have mixed results on Asian American students' academic performance. The model minority myth inaccurately and harmfully generalizes that Asian American students are hardworking and receive good grades. Still, some studies show that the stereotype may benefit Asian American students' academic performance through stereotype threat. For example, Shih et al. (1999) conducted a study on how stereotype threat applies to Asian American women by having them complete math tests. These women were divided into different groups: one that reminded them of their female identity before taking the test and another that reminded them of their Asian identity before taking the test. Compared to the control group, women who were reminded of their female identity performed worse, and women who were reminded of their Asian identity performed better (Shih et al. 1999).

Race and Religiosity

Black individuals in the United States are often more religious than other racial groups, while Asians tend to be less religious. This is reflected in Pew Research Center's U.S. Religious Landscape Study, as 94% of Black respondents indicated that they believed in God with absolute or fair certainty. Additionally, 85% of Latinx respondents said they believed in God with absolute or fair certainty, followed by white respondents at 81%. Asian respondents were the least likely to indicate that they believed in God, with just 67% reporting absolute or fair certainty in their belief (Pew Research Center 2014b).

Similarly, Black individuals were the most likely and Asian individuals were the least likely to indicate that religion was very important to them. Specifically, 75% of Black respondents said religion was very important to them, followed by 59% of Latinx respondents, 49% of white respondents, and 36% of Asian respondents. Weekly religious service attendance also fluctuated by race and followed the same racial pattern, with 47% of Black respondents reporting that they attended religious services every week, followed by 39% of Latinx respondents, 34% of white respondents, and 26% of Asian respondents. Notably, other indicators of religiosity—including frequency of prayer, frequency of participation in scripture study or religious education groups, and frequency of reading scripture—followed the same racial pattern of Black respondents being most likely to engage in the religious practice, followed by Latinx respondents, white respondents, and lastly Asian respondents (Pew Research Center 2014b).

Numerous academic studies corroborate the aforementioned trends (Johnson, Matre, and Armbrecht 1991; Mohamed and Rotolo 2023; Yang et al. 2016). For instance, Chatters et al. (2009) found that for all 12 measures of religious participation (e.g., frequency of church attendance, reading religious materials, prayer), African Americans had greater religious engagement than non-Hispanic whites. Many scholars have also researched the prominent role of religious institutions in African Americans' lives, which may explain their higher levels of religiosity (Billingsley 1999; Lincoln and Mamiya 1990). One reason that fewer Asian Americans identify as religious is that many Asian cultures have overlapping values with religions like Buddhism, Daoism, and Confucianism. Therefore, many Asian Americans' values are based on these religions despite them not identifying as religious. In fact, four in 10 Asian Americans indicated that they felt close to at least one other religion even though they did not identify with that religion (Mohamed and Rotolo 2023).

Socioeconomic Status, Need-Based Financial Aid, and Academic Performance

A student or their family's socioeconomic status affects numerous aspects of a college student's life, such as if they receive need-based financial aid, whether they need to work a part-time job, and if they can afford textbooks and meals. Lower- and middle-class students tend to qualify for financial aid. Many of these students also hold jobs while in school, either through Federal Work-Study or another form of employment (Federal Student Aid 2024). Studies have found negative correlations between holding a job while in college and GPA, especially if the job requires over 20 hours of work a week. This is largely due to working students having less time to study (Carnevale 2019; DeSimone 2008; Sockin 2021; Tessema, Ready, and Astani 2014). Additionally, it is important to note that while not all first-generation college students are low-income, they do tend to come from lower-income families (Fry 2021; Pappano 2015; Startz 2022). Consequently, some studies have found that first-generation college students tend to have weaker academic performance (Chen and Carroll 2005; Strayhorn 2007).

Additionally, studies reflect that textbook costs are an obstacle for many college students, especially considering college textbook prices increased by about 190% from 2006 to 2018. Lower-income, first-generation college students and historically underserved groups are particularly impacted by textbook costs (Jaggars, Rivera, and Akani 2019; Jenkins et al. 2020; Nagle and Vitez 2021). As a result, some students have to postpone purchasing textbooks due to their costs. In a survey of college students conducted by Wakefield Research in 2018, a market research company, 85% of U.S. college student respondents delayed or avoided purchasing course material, and 92% of those students said cost was a very or somewhat important factor in making their decision. Of the U.S. students who delayed or avoided purchasing textbooks, 68%

agreed with the statement that they would earn better grades if they accessed their course material before the first day of class (Wakefield Research 2018). This aligns with Nagle and Vitez's (2021) finding that 90% of the 65% of students surveyed who skipped buying a textbook due to cost were worried that their decision would hurt their grades.

Moreover, low-income college students are more likely to face food insecurity than their middle- and upper-class counterparts. Based on a survey distributed to undergraduates at Rowan University, there was a correlation between food insecurity and poor academic performance. Compared to their food-secure counterparts, those who were food insecure were twice as likely to be in the bottom 10% of students and about three times less likely to be in the top 10% of the student body (Weaver et al. 2019). Multiple previous studies also found that food-insecure students were more likely to have lower GPAs (Maroto, Snelling, and Linck 2014; Patton-López et al. 2014). Various factors may explain this relationship. Notably, not consuming a proper diet and being malnourished often have negative side effects, including fatigue, difficulty focusing, and hampered memory retention, which may impair academic performance (Weaver et al. 2019).

Socioeconomic Status, Need-Based Financial Aid, and Religiosity

Researchers have published numerous articles illustrating that people of lower socioeconomic status tend to be more religious and place greater importance on faith than individuals in higher socioeconomic groups (Baker 2008; Joshi, Hardy, and Hawkins 2009). The Pew Research Center depicted these trends in a 2014 study. According to the study, 66% of households that made less than $30,000 a year were absolutely certain that there is a God. This percentage did not greatly fluctuate among people in the $30,000 to $49,999 or the $50,000 to $99,999 income groups. However, this percentage dropped to 53% for households making

$100,000 or more annually. Thus, lower-income people are more likely to have strong beliefs in God's existence (Pew Research Center 2014a). Similarly, the Pew Research Center study reflected a negative correlation between household income and the importance of faith in one's life. The percentage of individuals who viewed faith as very important decreased as income increased: less than $30,000 (58%), $30,000 to $49,999 (53%), $50,000 to $99,999 (50%), and more than $10,000 (42%) (Pew Research Center 2014a).

Scholars have proposed many reasons why low-income individuals are more religious or pray more frequently than middle- or upper-class individuals. For example, lower-class Protestants are more likely to hold conservative religious beliefs, which emphasize adhering to religious doctrine and expressing greater religiosity in everyday life (Schwadel 2008; Smith and Faris 2005). Additionally, some researchers noted that low-income individuals use prayer as a coping mechanism (Yurdakul and Atik 2016). More specifically, other scholars proposed an escapist approach to coping, contending that low-income people believe that praying will afford them veneration from God and that God will eventually reward them (Baker 2008; Schwadel 2008). Similarly, other studies have linked lower-income individuals' heightened religiosity to deprivation theory. In brief, deprivation theory suggests that people experience discontent when they feel like they are lacking something in comparison to others. Consequently, people seek to address or obtain what they are being deprived of through a variety of methods. For low-income individuals, one strategy is religion, which may ease the psychological burden they often face (Berkessel et al. 2021; Hoverd, Bulbulia, and Sibley 2013).

Religion Overview

There are not many studies that address the association between specific religious groups and religiosity as well as whether certain religious groups are more likely to have stronger academic performance than others. It is hard to measure whether members of one faith tend to be more religious than members of another faith because there are distinct approaches to how people of different faiths practice and engage with religion. While some studies discuss religious faith and academic achievement, the existing literature is restricted because many of these studies focus on academic achievement, such as highest level of schooling, rather than academic performance, which includes test grades or GPA.

Religion and Educational Attainment

Part of Pew Research Center's U.S. Religious Landscape Study analyzed educational attainment for 30 religious groups and denominations. For reference, 27% of adults in 2014 held a college degree, which is less than many religious groups. Additionally, 43% of atheists and 42% of agnostics completed college, which is more than many religious groups. Hindus had the greatest level of educational attainment, with 77% of Hindu adults having earned a college degree. Among the other religious groups that have higher college completion rates than atheists and agnostics are Unitarian Universalists (67%), Jews (59%), Anglicans (59%), and Buddhists (47%). Religious groups that have higher college completion rates than the U.S. adult average but lower than atheists and agnostics include Muslims (39%), United Methodist Church (37%), and Mormons (33%). Religious groups that have lower college completion rates than the U.S. adult average include Catholics (26%), those that indicated "nothing in particular" (24%), and the Southern Baptist Convention (19%) (Murphy 2016).

Similar to the U.S. Religious Landscape Study, other studies have found that Jews tend to have greater educational attainment than other religions (Homola, Knudsen, and Marshall 1987; Lehrer 1999). In contrast, studies have not shown consistent results for Christian denominations' educational attainment levels. For instance, Lehrer (1999) found that Catholics and mainline Protestants were near the center of the educational attainment distribution. However, Murphy's (2016) analysis of the Pew Research Center study found that Catholics had lower college completion rates than the U.S. adult average. Additionally, Homola et al. (1987) found that Catholics and Methodists lack significant differences in their educational accomplishments, which contradicts Murphy's (2016) finding that United Methodist Church followers, but not Catholics, have a higher college completion rate than the U.S. adult average. Some of these discrepancies may be due to the studies being published in different decades.

Religion and Academic Performance

One study that examined the relationship between specific faiths and academic performance, rather than educational attainment, is Li and Murphy's (2018) study on how religious affiliation and religiosity affected students' performance in a marketing class at an unspecified public university. The researchers measured academic performance by looking at students' final grade percentage out of 100% in the marketing class and measured religiosity by asking survey respondents to indicate how frequently they attended places of worship—every week, every month, or rarely. The authors found that there is a positive relationship between religiosity and academic performance for Christians, no relationship for Jews, Buddhists, and Hindus, and a negative relationship for Muslims (Li and Murphy 2018). However, this contrasts

with Mooney's (2010) finding that Catholics, Protestants, and those with no religious affiliation tended to earn similar grades, while Jews tended to earn higher grades.

Li and Murphy (2018) theorized that the positive relationship between religiosity and academic performance for Christians may be a product of Christian college students' application of the Protestant work ethic to academic endeavors. Max Weber popularized the notion of the Protestant work ethic in his book, "The Protestant Ethic and the Spirit of Capitalism." The idea alludes to John Calvin and Martin Luther's Protestant teachings that espouse that one way to serve God is through discipline and hard work (Weber [1904] 2010). Applied to an academic context, the Protestant work ethic references dedication to studying and working hard in classes to do well in school. However, this explanation is limiting as it does not account for Catholic students. Additionally, Li and Murphy (2018) reasoned that the positive relationship between Christianity and academic performance may also be due to Christian students' affiliation with the dominant religion on campuses, providing them with a sense of ease within their college environment. Moreover, Li and Murphy (2018) conjectured that the negative relationship between religiosity and academic performance for Muslims may be due to prevalent Islamophobia and other stereotypes Muslims face on college campuses following 9/11.

Religion and Work Ethic

Additionally, Li and Murphy (2018) traced how religious doctrines in Christianity, Judaism, Islam, Buddhism, and Hinduism discuss ideas related to work. However, each of these religions place value on work, so members of a certain religious faith would not necessarily have a greater academic work ethic than members of another religious group solely based on doctrine and teachings. As previously mentioned, there is a Protestant work ethic specifically tied to the

teachings of John Calvin and Martin Luther. Additionally, Judaism emphasizes having a strong work ethic, with the Torah stating that people should work six days a week ahead of a seventh day of rest, or Shabbat. Some scholars have pointed to a Jewish cultural value on achievement and success, which motivates Jews to work hard (Lynn and Kanazawa 2008). Likewise, parts of the Quran denote the importance of work and mention that Allah will recognize people's work (Li and Murphy 2018). Additionally, Muslim Turks living in the United States were also shown to exhibit traits akin to the Protestant work ethic. For four out of the five characteristics related to a Protestant work ethic, such as an internal locus of control, Muslim Turks scored higher than Protestants and Catholics (Zulfikar 2011). Furthermore, Buddhism espouses that being lazy is a negative attribute that should be avoided. Its teachings value perseverance and taking initiative (Parboteeah, Paik, and Cullen 2009). There is also a Hindu work ethic that values education and hard work. Additionally, dharma, which relates to Hindus' moral and ethical responsibilities as well as ways of conducting themselves righteously, instills Hindus with a sense of duty (Li and Murphy 2018; Srivastava et al. 2013).

To summarize, with the literature gap on the relationship between specific religious faiths and religiosity, as well as religious groups and academic performance, it is challenging to gauge how religious identities may influence religiosity and academic performance. Turning to different religions' work ethics also does not help provide theories on this relationship because the most prominent religions in the United States embrace a similarly high standard of hard work and effort. Furthermore, while studies have found that certain religious groups tend to have higher educational attainment rates, that variable is distinct from academic performance. Therefore, more research is needed in order to discern trends in the association between specific

religious faiths and levels of religiosity and if certain religious groups are more likely to have stronger academic performance than other religious traditions.

Other Variables

My study and analysis will examine multiple other variables. However, these variables are not included in this literature review due to a lack of studies on their relationship with religiosity and academic performance. While there is literature on how first-generation college students tend to have weaker academic performance because they often come from a lower-income background or do not have many resources, I could not find many studies that explore the relationship between first-generation college students and religiosity. Therefore, first-generation college student status is not discussed under the Socioeconomic Status, Need-Based Financial Aid, and Religiosity subsection.

Moreover, there is little research on how one's year in college is associated with academic performance or religiosity. Still, there are important circumstances to consider when examining one's year in school. For instance, a first-year who has only one semester under their belt, which is the case for the first-years in my study, may have particularly high or low GPAs because they have not taken as many classes to balance out doing very well or very poorly in a particular course. Additionally, while students' first year in college may pose some academic burdens, such as adjusting to college expectations, later years in college have their own set of challenges. Many students start moving out of introductory-level courses their sophomore year and need to meet the demands of upper-level courses. Likewise, upperclassmen may experience academic burnout and additional external stressors like applying to graduate school or jobs, which may limit their studying time. Moreover, as previously noted, college is often viewed as a

secularizing force. Consequently, some studies have found that students became less religious during college, so first-years may be more religious than upperclassmen (O'Neill and Grandy 1994; Pascarella and Terenzini 1991). However, findings are not that clear cut, as some studies indicated that college strengthened individuals' religiosity (Foster and LaForce 1999; Lee 2000). These variables are important to keep in mind as I address the methodological approach to my study and go into greater depth about my independent and dependent variables in the subsequent section, Data and Methods.

Hypotheses

Based on the preceding literature review, I hypothesize that there is a positive correlation between religiosity and academic performance. Thus, I expect students with higher Duke University Religion Index (DUREL) and Intrinsic Religious Motivation Scale (IRMS) scores to have higher GPAs than students with lower DUREL and IRMS scores. It is important to contextualize this hypothesis considering some studies found a negative correlation between religiosity and academic performance (Daugherty and Han 2016; Zuckerman et al. 2013). These studies do not conceptualize or operationalize religiosity and academic performance in the same way I do, making them a less useful reference to inform my hypothesis than studies that found a positive correlation (Cannon et al. 2005; Mooney 2010). Additionally, Horwitz (2022) explained multiple reasons why religious students tend to do better in school.

