Pray Away the Criminal? Crime, Religiosity, Gender and Sexuality Over the Life Course

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Abstract: Lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals in the United States seem to be making strides in some social institutions, such as family, due to the recent ruling on marriage equality. Still, there remains a contentious relationship between sexual and gender minority youth, adults, and the institution of religion, for many faith systems. This study explores the relationship between religiosity, long theorized to act as a protective factor from offending, gender and sexuality. We use three waves of the National Longitudinal Study of Adolescent to Adult Health (Add Health) (Wave I, N = 12,940; Wave III, N = 10,742; Wave IV, N = 8,362) to look at these relationships over three stages of the life course (adolescence, young adulthood, and adulthood) on a particular type of offending: selling drugs. We find that while the effects of high levels of religiosity are protective from selling drugs, the effect is not as strong on sexual minority youth and adults as their sexual majority counterparts. We also find the effects of gender are stronger than sexual minority status, across the life course.

Keywords: Religiosity, protective factor, drugs, crime, sexual minority, life course

The fight for marriage equality for LBG people, for all of the benefits and consequences, has focused much energy and capital on one aspect of one social institution: two-person marriage, as one type of family system. While marriage is an important stage of the life course, for some, marriage equality does not address the rest of the social institutions LGBTQ people navigate throughout their lifetimes, such as school, work, military and religion. With this study, we aim to explore one important social institution in the United States for many: religion. Specifically, we seek to understand more about the life course of sexual minority youth and adults (gender minority individuals are beyond the scope of this article), and the social institutions they navigate, including religion. As social institutions tend to be gendered (Acker 1992), raced (Hawkesworth 2003), and heteronormative (Berlant and Warner 1998), involvement in those institutions may be a risk or protective factor, depending on the individual navigating. Exploring the experiences of sexual minority youth and adults in social institutions, over the life course, offers the opportunity to find sites of resilience, to prevent criminality, or promote desistance from crime.

Sexual minority youth and adults have often had a contentious relationship with organized religion, and this conflict has been even more visible since the United States Supreme Court ruling on marriage equality (Obergefell v. Hodges 2015). Just since the ruling, Kim Davis, a county clerk in Kentucky, went to jail to rather than issue same-sex marriage licenses, citing her religious beliefs. In early 2015, the LDS church backed an LGBT non-discrimination ordinance for Salt Lake City, after carving out a religious exemption for themselves. After the ruling, they
had instituted a rule change, labeling same-sex couples as “apostates.” This excludes their children from important rituals, forcing their children to disavow their parents to receive full membership. The battle of religious freedom versus sexual freedom points to the institution of religion as a source of exclusion, if not victimization, for sexual minority individuals and their families. This contradicts beliefs about religion as a source of comfort and community, theorization and research about religion acting as a protective factor for some measurements of life outcomes.

Marriage, as part of the institution of family, has been theorized to be a protective factor for one type of life outcome: participation in offending behaviors (Sampson, Laub and Wimer 2006). Most sexual minority individuals in the United States have grown up without legally sanctioned marriage as an option; any protective effect from offending that may come from this legal change, may not be measurable for some time. Without legal marriage on the menu, sexual minority individuals have formed other types of familial relationships and systems, but, the protective features of those kinships have not been explored in the criminological literature. It is unclear if the lack of marriage, as a protective factor from offending, has impacted sexual minority individuals, and their possible criminal careers. Similarly, there is a lack of research on the impact of exclusion from other social institutions (such as school, family, work, military, sports, politics and religion) on sexual minority life outcomes, such as offending. As examined in Conover-Williams’s (2014) exploration of social institutions as risk and protective factors for sexual minority offending, it may be that exclusions from social institutions create a cumulative disadvantage that pushes sexual minority youth and/or adults toward negative life outcomes, like offending. While that study provided a baseline examination of juvenile offending, it is unclear how experiences in social institutions impact sexual minority youth and adults, over the life course, promoting or impeding life outcomes.

This study offers a baseline examination of one social institution—religion—and its impact as a possible protective factor on offending for sexual minority youth and adults, over their life course. The effects of religion on crime have been debated since Lombroso (1911), and there has been no clear consensus (for a review, see Baier and Wright 2001; Stark 1996). Studies on the relationship between religion and crime have had widely varying outcomes, ranging from the effect of religion being small or nonexistent on criminality (Hirschi and Stark 1969; Ellis and Thompson 1989) to large and important (Rohrbaugh and Jessor 1975; Chadwick and Top 1993). Still, widely utilized criminological theories, such as those from life course criminology and the social control perspective, suggest that individual-level attachments, such as those to religion, can prevent criminality, and/or promote desistance from offending.