Furthermore, listed below are hypotheses regarding the relationship between religiosity, academic performance, and background variables. Like my primary hypothesis, these are informed by the literature review. However, not every background variable has an associated hypothesis due to limited studies or inconsistent results on the topic.

Sex: Respondents who were assigned female at birth will have higher levels of religiosity than respondents assigned male at birth. I cannot hypothesize how sex interacts with academic performance due to inconclusive findings in the literature review.

Gender: Respondents who identify as female will have higher levels of religiosity than respondents who identify as male. I cannot hypothesize how identifying as male or female interacts with academic performance due to mixed results in the literature review. However, studies indicate that being LGBTQ+ is correlated with having low levels of religiosity and weak academic performance, so I expect similar relationships to extend to genderqueer respondents.

Sexual Orientation: Heterosexual respondents will have higher levels of religiosity and stronger academic performance than non-heterosexual respondents.

Race: Black/African American respondents will have the highest religiosity scores and white respondents will have the strongest academic performance.

Hispanic, Latino, or Spanish Origin: Respondents of Hispanic, Latino, or Spanish origin will have higher religiosity scores but worse academic performance than respondents who do not share that background.

Year in College: Due to a lack of literature, I do not have hypotheses on how one's year in college is associated with religiosity or academic performance.

Need-Based Financial Aid: Respondents who receive need-based financial aid will have higher levels of religiosity and worse academic performance than respondents who do not receive need-based financial aid.

Subjective Social Class: Respondents from lower-class families will have higher religiosity scores and worse academic performance than respondents from higher social classes.

First-Generation College Student: First-generation college students will have worse academic performance than non-first-generation college students. I cannot craft a hypothesis on how being a first-generation college student is associated with religiosity due to extremely limited literature on the topic.

Religion Raised: I cannot formulate hypotheses on how being raised with a specific religious tradition is associated with religiosity or academic performance due to a lack of literature and inconclusive results on the topic. However, based on my primary hypothesis, I expect that respondents raised without a religion will have the lowest religiosity scores and weakest academic performance.

Current Religious Preference: I cannot craft a hypothesis on how identifying with a specific religious faith is associated with religiosity or academic performance due to limited literature and inconclusive findings on the topic. However, I anticipate that respondents who currently identify with a religion will have higher religiosity scores and better academic performance than nonreligious respondents.

Social Networks: As I will describe later, I posed questions about whether respondents' friends are religious and if they hold the same beliefs as the respondent. The literature review does not discuss these variables because there is not much scholarly precedent for including them in studies on religiosity and academic performance. Therefore, I do not have specific hypotheses for these questions, as they play a more exploratory role in my study.

DATA AND METHODS

In this section, I will explain my methodological approach and the research strategy I used for this study, from conceptualization to implementation. The following section is divided into two parts, Conceptualization and Operationalization and Methods and Research Design. In the first part, I will precisely detail how I conceptualized and operationalized my independent and dependent variables. I will also introduce the indices I employed to measure religiosity.

In the second part, I will outline how I used online anonymous surveys as a quantitative research approach and in-depth confidential interviews as a qualitative research approach. I will also elaborate on my availability sampling and survey distribution procedures. Then, I will walk through how I crafted the survey questions. Next, I will discuss how I conducted the interviews. Finally, I will describe the frequency distributions for variables that I analyze in my study.

Conceptualization and Operationalization

For this study, I am interested in assessing how Emory University undergraduate students' religiosity affects their academic performance. Religiosity is the independent variable and academic performance is the dependent variable. As I will explain in more detail later, I measure religiosity through two frequently used indices, the DUREL (Table 1) and the IRMS (Table 2). I measure academic performance by respondents' GPA.

Religiosity is an abstract concept that can be conceptualized in many ways. Religiosity is often thought of as a person's inclination to be religious, whether due to intrinsic, extrinsic, or other motivating factors. Likewise, there are numerous approaches to operationalizing

religiosity. As referenced in the literature review, studies have measured college students' religiosity by how often they attend religious services, the degree to which they view God as controlling the events in their lives, and their involvement in spiritual or religious activities on campus (Daugherty and Han 2016; Mooney 2010; Schubmehl et al. 2009).

Additionally, it is important to note that numerous studies have used scales or indices to measure religiosity. Many researchers have employed the Religious Orientation Scale (ROS), which is one of the first scales created to measure religiosity (see, e.g., Chen and Tang 2013; Leong and Zachar 1990; Trimble 1997). The ROS assesses three dimensions of religiosity: intrinsic religiosity, extrinsic-personal religiosity, and extrinsic-social religiosity. However, the ROS has limitations, which is partly why I opted to use different indices. For example, the ROS assumes respondents engage in religiosity indicators like praying and attending a place of worship, but it does not include response options for respondents to indicate that they do not participate in such practices. This is problematic because I cannot assume that each survey respondent engages in such religious activities. Operating under this assumption would exclude necessary perspectives from my study, especially those of nonreligious individuals.

I can gauge similar religiosity elements as the ROS while avoiding the aforementioned concern by using the DUREL and IRMS. The DUREL includes a praying question but does not assume survey respondents pray. Instead, the index asks how frequently one engages in "private religious activities," including prayer. Notably, the question has a "rarely or never" response option in case a respondent does not engage in private religious activities. Furthermore, the DUREL contains a question related to church or religious meeting attendance without assuming that respondents visit a place of worship. Rather, the DUREL examines how frequently one

attends church or religious meetings and includes a "never" option for people who do not engage in such religious activity.

The Duke University Religion Index

Table 1. The Duke University Religion Index

1. How often do you attend a place of worship (e.g., church, synagogue, mosque, etc.) or other religious meetings?
2. How often do you spend time in private religious activities, such as prayer, meditation, or religious text study?

To what extent do you agree with the following statements?

3. In my life, I experience the presence of the Divine (i.e., God).
4. Religious beliefs are what really lie behind my whole approach to life.
5. I try hard to carry religion over into all my other dealings in life.

Questions one and two have six response options. Question one's response options range from "never" to "more than once a week." Question two's response options range from "rarely or never" to "more than once a day." Questions three, four, and five are Likert scale questions that use a five-point scale. Response options for questions three, four, and five are "definitely not true of me," "tends not to be true of me," "unsure," "tends to be true of me," and "definitely true of me."

Harold Koenig, a psychiatrist and professor at the Duke University School of Medicine, and Arndt Büssing, a professor for quality of life, spirituality, and coping at the University of Witten/Herdecke in Germany, developed the DUREL. The index, which includes five questions, was devised to be incorporated into epidemiological surveys (Koenig and Büssing 2010). However, the questions included in the DUREL are not exclusively tied to epidemiology or health outcomes, so I was able to use the index to evaluate the relationship between religion and academic performance. Furthermore, the instrument has been widely used by other researchers. The DUREL has been used in over 100 published studies as of 2010, and researchers translated the instrument into 20 languages for use in studies in other countries as of 2022 (Koenig and

Büssing 2010; Toscanelli et al. 2022). The index evaluates three dimensions of religiosity: organizational religious activity, non-organizational religious activity, and intrinsic religiosity. Question one assesses organizational religious activity, question two assesses non-organizational religious activity, and questions three, four, and five assess intrinsic religiosity. Notably, the intrinsic religiosity questions were selected from the IRMS (Koenig and Büssing 2010).

Question one asks respondents to mark how often they attend a place of worship or other religious meeting. This question is related to organizational religious activity because attending a place of worship or religious meeting is a structured manifestation of religion. The original question in the DUREL said "church" instead of "place of worship" (Koenig and Büssing 2010). I altered this wording to make the question inclusive to non-Christians. This question has six response categories, ranging from "never" to "more than once a week."

Question two asks respondents to denote how often they spend time in private religious activities, such as prayer, meditation, and religious text study. These are non-organizational religious activities because they can be done individually, outside of an organized religious setting. The original question in the DUREL said "Bible study" instead of "religious text study" (Koenig and Büssing 2010). I changed this wording to be more religiously inclusive, as not all of my survey respondents are Christian. This question has six response categories, ranging from "rarely or never" to "more than once a day."

As previously mentioned, the DUREL shares three overlapping questions with the IRMS, which I will discuss in greater detail in the IRMS subsection. The overlapping items use a five-point Likert scale. Respondents are asked, "To what extent do you agree with the following statements?" Response options range from "definitely not true of me" to "definitely true of me." The three overlapping statements are: "In my life, I experience the presence of the Divine (i.e.,

God)," "My religious beliefs are what really lie behind my whole approach to life," and "I try hard to carry my religion over into all my other dealings in life."

In order to combine all DUREL questions into a composite score, I assigned each response category a point value. Questions one and two were scored out of six points. I assigned one point to the response option that indicated the least frequent engagement in the given religious activity, adding an additional point for each subsequent response option that indicated a higher frequency of religious engagement. Questions three, four, and five were scored out of five points. I assigned one point to the "definitely not true of me" option, two points to "tends not to be true of me," three points to "unsure," four points to "tends to be true of me," and five points to "definitely true of me." Thus, the composite DUREL score ranges from five to 27 points, with five points reflecting the least religiosity and 27 points indicating the highest level of religiosity.

In my Emory sample, Cronbach's alpha = 0.911 for the DUREL, which is very high and indicative of excellent internal reliability. To elaborate, Cronbach's alpha is an estimate of internal consistency or reliability, which in this case means that the items within the DUREL generally measure the same construct of religiosity. Additionally, inter-item correlations range from 0.615 to 0.875. The relatively high inter-item correlations further underscore the internal consistency of responses to the index.

The Intrinsic Religious Motivation Scale

Table 2. The Intrinsic Religious Motivation Scale

Rate how much you agree with each statement.

1. My faith involves all of my life.
2. It does not matter so much what I believe as long as I lead a moral life. (reverse-coded)
3. One should seek God's guidance when making important decisions.
4. In my life, I experience the presence of the Divine (i.e., God).
5. I refuse to let religion influence everyday affairs. (reverse-coded)
6. My faith sometimes restricts my actions.
7. Nothing is as important as serving God as best I know how.
8. There are many more important things in life than religion. (reverse-coded)
9. Religious beliefs are what really lie behind my whole approach to life.
10. I try hard to carry religion over into all my other dealings in life.

All items use the same five-point Likert scale with the following response options: "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." Questions two, five, and eight measure extrinsic religiosity indicators and are therefore reverse coded.

Dean Hoge, who was a prominent sociologist of religion, developed the IRMS. He spent most of his career as a professor at the Catholic University of America and served as president of the Society for the Scientific Study of Religion (Goodstein 2008). Hoge detailed how he developed the IRMS in "A Validated Intrinsic Religious Motivation Scale" (1972). During this time, he was an assistant professor at Princeton Theological Seminary. Members of a seminar at Princeton Theological Seminary helped develop the IRMS (Hoge 1972).

Hoge and the seminar members began creating a new religiosity scale after noticing pitfalls in other scales. They constructed a 30-item preliminary validation questionnaire, including the eight questions from the ROS that had the highest item-to-scale correlations as well as 22 new items. The final validation questionnaire was also 30 items, including the nine best items from the preliminary validation (Hoge 1972). Out of the 30 items, Hoge and the seminar

members selected the 10 questions that produced the highest validity, reliability, item-to-item correlation, and item-to-scale correlation for their intrinsic religiosity scale.

The IRMS includes three questions that Hoge (1972) classified as extrinsic religiosity factors. As he intended, I reverse-scored the following questions: “It does not matter so much what I believe as long as I lead a moral life,” “I refuse to let religion influence everyday affairs,” and “There are many more important things in life than religion.” Moreover, I spread out the reverse-scored questions throughout the IRMS section of my survey to minimize response bias.

It is important to note that I made a few alterations to the original IRMS response options and questions. First, the original IRMS only included four response options in the following order: “strongly agree,” “agree,” “disagree,” and “strongly disagree.” I added a “neutral” response option because the original response categories were not exhaustive—people may not have any level of agreement or disagreement with a particular item. This also helps align the response categories for the three overlapping questions on the DUREL and IRMS. Furthermore, I flipped the order of the response categories so that “strongly disagree” is the first response option and “strongly agree” is the last response option. This aligns with how the response categories are ordered on the DUREL, and survey pre-test respondents indicated that the DUREL and IRMS having flipped response category orders made the survey confusing.

In terms of questions that I altered, the IRMS originally stated, “Although I am a religious person, I refuse to let religious considerations influence my everyday affairs” (Hoge 1972). I omitted the “although I am a religious person” part of the statement because I wanted to make my survey applicable to all people, even if they are not religious. For this same reason, I omitted the beginning part of “Although I believe in my religion, I feel there are many more important things in life” (Hoge 1972). Instead, I included, “There are many more important

things in life than religion." This updated statement addresses the same concern as the original IRMS item without presupposing that respondents are religious. Moreover, I made small edits to two additional items on the IRMS. One item originally stated, "My religious beliefs are what really lie behind my whole approach to life," and the other item stated, "I try hard to carry my religion over into all my other dealings in life" (Hoge 1972). For both these items, I omitted "my" before "religious" and "religion." Including phrases like "my religious beliefs" or "my religion" implies that respondents identify with a religion. However, my population includes all undergraduates at Emory, regardless of whether they are religious or not. Therefore, omitting "my" allows the scale to apply to all individuals, including those who are not religious. To note, the modified wording is modeled after how Štambuk, Štambuk, and Konjevoda (2007) altered the IRMS items.

In order to combine all IRMS questions into a composite score, I assigned each response category a point value: "strongly disagree" was one point, "disagree" was two points, "neutral" was three points, "agree" was four points, and "strongly agree" was five points. On the reverse-coded questions, "strongly disagree" was five points, "disagree" was four points, "neutral" was three points, "agree" was two points, and "strongly agree" was one point. Thus, the composite IRMS score ranges from 10 to 50 points, with 10 points indicating the least religiosity and 50 points reflecting the highest level of religiosity.

In my Emory sample, Cronbach's alpha = 0.936 for the IRMS. Thus, the IRMS has excellent internal reliability. Furthermore, inter-item correlations range from 0.365 to 0.881, which is relatively high and indicates that responses to the IRMS have internal consistency. Moreover, the DUREL and IRMS are highly correlated with each other, with $r = 0.920$. This

attests to the indices' convergent validity and means that both scales are measuring a similar conception of religiosity.

Methods and Research Design

In this subsection, I will detail the process of developing my study, from submitting my study proposal to the Emory Institutional Review Board (IRB) to crafting my survey. I will note my study's population and sample as well as explain how I distributed the survey. Finally, I will explain how I devised interview questions and my interview process.

Emory Institutional Review Board

My study had to be approved by Emory's IRB. While my study qualified for an expedited review, the IRB approval process still took significant time and it delayed when I was able to start data collection. Specifically, I submitted my study proposal to the IRB in October 2023, and the IRB approved my study in January 2024. Before submitting my proposal, I completed my survey instrument, devised interview questions, and drafted wording to promote my study. My proposal went through multiple rounds of revisions before it was approved. I appreciate the IRB staff who helped me through this process, as it was my first time submitting a study to the IRB.

Study Population and Sample

The population for my study is undergraduate students at Emory University who are at least 18 years old. Specifically, Emory University had 8,212 undergraduate students who were at least 18 years old in fall 2023 (Emory University 2023a). However, my study only has a sample

of 111 respondents. Notably, it is highly unlikely my survey reached all undergraduate students at Emory, and it is much more likely that only about one thousand students saw my survey based on where I advertised it.

I utilized nonprobability sampling because I did not randomly select the survey respondents. As I will expand on in the Survey Distribution subsection, I asked for my survey to be sent to various Emory-affiliated email lists, and I sent my survey in multiple Emory student group chats. Additionally, I employed snowball sampling, as I asked my friends to complete my survey as well as share my survey with their social networks. This was an important measure to make sure my survey reached as many Emory students as possible.

Survey Development and Pre-Test

I developed an original survey to assess Emory undergraduate students' religiosity, academic performance, and other relevant characteristics. I divided my survey into five parts: demographic questions, religiosity questions, academic questions, the DUREL, and the IRMS. Additionally, I employed skip configurations before respondents could start answering questions. If respondents marked "no" to agreeing to everything stated in the informed consent or "no" to being at least 18 years old, they were taken to the survey exit page. I self-tested the survey dozens of times to ensure that the skip patterns worked and to certify that respondents would not be allowed to move on to new survey sections without answering the required questions.

After developing the survey, I pre-tested it on five peers, which is important for enhancing the effectiveness of the survey and reducing the potential number of non-respondents. Their response times ranged from three minutes to 10 minutes, with the average time to complete the survey being seven minutes. The survey pre-test respondents also provided suggestions on

how I could improve the survey. As previously mentioned, the DUREL had Likert scale questions where respondents had to indicate how much they agreed or disagreed with a statement on a scale ranging from “definitely not true of me” to “definitely true of me.” However, the IRMS scale ranged from “strongly agree” to “strongly disagree.” Three of the survey pre-testers said that the flipped scale range was confusing. Therefore, I reversed the response options on the IRMS so they would range from “strongly disagree” to “strongly agree.”

Furthermore, two survey pre-testers said that it was challenging to answer some questions on the IRMS considering they do not identify with any religion. They found two questions particularly difficult because the wording made the question seem like it only applied to religious respondents: “Although I am a religious person, I refuse to let religious considerations influence my everyday affairs” and “Although I believe in my religion, I feel there are many more important things in life.” Therefore, I altered the wording of those questions to make them more applicable to nonreligious respondents. The updated questions are: “I refuse to let religion influence everyday affairs” and “There are many more important things in life than religion.” As previously noted, I modeled this wording on how Štambuk et al. (2007) modified the IRMS.

Survey Distribution

After I finalized the survey instrument, I formatted it on Qualtrics, which is an online software where users can create surveys (Qualtrics 2024). Qualtrics offers numerous benefits, especially since my survey was anonymous. For instance, Qualtrics has an “anonymous link” function which generates a reusable link that can neither be tracked nor used to identify respondents. Likewise, Qualtrics has an “anonymize responses” function which prevents the platform from recording respondents’ IP addresses and location data. Furthermore, Qualtrics

allows data to be directly downloaded into Statistical Package for the Social Sciences (SPSS), which is the software I used to analyze the survey data. The survey opened on February 6, and respondents had until February 20 to complete the survey.

I created a flier to advertise my study and emphasized that individuals do not need to be religious to participate in the study. I asked numerous departments and campus groups to disseminate my study information through their email lists. While not all departments and groups agreed to my request, many did distribute my study flier. Specifically, my study information was emailed to sociology majors, religion majors, all residents in Alabama Hall, Dobbs Hall, and Raoul Hall, and all resident advisors and sophomore advisors. I also posted the flier and survey link in the Class of 2024 GroupMe and the Class of 2025 GroupMe. GroupMe is a group messaging app. It is important to note that while these group chats have hundreds of members, there are relatively few active users. Furthermore, I advertised the survey in the Emory College Honor Council group chat, the Behind the Glass: Immigration Reflections executive board group chat, and the executive board group chat for Emory's chapter of Omicron Delta Kappa, which is a national leadership honor society. Lastly, I promoted my survey in The Emory Wheel's Slack, which is a team-based communication platform.

Survey Questions

I introduce many variables throughout my survey, which I take into account during data analysis. In this subsection, I will outline the various demographic, religious experience, and academic experience questions I asked in my survey as well as how I devised the wording for each question. I required respondents to answer all survey questions. If an open response question did not apply to a respondent, I instructed them to write "N/A" in the textbox.

Sex

I asked respondents to indicate what sex they were assigned at birth. This is a standard demographic question asked on many surveys, including the U.S. Census and General Social Survey (GSS). I offered the following response categories: male, female, and "other." The "other" response option allows my survey to not exclude any groups, such as intersex individuals. Furthermore, I wrote "please specify" next to "other" and formatted the survey so that respondents were required to type a specification in order to move on to the next section. This formatting applies to all instances in which I included an "other" response option.

Gender

I asked respondents to indicate their gender and offered the following response categories: male, female, non-binary, and "other." The 2020 Census did not ask about gender (U.S. Census Bureau 2020). Although Emory collects data on students' gender, their response options only include "male" and "female," which is limiting (Emory University 2023a). I included non-binary and "other" response options to ensure my response categories were exhaustive.

Sexual Orientation

I asked respondents to indicate their sexual orientation and included the following response options: heterosexual (straight), gay, lesbian, bisexual, queer, asexual, pansexual, and "other." The GSS asks about sexual orientation, but it offers less extensive response categories: heterosexual or straight, gay, lesbian, or homosexual, and bisexual (General Social Survey 2024e). Therefore, I included additional response options to make the question more inclusive.

Race and Hispanic, Latino, or Spanish Origin

I asked respondents to indicate their race by selecting one of the following options: American Indian/Alaskan Native, Asian, Black/African American, Native Hawaiian/other Pacific Islander, white, two or more races, and "other." I included these response options based on what Emory uses to report on the racial makeup of its students (Emory University 2023a). I added the "other" option to ensure that respondents who did not identify with one of the listed racial groups could still answer the question truthfully. Emory also includes "Hispanic/Latino" under race, but like the Census and GSS, I asked about that identity in a separate question (General Social Survey 2024a; U.S. Census Bureau 2020). I included two response options for the Hispanic, Latino, or Spanish origin question: yes and no. I used the words "Hispanic," "Latino," and "Spanish" because the Census and GSS use those three classifications as well (General Social Survey 2024a; U.S. Census Bureau 2020).

Year in College and School within Emory

I asked respondents to indicate their year in college: first year, second year, third year, fourth year, or "other." In a separate question, I asked respondents what school at Emory they attend: Emory College of Arts and Sciences, Goizueta Business School, Nell Hodgson Woodruff School of Nursing, or Oxford College.

Need-Based Financial Aid

I asked respondents to indicate whether they receive need-based financial aid. I offered three response options: yes, no, and "I am not sure." I specified need-based financial aid because

I intended for this question to gauge respondents' economic status. Therefore, I did not want respondents to consider whether they receive merit aid.

Subjective Social Class

To assess respondents' socioeconomic status, I asked respondents to indicate what social class they think they were raised in based on the following response options: lower class, working class, middle class, upper class, and "I am not sure." Specifically, I asked, "If you were asked to use one of the following labels to describe the social class of the family you were raised in, which would you say your family belongs to?" This wording was modeled after a question on the GSS: "If you were asked to use one of four names for your social class, which would you say you belong in: the lower class, the working class, the middle class, or the upper class?" (General Social Survey 2024d:Subjective Class Identification).

First-Generation College Student

I asked respondents to indicate whether they are a first-generation college student based on the criteria that none of the respondents' parents completed a baccalaureate degree. I used this definition because that aligns with how Emory describes first-generation status (Emory University 2023a). I included yes, no, and "I am not sure" as response options.

Religion Raised

I asked respondents to indicate what religion they were raised from the following options: Protestant, Catholic, Jewish, Muslim, Buddhist, Hindu, none, or "other." I selected these

response options because they are the most prevalent religions at Emory (Emory University 2023b). I modeled this question after the GSS item, “In what religion were you raised?” (General Social Survey 2024c:Religion in Which Raised). It is important to gauge respondents’ religion before college because college is a transformative time where individuals’ identities may shift.

Current Religious Preference

I asked respondents to indicate their current religious preference using the same response categories as the religion raised question. I modeled this question after the GSS item, “What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?” (General Social Survey 2024b:R’s Religious Preference). Noticeably, my response options are more inclusive than those on the GSS.

Religiosity Questions

I also asked questions related to religiosity that the DUREL and IRMS did not assess. Specifically, I asked an open response question on what religious, faith, or spiritual organizations respondents have engaged with in college. I also asked how many religious organizations respondents have been involved with on campus: none, one, two, three, or four or more.

Furthermore, I included a couple of social network questions. I asked what percentage of the respondents’ friends hold the same religious beliefs as the respondent. I also asked respondents to identify what percent of their friends they consider religious. The response options for these questions were 0% of friends, 1% to 24%, 25% to 49%, 50% to 74%, 75% to 99%, or 100%.

Lastly, using a five-item Likert scale ranging from strongly disagree to strongly agree, I asked respondents to rate how much they agree with the statement, "I consider myself to be a religious person." I posed this question so I could evaluate how one's perception of their religiosity correlates with how they score on the DUREL and IRMS.

Academic Questions

I measured my dependent variable, academic performance, by asking respondents to share their GPA. I also asked respondents to specify their major(s) and minor, if applicable, as well as how many hours a day they spend studying. Additionally, using a five-item Likert scale ranging from strongly disagree to strongly agree, I asked respondents to rate how much they agree with the statement, "I find my coursework so far at Emory to be challenging."

Interview Background and Interest Form Distribution

I conducted confidential in-depth interviews to add a qualitative dimension to my study. These interviews were conducted either in person or on Zoom, and the conversation lasted about 20 minutes. In total, I conducted 11 interviews. I recorded the interviews using Otter.ai, which automatically transcribes speech. Additionally, because the interviews are confidential, I will refer to participants using a pseudonym and not share extensive personal information.

The aforementioned survey distribution procedures apply to how I gauged people's interest in participating in an interview. At the end of the survey, I included an optional link to an external Qualtrics form where respondents could share their first name and email address if they were interested in participating in an interview. This interest form is in no way linked to the main survey. Therefore, I am not able to match interest form names to completed surveys, maintaining

survey respondents' anonymity. I reached out to people who completed the interview interest form on a rolling basis, and I conducted all interviews between February 13 and March 7.

Interview Questions and Process

I drafted the interview questions based on what the survey asked. Additionally, I broke the interview into five parts: informed consent, demographic questions, religious identity and experiences before college, religious identity and experiences in college, and academic experiences. During the informed consent part, I read an informed consent statement that was approved by the IRB and confirmed that the participant was at least 18 years old, an undergraduate at Emory, and still wanted to participate in the study. After the participant affirmed each point, I started to record the conversation and the interview commenced.

I asked participants minimal demographic questions, such as their year in school, major, preferred pronouns, and religious identity. Participants shared other demographic information, such as race and sexuality, without me prompting them. When including such commentary in my study, I make sure to leave out other personal information that may point to their identity.

In the portion of the interview about religious experiences before college, I asked participants to share what their religious faith was growing up as well as how they practiced religion. I also questioned whether respondents attended religious services or if they celebrated religious holidays. Furthermore, I asked participants to self-assess how important religion was to them. I asked similar questions even if participants indicated that they did not identify with a religion. To elaborate, I still asked if they celebrated any religious holidays, even if it was for secular purposes. Moreover, I asked about the social context of not being religious while growing up and if there were any moments in which participants wished they were religious.

Most of my questions were related to participants' current religious identity. I asked if their religious identity or how they practice religion changed upon coming to college. Furthermore, I asked those who said they are religious to specify how they engage in their religion while in college. I also asked participants whether they are involved in any religious clubs. Additionally, I asked participants to share what they find useful or beneficial about being religious (or not being religious for nonreligious participants) and what they think they would miss out on if they were not religious (or were religious for nonreligious participants). Moreover, I asked participants to share how they think their religious background, or lack thereof, influences their approach to academics and studying. Moving in a more social direction, I asked participants to evaluate whether their friends are religious. Lastly, I asked participants if they would describe religion as having a positive, negative, or neutral force in their lives.

To transition to the academic dimension of my interview, I asked participants to share their GPAs. I also asked participants how many hours a day they typically spend studying. Furthermore, I inquired whether participants experience stress related to schoolwork. In a follow-up question, I asked participants how they cope with stress. I asked if participants had anything else they would like to share before I concluded the interview.

Preliminary Data Analysis

Univariate Frequency Distributions

Table 3 reflects the frequencies of variables that I analyze in my study. I do not analyze the responses to every question asked in the survey, so Table 3 only displays selected variables.

Additionally, Table 3 lists the mean, median, and standard deviation for my independent variables, DUREL and IRMS scores, and my dependent variable, GPA.

Table 3. Characteristics of the Sample: Univariate Distributions

	Frequency	Percent
DEMOGRAPHICS		
Sex		
Male	26	23.4
Female	85	76.6
Other	0	0.0
Total	111	100.0
Gender		
Male	27	24.3
Female	78	70.3
Non-binary	6	5.4
Other	0	0.0
Total	111	100.0
Sexual Orientation		
Heterosexual	68	61.3
Gay	6	5.4
Lesbian	7	6.3
Bisexual	21	18.9
Queer	6	5.4
Asexual	2	1.8
Pansexual	1	0.9
Other	0	0.0
Total	111	100.0
Hispanic, Latino, or Spanish Origin		
Yes	17	15.3
No	94	84.7
Total	111	100.0
Race		
American Indian/Alaskan Native	0	0.0
Asian	34	30.6
Black/African American	9	8.1
Native Hawaiian/Other Pacific Islander	0	0.0
White	61	55.0
Two or more races	6	5.4
Other	1	0.9
Total	111	100.0

Table 3. Univariate Distributions (continued)

	Frequency	Percent
DEMOGRAPHICS (continued)		
Year in College		
First year	17	15.3
Second year	25	22.5
Third year	38	34.2
Fourth year	30	27.0
Other	1	0.9
Total	111	100.0
Current School within Emory		
Emory College of Arts and Sciences	95	85.6
Goizueta Business School	8	7.2
Nell Hodgson Woodruff School of Nursing	3	2.7
Oxford College	5	4.5
Total	111	100.0
Receive Need-Based Aid		
Yes	49	44.1
No	59	53.2
Not sure	3	2.7
Total	111	100.0
Family's Social Class		
Lower class	10	9.0
Working class	18	16.2
Middle class	46	41.4
Upper class	35	31.5
Not sure	2	1.8
Total	111	100.0
First-Generation College Student		
Yes	17	15.3
No	94	84.7
Not sure	0	0.0
Total	111	100.0

Table 3. Univariate Distributions (continued)

	Frequency	Percent
RELIGION		
Religion Raised		
Protestant	28	25.2
Catholic	19	17.1
Jewish	18	16.2
Muslim	4	3.6
Buddhist	3	2.7
Hindu	2	1.8
None	27	24.3
Other	10	9.0
Total	111	100.0
Current Religious Preference		
Protestant	20	18.0
Catholic	13	11.7
Jewish	19	17.1
Muslim	4	3.6
Buddhist	3	2.7
Hindu	2	1.8
None	40	36.0
Other	10	9.0
Total	111	100.0
Number of Religious, Faith, or Spiritual Organizations Involved with on Campus		
0	64	57.7
1	29	26.1
2	11	9.9
3	4	3.6
4 or more	3	2.7
Total	111	100.0
Friends with Same Religious Beliefs		
100%	1	0.9
75% to 99%	16	14.4
50% to 74%	23	20.7
25% to 49%	30	27.0
1% to 24%	35	31.5
0%	6	5.4
Total	111	100.0

Table 3. Univariate Distributions (continued)

	Frequency	Percent
RELIGION (continued)		
Friends Who Are Religious		
100%	2	1.8
75% to 99%	10	9.0
50% to 74%	28	25.2
25% to 49%	35	31.5
1% to 24%	32	28.8
0%	4	3.6
Total	111	100.0
Consider Themself Religious		
Strongly disagree	25	22.5
Somewhat disagree	21	18.9
Neither agree nor disagree	10	9.0
Somewhat agree	32	28.8
Strongly agree	23	20.7
Total	111	100.0
ACADEMIC EXPERIENCE		
Finds Coursework at Emory Challenging		
Strongly disagree	0	0.0
Somewhat disagree	12	10.8
Neither agree nor disagree	7	6.3
Somewhat agree	60	54.1
Strongly agree	32	28.8
Total	111	100.0
RELIGIOSITY INDICES		
Duke University Religion Index (DUREL)		
Mean	12.9	
Median	12.0	
Standard Deviation	6.66	
Intrinsic Religious Motivation Scale (IRMS)		
Mean	25.05	
Median	24.0	
Standard Deviation	10.68	

Table 3. Univariate Distributions (continued)

		Frequency	Percent
ACADEMIC PERFORMANCE			
GPA			
Mean	3.8		
Median	3.87		
Standard Deviation	0.26		

Demographic Frequencies

In terms of both sex and gender, my sample lacks male respondents. Only 23.4% of respondents were assigned male at birth, and only 24.3% of respondents currently identify as male. In contrast, sexual minorities are well represented, with 38.7% of my sample not identifying as heterosexual. Respondents who are of Hispanic, Latino, or Spanish origin are modestly represented, at 15.3%. In terms of race, my sample includes mostly white respondents, at 55%. Asian individuals are fairly represented, with just under one in three respondents identifying as Asian. However, there are not many Black/African American respondents, as only 8.1% of respondents identify as Black/African American.

Considering that Emory is a four-year institution for undergraduates, it is reasonable to expect first-years, second-years, third-years, and fourth-years to each represent roughly 25% of Emory's total undergraduate population. Excluding the one fifth-year respondent, 15.5% of respondents are first-years, 22.7% are second-years, 34.5% are third-years, and 27.3% are fourth-years. Thus, first-years are likely underrepresented and third-years are likely overrepresented in my sample. Additionally, 85.6% of respondents are enrolled in Emory College of Arts and Sciences, 7.2% in Goizueta Business School, 2.7% in Nell Hodgson Woodruff School of Nursing, and 4.5% in Oxford College. Therefore, there is minimal representation of students from Oxford College, the business school, or the nursing school.

My study includes a sizable number of students who receive need-based financial aid. Excluding the three unsure respondents, 45.4% of my sample receives need-based financial aid. Furthermore, the plurality of respondents are middle class. Excluding the two respondents who are unsure of their social class, 42.2% of respondents indicated that they come from a middle-class background. Less than one in 10 respondents come from lower-class families, so they lack representation in my study. My study also had a modest number of first-generation college students, with 15.3% of respondents holding this identity.

Religion Frequencies

Respondents were raised with many different religious backgrounds. The plurality of respondents were raised Protestant, at 25.2%. This is closely followed by respondents who were raised without a religion, at 24.3%. Additionally, 17.1% of respondents were raised Catholic and 16.2% were raised Jewish. However, not many respondents were raised Muslim, Buddhist, or Hindu, as only 8.1% of respondents were raised with one of these religions. Regarding current religious identity, the plurality of respondents are nonreligious, at 36%. Notably, 27 respondents indicated that they were raised nonreligious, but 40 respondents currently identify as nonreligious, which is a 48.2% increase. Additionally, 18% of my respondents are Protestant, 17.1% are Jewish, and 11.7% are Catholic. As with religion raised, only 8.1% of respondents currently identify as Hindu, Muslim, or Buddhist, so they are underrepresented in my study.

Furthermore, most respondents are not involved in any religious organizations on campus, as only 42.3% of respondents participate in such clubs. In terms of respondents' social networks, 63.9% of respondents indicated that under 50% of their friends have the same religious beliefs as themselves. Likewise, 63.9% of respondents reported that most of their friends are not

religious. Moreover, the plurality of respondents agree with the statement, “I consider myself to be a religious person.” Specifically, 49.5% of respondents consider themselves religious, while 41.4% of respondents disagree with the statement.

Academic Experience Frequencies

The vast majority of respondents, specifically 82.9%, agree with the statement, “I find my coursework so far at Emory to be challenging.” In stark contrast, just 10.8% “somewhat disagree” with the statement. No respondents indicated “strongly disagree.”

Central Tendencies of Religiosity Indices

Figure 1. DUREL Score Histogram

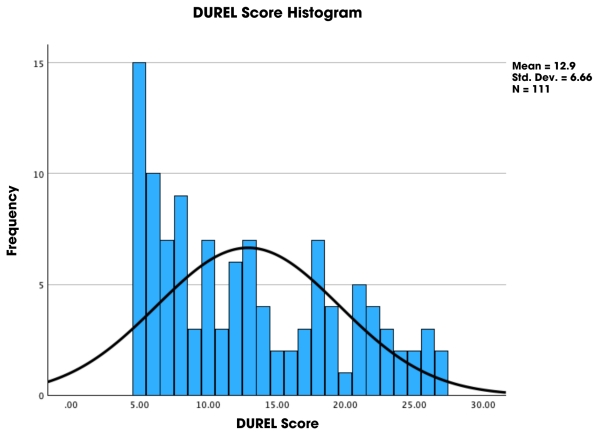
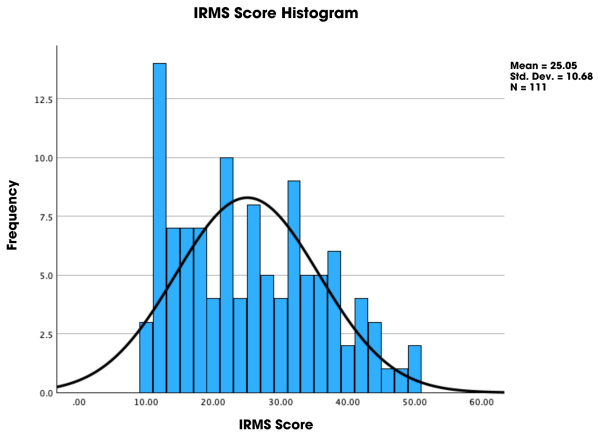


Figure 2. IRMS Score Histogram

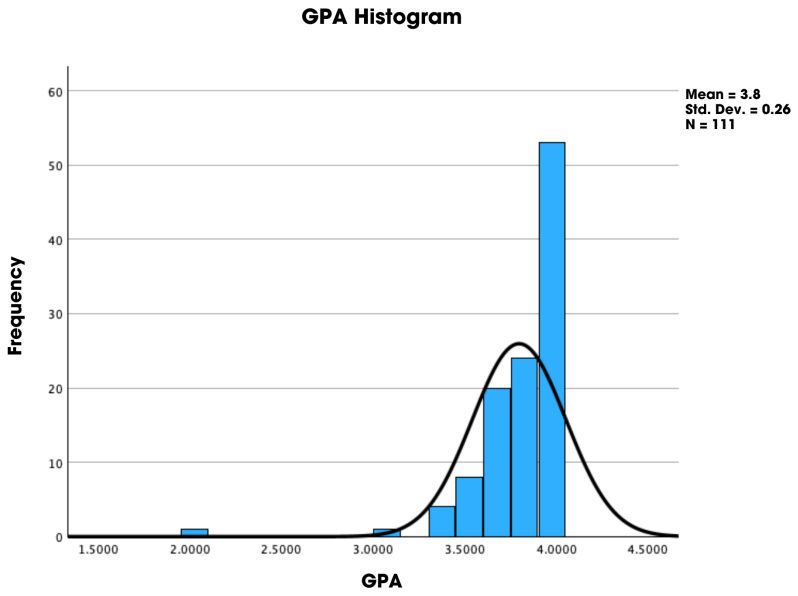


Respondents’ mean score on the DUREL is 12.9 points, with a standard deviation of 6.66 points. Additionally, the median score is 12 points. Considering that the DUREL is scored out of 27 points, these numbers suggest that the sample has low levels of religiosity. This is reflected in Figure 1, as the histogram is right skewed.

Similar trends apply to the IRMS. Respondents' mean score on the IRMS is 25.05 points, with a standard deviation of 10.68 points. Furthermore, the median score is 24 points. Like Figure 1, Figure 2 also depicts a right-skewed histogram, suggesting that the sample has low levels of religiosity.

Central Tendencies of GPA

Figure 3. GPA Histogram



Respondents' mean GPA is 3.8, with a standard deviation of 0.26. The median GPA is 3.87. Therefore, the average GPA is relatively high, as indicated by Figure 3, which displays a left-skewed histogram. Figure 3 also reveals that one respondent has a 1.99 GPA, which is an outlier. I will discuss the outlier more in the Data and Methods section. With this data point excluded, the standard deviation is 0.19. Additionally, there is not much variation in respondents' GPA, with 99.1% of respondents having above a 3.0. Moreover, 82% of respondents have at least a 3.7 and 47.7% of respondents have at least a 3.9.

QUANTITATIVE ANALYSIS

In this section, I will analyze my quantitative data through bivariate mean comparisons and multivariate regression models. The bivariate mean comparisons act as a preliminary check on my hypotheses. However, bivariate analysis does not simultaneously control for all background variables, so I turn to multivariate regression to see which background variables are most important for explaining variation in academic performance.

Bivariate Mean Comparisons

In this subsection, I will analyze the mean DUREL scores, IRMS scores, and GPA for my background variables. These data are reflected in Table 4. As previously stated, one survey respondent reported a 1.99 GPA, which is an outlier. My bivariate analysis includes the outlier. Therefore, I will note when the 1.99 GPA drastically lowers a response group's mean GPA. Additionally, as described in the Data and Methods section, Table 3 displays the frequency distributions for many of the survey questions. However, not all of these questions are background variables. Therefore, my bivariate analysis is more selective than the univariate analysis.

Table 4. Bivariate Distributions

	Frequency	Mean DUREL Score	Mean IRMS Score	Mean GPA
DEMOGRAPHICS				
Sex				
Male	26	13.23	26.31	3.79
Female	85	12.8	24.67	3.8
Gender				
Male	27	13.04	25.89	3.79
Female	78	13.38	25.4	3.79
Non-binary	6	6.0	16.83	3.93
Sexual Orientation				
Heterosexual	68	15.37	28.88	3.76
Gay	6	10.67	22.67	3.88
Lesbian	7	9.14	17.86	3.83
Bisexual	21	8.9	19.48	3.85
Queer	6	9.33	18.17	3.85
Asexual	2	5.5	14.0	3.77
Pansexual	1	5.0	10.0	4.0
Hispanic, Latino, or Spanish Origin				
Yes	17	14.06	26.18	3.7
No	94	12.69	24.85	3.81
Race				
Asian	34	13.53	26.65	3.75
Black/African American	9	18.22	33.0	3.8
White	61	11.9	23.46	3.84
Two or more races	6	12.67	22.83	3.7
Other	1	6.0	10.0	3.08
Year in College				
First year	17	16.12	28.06	3.87
Second year	25	11.52	24.0	3.81
Third Year	38	13.34	25.34	3.69
Fourth Year	30	11.8	23.97	3.88
Other	1	9.0	22.0	3.67

Table 4. Bivariate Distributions (continued)

	Frequency	Mean DUREL Score	Mean IRMS Score	Mean GPA
DEMOGRAPHICS (continued)				
Receive Need-Based Aid				
Yes	49	14.59	27.55	3.75
No	59	11.22	22.42	3.84
Not sure	3	18.33	36.0	3.74
Family's Social Class				
Lower class	10	14.5	28.0	3.71
Working class	18	12.72	24.28	3.8
Middle class	46	13.28	25.76	3.82
Upper class	35	12.17	23.71	3.79
Not sure	2	10.5	24.5	3.65
First Generation College Student				
Yes	17	14.53	27.12	3.73
No	94	12.61	24.68	3.81
RELIGION				
Religion Raised				
Protestant	28	16.57	31.25	3.84
Catholic	19	13.53	25.84	3.75
Jewish	18	12.61	23.22	3.85
Muslim	4	18.25	35.25	3.32
Buddhist	3	9.0	18.67	3.72
Hindu	2	15.5	30.5	3.75
None	27	7.85	17.19	3.86
Other	10	14.1	27.5	3.72
Current Religious Preference				
Protestant	20	20.25	37.5	3.85
Catholic	13	14.69	28.92	3.79
Jewish	19	13.58	24.79	3.81
Muslim	4	18.25	35.25	3.32
Buddhist	3	12.67	22.33	3.7
Hindu	2	15.5	30.5	3.75
None	38	6.95	15.21	3.84
Other	12	14.33	28.08	3.76

Table 4. Bivariate Distributions (continued)

	Frequency	Mean DUREL Score	Mean IRMS Score	Mean GPA
RELIGION (continued)				
Friends with Same Religious Beliefs				
100%	1	5.0	15.0	3.9
75% to 99%	16	11.75	23.31	3.77
50% to 74%	23	13.0	24.13	3.72
25% to 49%	30	12.53	24.97	3.82
1% to 24%	35	14.03	27.23	3.81
0%	6	12.17	22.67	3.91
Friends Who Are Religious				
100%	2	16.0	31.0	3.9
75% to 99%	10	11.6	21.9	3.73
50% to 74%	28	15.39	29.75	3.83
25% to 49%	35	14.0	27.14	3.75
1% to 24%	32	10.56	20.59	3.82
0%	4	6.25	14.5	3.94
TOTAL				
	111	12.9	25.05	3.8

Demographic Variables

Sex and Gender

Respondents assigned male at birth have higher mean DUREL and IRMS scores than respondents assigned female at birth. These results contradict my hypothesis that respondents assigned female at birth have a higher level of religiosity than respondents assigned male at birth. Regarding gender, men have a lower mean DUREL score but a higher mean IRMS score than women. Notably, non-binary respondents tend to express very low levels of religiosity, as their mean DUREL and IRMS scores are much lower than those of male and female respondents. However, the validity of this finding might be limited by the small sample size of six non-binary

respondents. These findings partially support my hypothesis that female respondents will have higher religiosity scores than male respondents. Additionally, these results align with my expectation that non-binary respondents have low religiosity levels.

Respondents who were assigned male at birth have a very similar mean GPA, 3.79, to respondents who were assigned female at birth, 3.8. Likewise, both male-identifying and female-identifying respondents have a mean GPA of 3.79. Non-binary respondents have a much higher mean GPA of 3.93. As previously noted, I do not have hypotheses on how sex and gender are correlated with academic performance due to inconclusive findings in the literature review. However, these results counter my expectation that non-binary respondents have weak academic performance.

Sexual Orientation

Heterosexual respondents have higher mean DUREL and IRMS scores than every sexual minority group assessed in the survey. Thus, sexual minorities tend to exhibit very low levels of religiosity. This supports my hypothesis that heterosexual respondents have higher DUREL and IRMS scores than non-heterosexual respondents.

Heterosexual respondents have a mean GPA of 3.76, which is lower than the mean GPA of each non-heterosexual group. Furthermore, when all sexual minority groups are consolidated into one category, their mean GPA is 3.85, which is noticeably higher than heterosexual respondents' mean GPA. Even with the 1.99 GPA outlier excluded from the dataset, heterosexual respondents' mean GPA is only 3.79. These data suggest that heterosexual respondents tend to have worse academic performance than sexual minorities, which contradicts my hypothesis.

Race and Hispanic Origin

Black/African American respondents indicated the greatest level of religiosity. Aside from the one respondent who indicated "other" for race, white respondents have the lowest religiosity levels. Furthermore, those who are of Hispanic, Latino, or Spanish origin tend to be slightly more religious than those who do not share that background. These findings support my hypothesis that Black/African American respondents have the highest religiosity scores. Likewise, these results align with my hypothesis that respondents of Hispanic, Latino, or Spanish origin have higher religiosity scores than people who do not share that background.

White respondents have the highest mean GPA at 3.84, followed by Black/African American respondents at 3.8. Aside from the one "other" respondent who indicated a 3.08 GPA, those who selected "two or more races" have the lowest mean GPA at 3.7. Asian respondents followed with a mean GPA of 3.75. It is important to note that the dataset only includes six respondents with two or more races and nine Black/African American respondents. These low frequencies limit the validity of these groups' mean GPAs. Furthermore, the outlier respondent with a 1.99 GPA is Asian. With their GPA excluded, Asian respondents' mean GPA rises to 3.81, making Asians have the second highest mean GPA. White respondents' stronger academic performance is further discernable when consolidating all racial minority respondents into a single group. With this consolidation, non-white respondents' mean GPA is 3.74, which is pronouncedly lower than white respondents' mean GPA of 3.84. These results support my hypothesis that white respondents have the strongest academic performance.

Furthermore, Hispanic, Latino, or Spanish respondents have a mean GPA of 3.7, which is lower than the mean GPA of 3.81 among respondents who do not share that background. This

finding aligns with my hypothesis that respondents of Hispanic, Latino, or Spanish origin have weaker academic performance than respondents who do not share that background.

Year in College

Excluding the fifth-year respondent, second-years have the lowest mean DUREL score, but fourth-years have the lowest IRMS score. In contrast, first-years have the highest mean DUREL and IRMS scores. These findings indicate that first-years tend to have the highest religiosity levels. I do not have a hypothesis on this relationship due to a lack of literature on the topic. As I described in the Introduction section, college is often viewed as a secularizing force. Through this lens, it is logical that first-years have the highest mean DUREL and IRMS scores. However, then it does not make sense for second-years and fourth-years to have very similar mean DUREL and IRMS scores.

Aside from the fifth-year respondent, third-years have the lowest mean GPA at 3.69. With the outlier excluded, third-years still have the lowest mean GPA at 3.74. Fourth-years have the highest mean GPA at 3.88, which is slightly greater than first-years' mean GPA of 3.87. Second-years' mean GPA is 3.81. Thus, respondents in their first year or fourth year tend to have higher GPAs than respondents in their second year and third year. I do not have a hypothesis on the relationship between year in college and GPA due to a lack of literature on the topic. However, it makes sense for fourth-years to have the strongest academic performance because they have the most number of classes contributing to their GPA, which may minimize the effect of any low outlier grade they received. It also makes sense for first-years to have the second-highest mean GPA because they tend to take introductory-level courses, which are often easier.

Financial Aid

Respondents who receive need-based financial aid have greater mean DUREL and IRMS scores than respondents who do not receive need-based financial aid. These results suggest that those receiving need-based financial aid tend to be more religious than those who do not receive such aid, which supports my hypothesis.

Respondents who do not receive need-based financial aid have a mean GPA of 3.84, which is higher than the mean GPA of 3.75 among respondents who do receive need-based financial aid. Thus, those who do not receive need-based financial aid tend to have stronger academic performance than those who do receive such aid, which supports my hypothesis.

Family's Subjective Social Class

Lower-class respondents have the highest mean DUREL and IRMS scores. However, the sample only includes 10 lower-class respondents, which may impact the validity of this finding. Middle-class respondents have the second-highest mean DUREL and IRMS scores, followed by working-class respondents. Upper-class respondents have the lowest mean DUREL and IRMS scores. These results indicate that lower-class respondents tend to have higher religiosity scores than respondents from higher social classes, which aligns with my hypothesis.

Lower-class and upper-class respondents have average GPAs lower than the overall mean, while working-class and middle-class respondents have average GPAs higher than the overall mean. Specifically, respondents who come from lower-class families have the lowest mean GPA of 3.71. Middle-class respondents have the highest mean GPA of 3.82. In fact, with the outlier who has a 1.99 GPA excluded from the dataset, middle-class respondents' mean GPA rises to 3.86. Working-class and upper-class respondents' mean GPAs are not far off, with the

former group's mean GPA being 3.8 and the latter's being 3.79. These means reflect that lower-class respondents tend to have weaker academic performance than respondents of higher social class groups, which aligns with my hypothesis.

First-Generation College Student

First-generation college students have higher mean DUREL and IRMS scores than respondents who are not first-generation college students, suggesting that first-generation college students tend to have higher levels of religiosity. As previously stated, there is a severe lack of literature on how being a first-generation college student relates to religiosity, so I do not have a hypothesis on this relationship. However, as noted in the literature review, first-generation college students tend to come from lower-income backgrounds, and lower-class respondents tend to have higher mean DUREL and IRMS scores. Therefore, it is reasonable that first-generation college students have greater religiosity scores.

First-generation college students have a mean GPA of 3.73, and respondents who are not first-generation college students have a mean GPA of 3.81. This indicates that respondents who are first-generation college students tend to have weaker academic performance, which aligns with my hypothesis.

Religion

Religion Raised

Respondents who were raised Protestant, Catholic, Muslim, Hindu, or "other" have mean DUREL and IRMS scores greater than the overall means, while Jewish, Buddhist, and nonreligious respondents' mean DUREL and IRMS scores are below the overall means. Muslim-

raised respondents indicated the highest level of religiosity. However, the dataset only includes four Muslim-raised respondents, potentially interfering with this finding's validity. Respondents who were raised Protestant are the second most religious group. In contrast, respondents raised without a religion expressed the lowest levels of religiosity. Of respondents who did identify with a religion growing up, Buddhist-raised individuals are the least religious. However, the dataset only includes three Buddhist-raised individuals, limiting the validity of this result. As I previously explained, I cannot form a hypothesis on how being raised with a specific religious tradition is associated with religiosity due to a lack of literature on the topic. However, these results align with my expectation that respondents raised without a religion have the lowest religiosity scores.

Respondents who were raised Protestant, Jewish, or without a religious identity have mean GPAs greater than the overall mean, while respondents who were raised Catholic, Muslim, Buddhist, Hindu, or "other" have mean GPAs less than the overall mean. Respondents who were raised without a religious identity have the highest mean GPA, 3.86. Among those raised with a religious background, Jewish-raised respondents have the highest mean GPA, 3.85, which is slightly higher than Protestant-raised respondents' mean GPA of 3.84. In contrast, Muslim-raised respondents have the lowest mean GPA at 3.32. However, this mean is affected by the outlier GPA and the fact that only four Muslims are represented in the dataset. When excluding the outlier, Muslim-raised respondents' mean GPA rises to 3.76. Those who were raised Buddhist or selected "other" share the second lowest mean GPA of 3.72. I do not have a hypothesis on how being raised with a specific religious tradition is correlated with academic performance due to inconclusive findings in the literature review. However, contradicting what I expected, these

findings suggest that respondents raised without a religious background tend to have stronger academic performance than respondents raised with a religious background.

Current Religious Preference

Trends between respondents' current religious preference and mean DUREL and IRMS scores largely align with the previously described trends between religion raised and DUREL and IRMS scores. Protestant, Catholic, Muslim, Hindu, and "other" respondents have mean DUREL and IRMS scores greater than the overall means, and Buddhist and nonreligious respondents have mean DUREL and IRMS scores less than the overall means. One key difference is that Jewish respondents' mean score for the DUREL is above the overall mean, but their mean score for the IRMS is below the overall mean. Another difference between religion raised and current religious preference is that respondents who currently identify as Protestant indicated the highest level of religiosity, not Muslims. However, Muslim respondents were the second most religious group. Similar to the findings for religion raised, respondents who currently identify as nonreligious scored the lowest on the DUREL and IRMS, followed by Buddhist respondents. Like with religion raised, I do not have a hypothesis on whether respondents of a certain faith have higher DUREL and IRMS scores than respondents of a different faith. Nevertheless, I anticipated that nonreligious respondents would have the lowest mean scores on the DUREL and IRMS, which these findings support.

Like with religion raised, respondents who are currently Protestant, Jewish, or who do not identify with a religion have mean GPAs greater than the overall mean, and respondents who are currently Catholic, Muslim, Buddhist, Hindu, or "other" have mean GPAs less than the overall mean. In contrast to trends on GPA and religion raised, Protestants have the highest mean GPA

at 3.85, surpassing the mean GPA of respondents who do not identify with a religion, 3.84, and Jewish respondents, 3.81. Similar to the religion raised mean comparison, Muslim respondents have the lowest mean GPA at 3.32. As previously noted, only four Muslim respondents are included in the dataset, including an outlier with a 1.99 GPA, which lowers Muslim respondents' mean GPA. With the outlier excluded, Muslim respondents' mean GPA increases to 3.76. Apart from Muslims, Buddhists have the lowest mean GPA at 3.7, followed by Hindus, who have a 3.75 mean GPA. These findings may lack validity as the dataset only includes three Buddhists and two Hindus. While I do not have a hypothesis on the relationship between specific faiths and academic performance due to inconclusive findings in the literature, these results contradict my expectation that respondents who do not have a religious faith have the lowest GPA.

Friends with Same Religious Beliefs

Respondents who share the same religious beliefs with at least 50% of their friends have lower mean DUREL and IRMS scores than respondents who share the same religious beliefs with under 50% of their friends. Therefore, people who do not share the same religious beliefs as most of their friends tend to be more religious. As previously mentioned, I do not have a hypothesis for this relationship because I included it for more exploratory purposes.

Respondents who identify at least 50% of their friends as having the same religious beliefs as themselves have a mean GPA of 3.75, while respondents who identify less than 50% of their friends as having the same religious beliefs as themselves have a mean GPA of 3.82. Thus, respondents who have mostly friends with different religious beliefs than themselves tend to have better academic performance. I also do not have a hypothesis for this relationship due to its exploratory nature.

Religious Friends

Respondents who identify less than 50% of their friends as religious have lower mean DUREL and IRMS scores than respondents who identify at least 50% of their friends as religious. This finding is logical when considering the concept of homophily, or the propensity for individuals to affiliate with people similar to themselves. Therefore, it makes sense for people who have mostly religious friends to also have higher levels of religiosity.

Respondents who identify at least 50% of their friends as being religious have a mean GPA of 3.81, and respondents who identify less than 50% of their friends as being religious have a mean GPA of 3.79. Therefore, having mostly religious friends is correlated with slightly better academic performance. Like the other social networks question, I do not have a specific hypothesis for this relationship due to the lack of scholarly precedent on this topic.

Religiosity and Academic Performance Bivariate Correlations

Table 5. Religiosity and Academic Performance Correlations (with Outlier)

		DUREL	IRMS
GPA	**Pearson Correlation**	-0.167	-0.153
	Sig. (2-tailed)	0.080*	0.109

* = significance at $p < 0.10$
N = 111

Table 5 depicts the bivariate correlations between the DUREL and IRMS indices and GPA. The respondent with a 1.99 GPA is included in this table. The correlations reflect a weak negative relationship between the DUREL and GPA as well as the IRMS and GPA, which counters my hypothesis that religiosity and academic performance are positively correlated. However, only the correlation between the DUREL and GPA is marginally statistically

significant at $p < 0.10$, which indicates weak statistical significance. The negative relationship between the IRMS and GPA is not statistically significant at $p < 0.10$.

Table 6. Religiosity and Academic Performance Correlations (without Outlier)

		DUREL	IRMS
GPA	**Pearson Correlation**	-0.094	-0.077
	Sig. (2-tailed)	0.330	0.423

N = 110

Table 6 depicts the same bivariate correlations as Table 5 but with the 1.99 outlier GPA excluded. While Table 6 still indicates negative correlations between the DUREL and IRMS indices and GPA, these correlations are weaker with the outlier excluded. Additionally, neither relationship is statistically significant, reflecting the outlier's key role in this study.

Multivariate Analysis

While the bivariate analysis is a helpful preliminary check on my hypotheses, it does not simultaneously control for all of the background variables. Therefore, I conduct multivariate regression to see which background variables are most important for explaining variation in academic performance. As the correlation in Table 5 indicates, only the DUREL has a marginally significant effect on GPA at the bivariate level ($p = 0.080$). Because the DUREL and IRMS are so highly correlated ($r = 0.920$), both indices cannot be in the same regression equation due to collinearity (i.e., the independent variables are so highly correlated that their particular effects cannot be distinguished). For that reason, the IRMS is excluded from the regression analysis.

Additionally, my bivariate analysis was extensive, so I had to be more selective when deciding which variables to include in my multivariate analysis. Thus, I ran bivariate correlation tests between GPA and background variables. I decided to exclude the following variables due to them not being statistically significantly related to GPA and the lack of scholarly precedent with including such variables in religiosity and academic performance studies: year in college, religion raised, current religious preference, friends with same religious beliefs and friends who are religious. Furthermore, I excluded the gender variable from the multivariate analysis because the dataset only includes six non-binary respondents, which is not enough cases to analyze non-binary respondents separately from respondents who identify as male or female.

The regression results are presented in Table 7. The table shows four different regression equations (Model 1 to Model 4), each one estimated using ordinary least squares regression. The first number shown for each variable is the unstandardized slope, and the second number is the standardized slope. Unstandardized slopes can be compared across equations to assess the stability of effects, while the standardized slopes can be compared within equations. Specifically, the standardized slopes reveal which of the background variables have a stronger effect within a given equation.

Table 7. Multivariate Analysis: The Effects of Religiosity on Academic Performance, Controlling for Background Variables

	Model 1	Model 2	Model 3	Model 4
Religiosity				
DUREL	-0.006*	-0.004	-0.003	-0.003
	-0.167	-0.112	-0.085	-0.066
Sex and Sexuality				
Sex		0.008	0.009	-0.018
(female = 1)		0.013	0.016	-0.029
Sexuality		0.004	0.042	0.047
(other = 1)		0.117	0.080	0.089
Race and Ethnicity				
Race			-0.095*	-0.083
(other = 1)			-0.185	-0.159
Hispanic			-0.125	-0.134*
(yes = 1)			-0.177	-0.190
Socioeconomic Status				
Family Class				-0.043
				-0.156
Financial Aid				-0.083
(yes = 1)				-0.160
First-Generation				-0.012
(yes = 1)				-0.017
Multiple R^2	0.167	0.197	0.304	0.324
Number	111	111	111	106

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The first number shown for each variable is the unstandardized slope; the second number is the standardized slope.

Model 1

The unstandardized slope for the DUREL in Model 1 is -0.006, while the standardized slope is -0.167. Model 1 repeats the correlation matrix shown in Table 5. To reiterate, when not controlling for any background variables, there is a negative relationship between religiosity and academic performance; as DUREL scores increase, GPA decreases. This negative correlation is marginally significant at $p < 0.10$.

Model 2

The regression equation shown in Model 2 builds upon Model 1 by controlling for sex and sexual orientation. Neither sex nor sexual orientation have a statistically significant impact on GPA. However, the regression reflects that individuals assigned female at birth tend to have slightly higher GPAs than people who were not assigned female at birth. This aligns with the bivariate analysis results. Moreover, on average, non-heterosexual individuals have higher GPAs than people who are heterosexual, which echoes what I found in the bivariate analysis but contradicts my hypothesis that heterosexual individuals have stronger academic performance. Additionally, sexual orientation has the strongest effect on GPA in Model 2, as it has the highest standardized slope of 0.117. While not statistically significant, religiosity and academic performance are still negatively correlated when controlling for sex and sexual orientation. This finding contradicts my primary hypothesis.

Model 3

The regression equation shown in Model 3 builds upon Model 2 by controlling for race and whether respondents are of Hispanic, Latino, or Spanish origin. Race is the only variable in

Model 3 that has a marginally significant impact on GPA at $p < 0.10$. Likewise, race has the strongest effect on GPA, as indicated by the standardized slope of -0.185. These results suggest that non-white individuals tend to have lower GPAs than white individuals, which mirrors what I found in the bivariate analysis and supports my hypothesis that white respondents have stronger academic performance. Furthermore, Model 3 reflects that respondents who are of Hispanic, Latino, or Spanish origin tend to have worse GPAs than respondents who do not share that background. This finding also aligns with my bivariate analysis results as well as my hypothesis that people of Hispanic, Latino, or Spanish origin have weaker academic performance. Additionally, the positive relationship between being female and GPA and not being heterosexual and GPA remains not statistically significant in Model 3. Like Model 2, religiosity and academic performance are still negatively correlated when controlling for sex, sexual orientation, race, and Hispanic origin, but the association is not statistically significant.

Model 4

Model 4 builds upon all previous models by controlling for all background variables, including respondents' subjective assessment of their family's social class, whether respondents receive need-based financial aid, and whether respondents are first-generation college students. It is important to clarify that when all background variables are controlled for, the number of cases drops to 106 due to there being five missing cases from the socioeconomic status questions. Moreover, the full set of background variables explains 32.4% of the variation in GPA.

As reflected in Model 4, as one's subjective social class increases, their GPA decreases, although not significantly. Even so, the pattern reveals that people of lower social classes tend to have higher GPAs than people of higher social classes. This does not align with my bivariate

analysis finding that lower-class respondents have the lowest mean GPA. However, this makes sense considering my sample only includes 10 lower-class respondents, compared to 35 upper-class respondents, who have the second lowest mean GPA. Therefore, this finding also contradicts my hypothesis that respondents from lower-class backgrounds have worse academic performance than respondents from higher social classes.

Additionally, Model 4 indicates a negative relationship between receiving need-based financial aid and GPA as well as being a first-generation college student and GPA. These results reproduce the patterns discussed in the bivariate analysis as well as support my hypotheses that respondents who receive need-based financial aid or who are first-generation college students have weaker academic performance. Moreover, of the socioeconomic status variables, receiving need-based financial aid most strongly affects GPA, as its standardized slope is -0.160. While none of the socioeconomic status indicators have significant effects on GPA, the pattern across all three indicators is consistently negative.

It is important to note that being of Hispanic, Latino, or Spanish origin is the only variable in Model 4 that has a marginally significant impact on GPA at $p < 0.10$. Likewise, being of Hispanic, Latino, or Spanish origin has the strongest effect on GPA in Model 4, as suggested by the standardized slope of -0.190. Like in Model 3, this variable is negatively correlated with academic performance. Furthermore, being female has a negative relationship with GPA in Model 4 but has a positive relationship with GPA in the previous model. This change is not unreasonable considering the relationship between being female and GPA is not statistically significant. Similar to the previous models, the DUREL and GPA are still negatively correlated when controlling for all background variables, and this correlation is not statistically significant.

To summarize, religiosity and academic performance have a negative correlation that is marginally significant at $p < 0.10$ when I do not control for any background variables. Being female and not being heterosexual are positively associated with GPA, but not statistically significantly. Race has a marginally significant negative effect on GPA in Model 3, but race has a non-statistically significant negative effect on GPA in Model 4. These correlations suggest that being non-white tends to be correlated with weaker academic performance. Additionally, being of Hispanic, Latino, or Spanish origin has a non-statistically significant negative effect on GPA in Model 3, but it has a marginally significant effect in Model 4. Familial social class, receiving need-based financial aid, and being a first-generation college student do not have statistically significant effects on GPA.

QUALITATIVE FINDINGS

As I explained in the Data and Methods section, I conducted confidential in-depth interviews to add a qualitative dimension to my study. I interviewed 11 participants, who are identified below using pseudonyms. I do not indicate participants' year in college or major, except for noting Miranda's enrollment in Goizueta Business School, to ensure that participants' identities cannot be determined. In this section, I will summarize my interview with each participant and then include a brief reflection and analysis of what the participants shared.

Interview Participant Summaries

Carrie (nonreligious/atheist, 3.82 GPA)

Despite both her parents growing up religious, Carrie has never identified with a religion. The closest she got to organized religion was attending church three or four times over the course of a couple of months when she was about six years old. However, with her and her sister finding church boring, as well as one of her parents currently identifying as nonreligious and the other believing in a higher power but not organized religion, not much was keeping Carrie and her family at church. Although Carrie does not identify with a religion, she celebrated Christmas and Easter growing up. She continues to celebrate Christmas, but her family's celebration of Easter ended shortly after Carrie found out the Easter Bunny was not real. Her family did not discuss the religious context of these holidays. Rather, they celebrated Christmas and Easter for fun.

Carrie currently identifies as an atheist, and she never planned on exploring religion while in college. However, she has more religious friends in college than she did in high school, which she said is partly because many people in her high school were Christian and would judge Carrie for not being religious. Moreover, Carrie explained that being lesbian contributes to her negative perception of religion. While Carrie was not out as a lesbian in high school, she noticed how the judgmental form of Christianity that surrounded her translated into homophobia. Her high school peers would perpetuate homophobia by saying phrases like, "Adam and Eve, not Adam and Steve," which turned Carrie off from religion. Additionally, Carrie's mom, who is Persian, experienced racism from the very devout Christians in their community. "They would preach loving all people and stuff, and then they would turn and not love her," Carrie shared.

By not being religious, Carrie said she has a sense of autonomy: “I’m a lot more willing to do what I want and what I think is right personally as opposed to trying to follow the Bible.” However, she acknowledged that she is likely missing out on a sense of solidarity and hope by not belonging to a faith community. Additionally, Carrie noted that she may feel more worried or uncertain than religious individuals because she does not believe in ideas like God’s plan, which would give her something to fall back on and soothe her during trying times. This also relates to Carrie’s academic experience. Without a religious cornerstone, Carrie said she is forced to acknowledge that things might not work out—that she might not do well on a test or assignment—which contributes to stress. Carrie copes with mild stress through physical activity, such as walking or rock climbing. However, Carrie said she sometimes breaks down in times of extreme stress. To cope, she gives herself a day to be depressed and then tries to move forward.

Kacey (nonreligious, 3.8 GPA)

While Kacey has never identified with a religion, churches were often used as community spaces when she was growing up. For example, some of her art lessons and summer camps were hosted at a church. Additionally, she participated in a church choir, not because she was religious, but because she enjoyed singing. Kacey’s family was never interested in becoming religious because her parents also grew up nonreligious. However, she still celebrated Christmas and Easter. Rather than understanding the religious significance of these holidays, Kacey’s family celebrated them for the fun experience of collecting eggs and receiving presents.

Kacey still identifies as nonreligious, but many of her friends are religious. She discussed beneficial aspects of being religious. “Religion to a lot of people in an academic institution has been something they can lean on and turn to, especially if they’re going through hardships,”

Kacey shared. She elaborated that she and her roommate, who is Muslim, are enrolled in a course together. After completing a challenging exam, Kacey tried to comfort her roommate by saying that everything would be okay and things would get better over time. However, her roommate found it more comforting to speak to somebody who was also Muslim. The Muslim peer tied what they said to the Quran. By adding a religious dimension to the post-exam conversation, the Muslim friend was better able to support and validate Kacey's roommate's feelings.

Kacey also noted that she has a sense of independence by not being religious. She is able to interpret what life means to her without needing to make sure that her beliefs are in line with religious doctrine. However, after one of Kacey's friends brought her to an Asian church group, Kacey realized that she misses out on community by not being religious. She reflected, "The fact that they're able to share such a vulnerable space together through faith was very emotional. I didn't know the feeling—I couldn't explain it—but I could feel it in that space."

Regarding school, Kacey experiences a lot of academic stress. She tries to cope with stress by talking to her friends or her family. At other times, Kacey copes with stress by crying.

Bailey (non-denominational Protestant, 4.0 GPA)

Bailey, who is Black, a first-generation college student, and low-income, describes her religious experience as very individualized. She identifies as a non-denominational Protestant. Growing up, Bailey's praying was "habitual." She prayed in the morning and before bed, in the car, and before eating. Although she prayed frequently, her family did not always go to church because they were comfortable worshiping and holding Bible study in their house. In fact, her family did not join a church until Bailey was in fifth grade. By her last couple of years in high

school, Bailey attended church three to four times a week. Additionally, Bailey's family tried to decentralize the commercialized nature of Christmas when they celebrated the holiday. They referred to the holiday as "Jesus' birthday" and did not emphasize Santa or presents.

Since coming to college, Bailey's practice of Christianity has changed, especially in relation to organized religion because she does not attend church. Bailey feels like she "hit a dead end" because she does not have a religious community in college. She tried joining a club for Black Christians at Emory but struggled to find community there. Consequently, she now focuses more on her own relationship with God and relies less on organized religion. However, one aspect of Bailey's religious life that remains consistent is her engagement in a prayer line. Bailey's days start at 6:00 a.m., when she wakes up to dial a prayer line, which is a commercial telephone number that brings people to a group call. Bailey's mom started to lead the prayer line after the former leader went back to school, and Bailey thinks that one day she will lead the prayer line: "I know exactly what's going to happen when she gets too busy in her life—she's going to pass it to me." The prayer line helps Bailey stay consistent with praying while in college. On days when there are not many prayer requests, people on the call discuss the Bible. After the 30-minute call is over, Bailey goes back to bed until it is time for class. Outside of the prayer line, Bailey sometimes fasts, worships in her room, or listens to gospel music while driving. She also tries to read the Bible, but she often does not have time. She acknowledged how that is not a good excuse and that she should make time to read the Bible.

Additionally, being religious helps Bailey get through her daily life. She believes that God has a plan, so when she experiences unpleasant feelings like sadness or anger, she understands that there is a bigger point to how she is feeling. "It helps me in day-to-day

frustrations. I'll be stuck in traffic and be like, 'Ugh.' Then I'm like, 'Maybe God is saving me from a car accident.' It just helps me get through life," Bailey shared.

Bailey's religiosity helps her in an academic context as well. She described feelings of imposter syndrome while at Emory, questioning whether she belongs at an institution saturated with intelligent peers and professors. She then tells herself, "God didn't bring me this far for me to fail." Her identity as a first-generation, low-income college student contributes to her stress. She knows her family makes sacrifices for her to attend Emory, and she takes out loans to pay tuition. Therefore, she feels like failure is not an option. In times of high stress, Bailey turns to prayer, asking God for grace and mercy. She feels like God comes through every time.

Jordan (nonreligious/agnostic, 3.8)

Although Jordan grew up in a nonreligious family, she still celebrated Easter and Christmas, but in very commercialized ways. Her parents pretended that the Easter Bunny left chocolates around the house for Jordan to find, but they never discussed Easter's religious underpinnings. Likewise, Jordan's family oriented Christmas around Santa coming to town, not Jesus. Reflecting on her childhood, Jordan thinks the most religious experience she had with her family was celebrating one or two nights of Chanukah with her mom's sister-in-law.

Despite growing up in a nonreligious context, when Jordan experienced personal turmoil, she turned to religion. She grew up very poor, and she lost her childhood home in middle school. Her parents also got divorced around that time. Feeling like she did not have a sense of community, Jordan became Baptist in seventh grade. This religious journey, which lasted two years, was completely on her own accord. She independently attended church three times a week, and her parents never went to church with her. In fact, Jordan's parents were not at her

baptism. However, Jordan described her parents as supporting her religious journey. For instance, they agreed to have Jordan attend a private Christian academy. This school provided Jordan with a better community, a smaller student body, and more rigorous courses, all of which Jordan considered to be superior to her public middle school experience. Attending the Christian academy and being religious gave Jordan a sense of belonging: "I felt very connected with the people around me, connected with my faith at the time, because it gave me a reason and obligation to hang out with people, and it gave people reason and obligation to hang out with me." Jordan's Baptist journey ended after she experienced how Christianity can be used to justify homophobia. Jordan developed a crush on a girl, and as a middle school student, she did not know how to process this feeling. Therefore, she went to her pastor for help. "He told me I would burn in hell and that being bisexual was a choice and that anyone who dated someone of the opposite sex was Satan's spawn," Jordan recalled. Subsequently, Jordan told her mom about this conversation, and her mom suggested that Jordan stop going to church, so she stopped.

Now, Jordan said she never wants to be religious again, and she does not want to date somebody who is religious—she is content with being agnostic. However, she still appreciates how ideals of love, companionship, and community are at the heart of Christianity, and she tries to maintain these values while identifying as agnostic. "The doctrine of treat your neighbor with respect and kindness is something that I hold to in my daily life…but it's not necessarily connected with any higher power," Jordan said.

Jordan does not think there is any association between her being agnostic and her academic experience. She cannot think of a day when she was not stressed about academics. To manage this stress, Jordan tries to itemize all her tasks, walk her dog, or talk to her therapist.

Miranda (Catholic, 3.6)

Miranda grew up as a very religious Catholic and actively involved in her faith community. She always went to Sunday mass, said grace before she ate, attended church retreats starting in middle school, and became a teacher for First Communion preparation in high school. Additionally, Miranda celebrates many religious holidays, attending mass for Christmas and Easter as well as observing Lent by not eating meat on Fridays. She also celebrates the Day of the Virgin of Guadalupe every December 12, which is a feast day commemorating the Virgin Mary's appearance in Mexico City in the 16th century. Primarily Mexican Catholics observe this day.

However, Miranda's parents were lenient about the family's faith when she was a young child. Her family became religious following a family problem when Miranda was in middle school. During this time, her parents were brought closer to God and Catholicism and were able to rekindle as a couple. Subsequently, Miranda's parents wanted their family to be more engaged with their Catholic faith. Since her family's religious reawakening, Miranda's parents want her to marry within Catholicism to ensure she will not convert. Likewise, her parents view Catholicism as a family tradition, so Miranda is expected to raise her future children Catholic. Miranda explained that there is also a cultural component to her family's emphasis on Catholicism because a large percentage of Mexicans are Catholic. Despite family expectations, Miranda's boyfriend is not Catholic. Miranda does not intend to lose her Catholic beliefs while dating him, and she thinks his practice of Christianity and her observance of Catholicism can coincide.

Miranda's practice of Catholicism has changed since coming to college. She no longer goes to church on Sundays, but that is because she does not know where to attend mass. She also

has more independence to explore Catholicism on her own terms, as she does not have her parents imposing the religion on her. Like at home, Miranda continues to pray frequently, such as saying grace before bed and when she feels stressed. Additionally, Miranda said that she views God as her friend, someone she can talk to whenever she wants. She finds this perspective beneficial now that she does not go to church frequently because talking to God helps bring her calmness. Thus, Miranda views faith positively. “It’s sad if you don’t believe in nothing because believing in something gives you a sense of comfort when you’re in distress,” Miranda said.

Although Miranda is a proud Catholic, she disagrees with many Catholics’ conservative social and political stances. Specifically, she associates Catholicism with being against abortion and knows many Catholics who voted for Donald Trump. Additionally, Miranda’s home church is not accepting of LGBTQ+ people. “I don’t agree with how in Catholicism we preach to love everybody, but people pick and choose who they love, which is not what God said,” Miranda remarked. Rather than dwelling on the negative aspects of Catholicism, Miranda tries to reorient her focus to her personal relationship with God.

Miranda also shared that she has a strenuous course schedule. Consequently, her GPA, 3.6, is not as high as she would like. Notably, Miranda is enrolled at Goizueta Business School, where classes are graded on a curve. Additionally, Miranda is in a four-year BBA-MPA program, so she is also enrolled in graduate-level accounting courses. To finish these two degrees in four years, Miranda said she needs to enroll in at least 20 credit hours a semester. This academic stress is compounded by her being a first-generation, low-income college student because she needs to work to afford tuition. As a result, she does not have much time to study. Miranda’s low-income background also contributes to her academic stress because she is

constantly worried about financial stability. Therefore, she puts pressure on herself to do well in classes and find an internship so she can have a well-paying job after college.

To alleviate some of these concerns, Miranda uses her classes and professors as a resource. For example, she enrolled in a personal finance class and discussed her financial situation with her professor, who gave Miranda advice on how to save and invest her money. To cope with stress, Miranda prioritizes completing high-stress tasks first and prays. Additionally, before she goes to sleep, Miranda asks God to give her the ability to learn more in her classes the next day. Miranda also prays before taking tests. She thinks this religious engagement benefits her because she tries to honor her prayers in the classroom by being more attentive.

Lainey (Spiritual, 3.93)

Lainey grew up in a religiously homogeneous community where everyone around her was Catholic or Protestant. In fact, she said she did not meet a Jewish person until coming to Emory, but that is partly because Lainey attended a Catholic school for her primary and secondary education. Lainey went to mass every Tuesday throughout elementary and middle school, and she sometimes went to church with her parents on Sundays. In high school, Lainey had "little stints" where she attended church on her own. Although her parents sent her to a religious school, they never discussed Catholicism at home. Their Christmas and Easter celebrations focused more on the holidays' fun and commercial aspects than on religion. Reflecting on her religious upbringing, Lainey said that Catholicism was not important to her.

Lainey, who now identifies as spiritual, said her practice of religion changed significantly since coming to Emory. She attended a non-denominational Protestant church with two of her friends for a year and a half. "I realized as time went on that I was seeking it more for

community rather than actual personal belief," Lainey reflected. Lainey is also involved in Bread Coffeehouse, which is a campus Christian ministry. She enjoys its community aspect, especially since many of her friends are also involved in Bread Coffeehouse. Although Lainey no longer considers herself Catholic, she thinks she became more spiritual and religious in college. Personal independence allows her to cultivate her own religious practices and belief systems, which facilitates her feeling more attuned to the religious and spiritual elements in her life.

Furthermore, while Lainey does not identify as Buddhist, she practices Buddhist traditions and believes in many Buddhist theologies. She is also a member of the Emory Buddhist Club, often hangs out with the Buddhist monks and nuns on campus, and studied abroad in India to learn more about Tibetan Buddhism. "I have this weird connection with Buddhism—and specifically Tibetans—that I feel like my life has led me to this spot of being very closely intertwined with this community. I feel like it's a karmic connection that I've had in a past life. I don't remember what the genesis was of my relationship with Buddhism, but it's something that has always been true, and it came to fruition when I was at Emory," Lainey shared.

In terms of academics, Lainey views learning through a Buddhist lens: "I view my learning in a holistic and practical way, like how can I grow and develop as a human being and then extend that outwards," Lainey said. Between participating in numerous clubs, working multiple jobs, and taking enough courses to complete a double major, Lainey often experiences stress. To cope, she likes to exercise, journal, or meditate, with the latter being particularly helpful. "Meditation pushes me to center myself and reevaluate what's important to me, but also what's important in this world and in this life. It helps me really tap into what I'm experiencing in my body, what I'm feeling in my body, which helps me cope with stress," Lainey said.

Morgan (nonreligious/atheist, 3.9)

Morgan, who identifies as transgender and non-binary, grew up as a reform Jew, but they started to be an atheist when they were 10 years old. Still, they went to Sunday school every week to learn Hebrew and learn the Torah. They did not regularly attend synagogue, primarily going for Rosh Hashanah, Yom Kippur, and Passover. However, Morgan did not feel connected to Judaism. "I liked being Jewish in the sense that it made me feel special, but I didn't really think of it as fundamental to my belief system," Morgan said. They elaborated that they grew up in the Southwest and that they only had a few Jewish peers, so being Jewish was like being in an "underground club." Additionally, Morgan's parents conveyed the importance of being Jewish in a cultural rather than devout way—they emphasized the significance of being Jewish to keep the religion and culture going for future generations, not the importance of God.

Discussing their switch to atheism when they were 10, Morgan described themself as being a very "online" child. This exposed them to other people who were questioning religion and promoting atheism. Moreover, their older brothers also became atheists, further legitimizing atheism to Morgan. At the time, Morgan was sold by the argument that there is not a scientific explanation for God's existence. Now, however, Morgan does not believe in God because they think such belief will not tangibly benefit their life. "I would much prefer to be reliant on myself and the people in my life rather than an abstract, omniscient force in the universe," Morgan said.

Despite identifying as an atheist, Morgan still had a bat mitzvah when they were 13. Morgan did not want to have a bat mitzvah since it required a lot of work, but their parents forced them because they viewed a bat mitzvah as an important coming-of-age ritual. Although Morgan did not see the point in having a bat mitzvah, they were motivated by the idea of presents and money. "I thought it was funny that I was getting up on stage and talking about my

love for God and my Jewish beliefs when I was barely raised Jewish and I didn't believe in God," Morgan said.

Morgan still identifies as an atheist. Similar to growing up, they never attend synagogue and are not involved in Jewish clubs on campus. Appreciative of their Ashkenazi Jewish ethnicity, they initially contemplated becoming more religious: "I had a craving for community, and I felt hanging out with other Jewish people might be a shorthand to making friends," Morgan said. After some "soul searching," Morgan realized that they do not agree with how religion enforces restrictions on sex and gluttony, and they were no longer interested in campus religious life. They still somewhat regret not having a religious community at Emory, but they said they would feel like an outsider by being in Jewish spaces as someone who does not believe in Judaism.

However, Morgan finds a beneficial side to not being religious. It makes them feel a sense of self-reliance rather than placing fate in God's hands, which they think is irresponsible. Moreover, Morgan views atheism as very compatible with queerness because "there's nothing in atheism that says you can't be queer, and there's a lot in the Bible that would be against several aspects of queer identity." While Morgan found reform Judaism relatively queer-accepting, they still think it is easier to be a queer atheist than a queer reform Jew.

Morgan does not think being an atheist has any influence on their academic performance. They keep a hyper-organized weekly schedule, which they map out every Sunday. Nevertheless, they are constantly stressed about schoolwork. To cope, Morgan tries to "brute-force logic" their way through stress, and if they are experiencing high anxiety, they talk to their therapist.

Maren (non-denominational Protestant, 3.92)

For most of her childhood and adolescent years, Maren attended a conservative evangelical church primarily made up of Chinese immigrants. Consequently, Maren grew up religiously conservative, attending church services and Sunday school classes every week. Her parents even allocated time for family devotion. Moreover, Maren's parents did not allow her to celebrate Halloween when she was young due to its pagan nature. She remembers that one year her mom bought a chemistry set for her to do instead of trick-or-treating. By middle school, Maren's parents were less religiously conservative, and she was allowed to celebrate Halloween. In terms of Christian holidays, Christmas was most important to Maren's family, followed by Easter.

Maren disagreed with the evangelical church's conservative nature, noting the prominence of sexism at the church. This stood out to Maren because she comes from a female-dominant family, where her dad is the only man in the household. "It was very interesting going from a family culture of that to the church, where they're like, 'Let's have the men handle this.' My mom is like, 'Why? I can do it,'" Maren shared.

When Maren was in ninth grade, she started looking for a less conservative church. She did not find one she liked until the following year. She thoroughly enjoyed her experience at the new church, exclaiming, "I didn't know that church was something that I didn't have to drag my feet to." She initially attended the new church alone, as her parents were still lay leaders and Sunday school teachers at the evangelical church. However, her parents' involvement with the evangelical church eventually drained them, and they announced they would take a sabbatical from that church. During the sabbatical, they attended the church Maren joined, and after the sabbatical was over, her parents decided that they would not go back to the evangelical church.

Maren still identifies as a very religious Protestant, attending church services every Sunday. However, she now considers herself a non-denominational Protestant. She attributes Bread Coffeehouse to broadening her view of Christianity. Bread Coffeehouse is one of Maren's favorite places at Emory because it is very accepting. In fact, somebody on the Bread Coffeehouse leadership team is Hindu. "That's a stark contrast to the evangelical upbringing I had because there were times when people…would bring in friends who are non-believers, and I have heard the pastors essentially say, 'Come back when you're ready to be Christian,' which is very aggressive and exclusive. To see bread as the antithesis to what I grew up in, it's changed a lot of what I think," Maren said. Furthermore, Maren has continued to shed harmful aspects of her conservative religious upbringing in college. Growing up, she was told that gay marriage is wrong, but she now knows that is not true. Being close friends with someone who is Christian and gay contributed to Maren coming to this understanding.

Discussing her academic experiences, Maren said she gets so stressed out by assessments that it leads to a paralysis-like feeling right before an exam. In response, she tells herself, "I put in my best, and the rest is up to God, and I'm just going to let go now." Maren added, "The most reassuring thing I can tell myself is that God's plan has accounted for my stupidity." Additionally, in high school, she began to mentally sing hymns at the start of an exam to help recenter herself and calm her down. Maren continues to do this during some college exams.

Kelsea (Hindu, 3.8)

Kelsea, who grew up Hindu, moved three times during childhood. Coincidentally, each time she moved, she entered a community with a larger Hindu population. She had a very small Hindu community in Pennsylvania, limiting her ability to explore her religion. Kelsea moved to

Texas when she was in elementary school, which had a larger Hindu population. In Texas, she was able to join Hindu organizations and take Sanskrit classes. Kelsea moved to Georgia in high school, which allowed her and her family to become more religious due to them being near a much larger Hindu community than they had in Texas.

Kelsea's practice of Hinduism has changed since coming to college. For example, she said she does not believe that pujas, which involve worshiping or making an offering to a deity, are an essential part of Hinduism, so she only does pujas when she is home. Additionally, Kelsea's parents are not keen on her fasting, so she fasts more in college now that she is away from home. On campus, Kelsea is mildly involved in the Hindu Student Association, but she normally does not attend their general body meetings. However, every Wednesday she attends a meeting hosted by Emory's Hindu chaplain, where they discuss topics like current events, being Desi-American or Hindu, and how Hinduism has evolved.

Although Kelsea said she does not incorporate Hinduism much into her daily life, she finds it helpful in response to stress, which often arises due to schoolwork. To elaborate, Hinduism helps Kelsea find inner peace—she views whatever happens to her as a product of her past actions and that her future is defined by her present choices. Furthermore, Hinduism grounds Kelsea, so she views religion as something to fall back on when she feels overwhelmed. Kelsea also speaks to the Hindu chaplain in times of stress.

Luke (Muslim, 3.96)

Islam was very important to Luke growing up. He attended services on Fridays and went to an Islamic elementary school. Additionally, Luke said that being Muslim in the United States led to his parents having a "survival instinct," especially because they were undocumented

immigrants when he was growing up. “They emphasized working hard, doing the best you can at school, and proving yourself as an ambassador of being a Muslim,” Luke shared.

Luke still identifies as a Sunni Muslim, but he now also practices Sufism, which is a change since coming to college. According to Luke, Sufi is a more mystical practice of Islam that incorporates music, art, and poetry in addition to prayer. He attributes this change to learning more about South Asian history in classes at Emory. Additionally, as a gay Muslim, Luke feels that Sufism is a more accepting and liberating way to practice Islam.

At Emory, Luke continues to attend Friday prayers and started to attend a Qawwali group. He described Qawwali as Sufi music and a form of prayer. Luke also used to be a part of the Muslim Student Association (MSA), but he had a turbulent experience in the club. Luke noted many problems within MSA, including that Shia Muslim students feel like they have been pushed out of the organization and that there are a lot of Sunni “hardliners” that prevent MSA from hosting certain events because it goes against their beliefs. Luke said he was kicked off the organization’s board because he advocated for the few Shia students and because he brought his then-boyfriend to an Iftar, which is the fast-breaking meal during Ramadan. He was initially upset that he was kicked out of MSA for being gay, but he then turned to the Qawwali group.

In terms of academics, Luke said that many people get stressed by looking at his schedule because he is very busy, but he does not think he is too busy. Religion helps Luke with time management because he knows he needs to make time for certain religious commitments. For example, Luke tries to do Islam’s five daily prayers. Therefore, he wakes up early, prays, and then does homework. He also tries to go to bed right after the last prayer. This provides structure in Luke’s daily life, as he typically wakes up around 6 a.m. and goes to bed around 10 p.m.

Religion also helps Luke cope with academic stress. “You do work, you pray, you hope, but ultimately failure is seen as redirection. It’s God protecting you from something,” Luke said. He finds this belief beneficial because it prevents him from catastrophizing every failure. Additionally, Luke likes to pray or listen to Qawwali music in times of stress. For instance, he does not cram right before exams. Rather, he mentally prepares by saying prayers and trusting that God will help him.

Parker (questioning religious identity, 3.94)

Parker grew up Episcopalian, but religion was much more important to his mom than it was to him. He attended church for Christmas, Easter, and on some other occasions. Parker was also baptized. While Parker was more ambivalent about being Episcopalian, some of his siblings were against the religion. His sister and one of his brothers converted to Catholicism, which is his dad’s religion. Parker did not convert: “If I’m going to be religious, I’m certainly not going to be a Catholic,” he said. Moreover, Parker feels his gay identity does not conflict with being Episcopalian because the Episcopal Church is accepting of LGBTQ+ individuals.

Despite his Episcopalian upbringing, Parker does not know how he would label his current religious identity. At times he feels agnostic, but he also sometimes goes to church. Parker has explored other religious communities while in college for social reasons and personal interests. For example, while he is a quarter Ashkenazi Jewish, Parker goes to Chabad and Jewish services because he likes to support his Jewish friends. Moreover, he has attended an Ismaili place of worship in Atlanta and spoke to Mormon missionaries out of pure interest. Parker also tried attending church when he first came to Emory, but he accidentally attended a Korean church, which made him feel out of place as a white person. He never searched for

another church in Atlanta, but he occasionally goes to his church back home during school breaks.

Additionally, Parker said his friends' religious practices influence his behavior. For example, one of his friends is very Christian and therefore practices abstinence. When Parker is around this friend, he tries to be less promiscuous. Likewise, Parker has a friend who is Muslim and does not drink. Parker drinks less when he hangs out with this friend because they tend to hang out in contexts where alcohol is not present.

Regarding academics, Parker does not study as much as he would like, averaging two hours of studying a day. His study schedule is "spiky," meaning some days he studies multiple hours, but he does not study at all on other days. Furthermore, when Parker experiences school-related stress, he either watches YouTube, orders Uber Eats, or talks to his therapist.

Reflections and Analysis

Participants' Characteristics, Religiosity, and Academic Performance

I interviewed a relatively diverse participant group, representing many different religious experiences and demographic identities. In terms of years in college, two participants are first-years, five are second-years, three are third-years, and one is a fourth-year. Participants' majors reach across multiple disciplines, including the hard sciences, social sciences, humanities, and business. Furthermore, the interview participants grew up in a wide range of religious backgrounds: three nonreligious, two Catholic, one non-denominational Protestant, one evangelical Protestant, one Episcopalian, one Muslim, one Hindu, and one Jewish. Additionally,

four participants currently identify as nonreligious, two non-denominational Protestants, one Catholic, one Muslim, one Hindu, one spiritual, and one who is questioning their religion.

Additionally, four interview participants have a different religious identity now than they had growing up. Lainey, who grew up Catholic, now identifies as spiritual. She also believes in Buddhist theologies, but she does not identify as Buddhist. Morgan grew up Jewish. Although they started to identify as an atheist as a child, they still practiced elements of Judaism. Now, they do not practice Judaism in any form. Maren grew up evangelical Protestant, but due to the conservative nature of evangelicalism and her experiences at Emory, she now identifies as a non-denominational Protestant. Parker grew up Episcopalian, but he is currently questioning his religious identity. Sometimes he attends church, but at other times he thinks he is agnostic.

Identity plays a crucial role in many participants' religious outlooks. Although I did not ask participants about their race or ethnicity, sexual orientation, or socioeconomic class, many participants shared how these identities shape their religiosity or academic experiences. Bailey, Miranda, Maren, and Kelsea all described how their race or ethnicity has influenced their religious experiences. For example, Bailey tried joining a Black Christian club at Emory. Miranda's Mexican ethnicity shapes her religious identity because the strong ties between being Mexican and Catholic make Miranda's family view religion as an integral part of their cultural identity. She also celebrates Mexican-specific Catholic holidays. Likewise, Maren's Chinese ethnicity influenced her childhood religious experience because she belonged to a primarily Chinese immigrant church. Additionally, Kelsea discusses her Desi-American identity during some of her meetings with the Hindu chaplain.

Furthermore, five participants shared how being LGBTQ+ has shaped or currently shapes their religious experiences: Carrie, Jordan, Morgan, Luke, and Parker. All but Parker implied a

negative relationship between being LGBTQ+ and religion. Carrie heard her high school peers use religion to justify homophobia, Jordan stopped being religious after her former pastor was homophobic when she came out as bisexual, Morgan noted a sense of ease by being queer and nonreligious, and Luke said he was forced out of an Emory Muslim student group for being gay. Parker did not have a negative experience being gay in religious contexts because of the Episcopal Church's accepting stance toward LGBTQ+ individuals. Furthermore, Miranda and Maren, who did not share if they identify as LGBTQ+, also noted tensions between being LGBTQ+ and religion. Miranda said that her home church is not accepting of LGBTQ+ people, and Maren was told in evangelical religious settings that gay marriage is wrong.

Additionally, Bailey, Jordan, and Miranda shared how their social class has influenced their religious or academic experiences. Jordan, who grew up very poor, turned to religion partly because she lost her house, engendering a period of uncertainty. Both Bailey and Miranda are first-generation college students. Bailey feels pressure to perform well due to the sacrifices her family makes so she can attend college. She also wants to be a role model for her younger family members so they attend college one day. Miranda faces increased academic stress because her job schedule limits the amount of time she has to study, but she needs to work to afford tuition. Thus, the in-depth interviews reveal that individuals' religiosity and academic performance are more complex than what religious practices they engage in and how much they study. Rather, demographic factors contour individuals' perspectives on religion and academic experiences.

Religiosity and Academic Performance Analysis

Excluding Parker, who is currently questioning whether he is religious, the interview participants' mean GPA is 3.85. Participants who currently identify as nonreligious have a mean

GPA of 3.83, and participants who currently identify as spiritual or religious have a mean GPA of 3.87. Thus, interview participants who identify with a religion or as spiritual tend to have stronger academic performance. Additionally, Bailey and Luke are two of the most religious interview participants because they engage in prayer daily and have a strong conception of God's presence in their lives. Interestingly, Bailey and Luke also have the highest GPAs, as Bailey has a 4.0 and Luke has a 3.96. These results contradict my quantitative findings, which is likely due to the minimal number of interview participants.

Moreover, all participants who currently identify as religious or spiritual use religion as a coping mechanism for academic stress or as part of their test preparation habits. For example, Hinduism helps ground Kelsea when she is overwhelmed, and she feels comfortable using the Hindu chaplain as a resource when she is stressed. Likewise, Lainey thinks about learning through a Buddhist perspective, and she enjoys meditating when she is stressed. Moreover, Bailey, Maren, Luke, and Miranda either pray or think about the power of God to help them persevere through academic stress. Bailey's belief in God's plan helps her cope when she has feelings of imposter syndrome. Similarly, Maren's belief in God's plan helps alleviate some of her pre-test anxieties. In times when anxiety persists, she calms herself by reciting hymns in her head. Like Maren, Luke mentally prepares for exams by saying prayers and believing that God will help him. Listening to Qawwali music also helps Luke when he is stressed. Additionally, Miranda asks God to allow her to learn more in classes and prays before taking a test.

DISCUSSION AND CONCLUSION

My study explored the connections between religiosity and academic performance using both quantitative and qualitative data drawn from Emory University's undergraduate population. The quantitative data suggest that there is a negative correlation between religiosity, measured by DUREL scores, and academic performance, measured by GPA. While this is not a statistically significant relationship when controlling for background variables, the association remains negative. This contradicts my primary hypothesis that religiosity and academic performance are positively correlated.

Discussion

Discussion on Multivariate Analysis

When comparing the unstandardized slopes for the DUREL across the four multivariate regression models, the negative relationship between religiosity and academic performance becomes weaker as I control for more variables. However, it is typical for the relationship between the independent and dependent variables to become weaker in multivariate regressions when more background variables are taken into account. Although the negative association between DUREL scores and GPA is only marginally significant in Model 1, the relationship remains negative throughout all models, reflecting a slight negative association between religiosity and academic performance.

Furthermore, the multivariate regression models suggest that race and ethnicity play a key role in the relationship between religiosity and academic performance. As I described in the

Quantitative Analysis section, race affects GPA marginally significantly at $p < 0.10$ in Model 3, and being of Hispanic, Latino, or Spanish origin affects GPA marginally significantly at $p < 0.10$ in Model 4. As I previously noted, I did not include the IRMS in the multivariate regression due to collinearity concerns. However, multivariate regression using the IRMS instead of the DUREL reveals similar patterns of the race and Hispanic origin variables' marginal statistical significance in affecting GPA. Specifically, in the IRMS multivariate regression, with the same variables controlled for as in Model 3, race and Hispanic origin have marginally significant negative effects on GPA at $p < 0.10$. This further suggests that non-white respondents and respondents of Hispanic, Latino, or Spanish origin tend to have worse academic performance. Like in Model 4 of the DUREL multivariate regression, only the Hispanic origin variable has a statistically significant effect when all background variables are controlled for in the IRMS multivariate regression. Thus, regardless of which religiosity measure is used, the race and Hispanic origin variables have similar marginally significant effects on GPA. Therefore, future research should more comprehensively investigate how race and ethnicity influence the dynamics between religiosity and academic performance.

Currently, most studies look at how race and ethnicity are correlated with religiosity or academic performance in separate studies, but not many studies look at how race and ethnicity influence religiosity and academic performance in a single study. For example, Stevens et al. (2018) discussed how racial discrimination is correlated with impaired academic performance, and Massey and Owens (2013) described how stereotype threat hurts Black and Hispanic students' academic performance. Additionally, Chatters et al. (2009) found that African Americans tend to have greater religious participation than whites, and Billingsley (1999) outlined churches' key role in African American history. Although my study echoes these prior

studies' findings that Black/African American and Hispanic students tend to have worse academic performance than white students and that Black/African American respondents tend to be more religious than other racial groups, future studies should further explore the role race plays in moderating the relationship between religiosity and academic performance.

Moreover, while not statistically significant, it is notable that not being heterosexual is positively correlated with academic performance. As reflected in Model 2, sexual orientation has the highest standardized slope of 0.117, meaning that the sexual orientation variable has the strongest effect on GPA in this model. This finding contradicts multiple studies as well as my hypothesis that being a sexual minority is negatively correlated with academic performance (Mathies et al. 2019; Oswalt and Wyatt 2011). Therefore, the relationship between academic performance and being a sexual minority should be more thoroughly examined in future studies.

Discussion on Unsupported Hypothesis

As previously noted, my primary hypothesis is that religiosity and academic performance are positively correlated. However, my results indicate the opposite; as DUREL scores increase, GPA tends to decrease. While this result contradicts my hypothesis, the context of my dataset must be considered. I included a distinct religiosity indicator in my survey that was not assessed in the DUREL and IRMS indices. Specifically, I asked respondents to rate their agreement, from strongly disagree to strongly agree, with the statement, "I consider myself to be a religious person." A bivariate correlation test between this question and GPA indicates that, on average, the more one agrees with the statement, the lower their GPA. In other words, considering oneself religious is negatively correlated with academic performance. With 10 cases excluded due to respondents indicating "neither agree nor disagree," this relationship is statistically significant at

$p < 0.05$. Thus, a different religiosity indicator also has a negative correlation with academic performance among respondents in my sample, further supporting my primary finding that DUREL scores and GPA are negatively correlated.

My hypothesis is partly based on representative studies that use random sampling and have a larger number of cases, such as Mooney's (2010) study. However, my study is not representative, does not use random sampling, and only has 111 cases. This discrepancy, which I will further discuss in the Limitations subsection, may help explain why my hypothesis is not supported. Additionally, it is important to note that my hypothesis was partly predicated on Horwitz's (2022) study on religiosity and academic performance among high school students. She discussed a symbiotic relationship between school and religious institutions, where schools espouse a hidden curriculum that aligns with values emphasized in religious contexts, such as conscientiousness, self-discipline, and delayed gratification. While these traits may also be helpful in a college context, that was not assessed in my study. Therefore, it is possible that factors that contribute to a positive relationship between religiosity and academic performance among high school students do not apply to college students. Future research should take into consideration college students' personality traits, including conscientiousness, when discussing religiosity and academic performance. Likewise, studies should also evaluate whether colleges have a hidden curriculum that acts in harmony with values individuals learn through religious institutions.

Discussion on Qualitative Findings

The in-depth interview participants described the role religion played in their lives growing up, what their relationship with religion looks like in college, and how they think their

religiosity, or lack thereof, influences their academic experience. Many respondents also detailed how aspects of their identity, such as race, ethnicity, social class, and sexuality, influence their religious and academic experiences. Notably, some participants viewed their race or ethnicity as integral to their religious identity, such as Maren, who used to attend a Chinese immigrant church, and Miranda, who celebrates Mexican-Catholic holidays. Some participants of lower social classes, including Bailey and Miranda, face more academic stress due to internalized pressure to do well in school or having limited time to study because they hold part-time jobs. Additionally, non-heterosexual participants, including Carrie, Jordan, Morgan, and Luke, have had negative experiences with religion.

A major finding from the interviews is that all religious or spiritual participants use religion as a way to cope with stress or prepare before tests. For instance, Kelsea speaks to the Hindu chaplain when she is overwhelmed, Bailey's belief in God's plan helps her cope with feelings of imposter syndrome, and Luke listens to Qawwali music when he is stressed. Moreover, Maren sometimes recites hymns to herself before tests, Miranda prays before tests, and Luke believes God will help him on tests. These qualitative findings suggest that religion interacts with students' academic experiences, legitimizing further exploration into the topic of religiosity and academic performance.

Conclusion

Limitations

Three main limitations of the present study should be emphasized. First, the survey sample was not randomly selected. This limits my ability to generalize results to the larger

Emory undergraduate population, much less to the national population of undergraduate students. Thus, to increase external validity (i.e., confidence in the generalizability of findings), future research on this topic should utilize random sampling from a wider selection of schools across the country. The inferential statistical techniques used in the present study would also be more meaningful when based on a random sample because then the p-values from significance tests would become better indicators of population-level effects.

The second limitation pertains to qualitative data. Unlike survey data, in-depth interviews are more typically based on nonrandom sampling, and therefore my combination of convenience and snowball sampling is in keeping with methodological norms. However, there were only 11 interview participants in my study, which is far less than needed to reach a saturation point of new information. More interesting details about the role of religion in students' lives and their academic experiences would likely be revealed with a larger number of in-depth interview participants. In addition, I recommend that future research consider using qualitative data more extensively, not just as a supplement to survey data but as a valuable source of information in its own right. Moreover, future research might also consider a more cohesive integration of qualitative material with quantitative data rather than treating the qualitative data as simply an adjunct section, as I did in my study.

The third limitation pertains to the dependent variable, GPA. As I discussed in the Data and Methods section, there is not much variation in reported GPAs, which are relatively high. Three factors may contribute to this issue with GPA. First, Emory students are high-achieving and generally intelligent, making them more likely to earn higher GPAs. Second, there may be grade inflation at Emory. Grade inflation has become a greater concern in higher education in recent years, and numerous elite institutions experience this phenomenon, including Yale

University, Duke University, and the University of California, Berkeley (Fair 2023; Rojstaczer 2016; Sumida 2024). Third, I use self-reported GPAs, and there may be a tendency for respondents to inflate their GPA when self-reporting. While I cannot verify respondents' reported GPAs because my survey is anonymous, respondents may be less likely to report an inaccurate GPA due to their names not being attached to the survey. Evidently, GPA is a challenging metric and has inherent flaws that are out of researchers' control. To minimize potential issues with using GPA as a variable, future studies should consider implementing data collection methods that allow the researcher to independently verify respondents' GPAs. Additionally, a larger sample size and greater variation in GPA would make it easier to detect statistical significance between background variables and GPA as well as make the data a better indicator of whether there is a statistically significant relationship between religiosity and academic performance. Furthermore, greater variation in GPA would likely minimize the effect of outlier GPAs.

Strengths

While the above limitations must be recognized, the present study still has certain strengths that deserve mention. First, my study is one of few that attempts to combine quantitative and qualitative data in a complementary way, hopefully showing the value of each data type to reach a more comprehensive understanding of the topic. Likewise, by including qualitative data, I am better able to understand some trends in how religious and nonreligious students approach their academic experiences that cannot be revealed merely through quantitative data.

A second strength of my study is that I modified the DUREL and IRMS indices to be more inclusive of people of all religious backgrounds, including nonreligious individuals. To elaborate, I modified the DUREL's wording so that questions do not assume that respondents are Christian, and I modified the IRMS' wording so that questions do not assume that respondents are religious. Even with these modifications, the DUREL and IRMS have high internal consistency and convergent validity, which is another strength of this study. Additionally, with these modifications, my study is one of few that focuses on the relationship between religiosity and academic performance among college students of all religious backgrounds and one study of even fewer that includes nonreligious students.

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