With this study, we aim to better understand the relationship between religiosity and offending by exploring the effect on an understudied population: sexual minority youth and adults. While the effect of religiosity has been examined in terms of personal attributes, including race (Johnson, Larson, De Li and Jang 2000; Stevens-Watkins and Rostosky 2010) and gender (Benda, Pope and Kelleher 2006; Steinman and Zimmerman 2004), it is still unknown to what degree religion may act as a protective, or risk factor, for offending by nonheterosexual youth and adults. Recent research has found that religiosity may have a lesser impact on the drinking of sexual minority respondents, in comparison to their heterosexual counterparts (Rostosky, Danner and Rigg 2007; 2008), but, it is still unknown if religiosity has an impact on actual criminal offending. Because sexual minority individuals experience more harassment and victimization in other social institutions, such as school (Kosciw, Greytak and Diaz 2009) and family (Savin-Williams 1994), it may be that church, or a belief in a
Higher power, acts as a protective factor. It may be, however, that because many organized religions actively promote anti-gay beliefs and/or forbid sexual minority individuals from their membership (Garrigan 2009), that religion is not a protective institution for some, especially for youth who may not have a say in their attendance at church. It may also be another source of stress, especially for sexual minority youth who come from religious families (Rostosky et al. 2007).

To the study of religion and crime, we offer a robust measure of religiosity, and explore the effects of that religiosity over various life stages. We contribute to the small but important scholarship on the effect of religiosity on the behaviors of sexual minority youth and adults. Our study also adds to the small but growing literature on sexual minority youth, adults, and their offending, across various stages of the life course.

**Theoretical Foundations**

Laub and Sampson’s (1993) age-graded theory of crime posited that over the life course, greater attachments to social institutions (like school, family and religion) would deter, or promote desistance from crime. This aligned with social control theories (Hirschi 1969) which also pointed to institutions like family and religion as sources of social control for the prevention of crime. Hirschi and Stark (1969) theorized about religion specifically with their “hellfire hypothesis” that belief in supernatural rewards and punishments would prevent criminality. Religion has also been theorized to provide normative standards for youth, as well as, social attachments to a religious community (Petts 2009), acting as a protective factor. We theorize religion, as an institution that may exclude or even oppress sexual minority individuals, depending on the faith system, may have a different impact on sexual minority youth and/or adults in comparison to their heterosexual counterparts. Involvement in a religion, or belief in a higher power, could be a replacement social network for some individuals (such as sexual minority youth or adults) being excluded from other institutions, such as school or family (Petts 2009). Religion and/or belief may also act as an additional stressor (Rostosky et al. 2007), or even a source of victimization, as many U.S. religions actively exclude or preach against nonheterosexual sexuality and relationships (Davidson 2000; Garrigan 2009).

**Religion and Crime**

Review of the extant literature on religiosity and offending shows the effect of religion on criminality likely depends on four important considerations: First, the effect may depend on the type of behavior being studied. Second, the impact may vary based on individual attributes of the offender, such as race or gender; as we explore in this study, the effect may also vary by sexuality. Third, the deterrent properties of religion may vary based on the stage in the life course of the population being studied. Last, the effect of religion on crime seems to vary based on how religion is measured. Each of these are explored below.

**Religion and Crime: Type of Behavior**

Generally, the effect of religiosity seems to be more impactful on minor and status crimes (Benda et al. 2006). In their study of 724 students in four public high schools, Benda and Corwyn (1997) found some relationship between religiosity and status offenses, but not other types of delinquency. There has been limited support found for religiosity’s effect on more serious crime (Johnson et al. 2000). Many studies of religiosity and antisocial behavior focus on alcohol (including binge drinking) or substance use (often with tobacco). For example, Wallace and colleagues (2007) found that higher levels of religiosity were associated with lower likelihoods of using tobacco,
engaging in binge drinking, or using marijuana in the past year.

While there is much research on the effect of various measures of religion on problem drinking behavior, and, substance use, there is not as much research on the effect of religion on selling drugs. One exception is Johnson et al’s (2000) examination of drug dealing. They found that for African American youth living in urban poverty, no church attendance was associated with .33 probability of dealing, while attendance of more than once per week decreased the probability to .14. This study was limited in that it was cross-sectional, used only a measure of church attendance, and was limited to poor, young African American males living in three urban areas. The effect of religiosity on selling drugs, therefore, remains unclear. Another exception is Salas-Wright, Vaughn and Maynard’s (2014) examination of selling drugs in adolescence and early adulthood. They found a consistently protective effect of religiosity (measured by indexing attendance and importance) across gender and across developmental periods. We build on these studies by looking at selling drugs, adding a third developmental period: adulthood. While there is considerable research on higher rates of drug use among sexual minority youth (for a review see Duncan, Hatzenbuehler and Johnson 2014) and adults (Hughes and Eliason 2002), there is a dearth of scholarship exploring other drug-related behaviors with this population, including selling drugs. We begin to fill that gap by exploring the selling of drugs across the life course for sexual minority youth and adults, in comparison to their sexual majority counterparts.

Religion and Crime: Individual Attributes

It may be that the effect of religion on offending varies by individual attributes of the person committing the crimes. Prior studies have found some variation, by race and gender; as we explore in this study, the effect may also vary by sexuality.

Race. Several scholars have theorized that African-Americans may be more influenced by church, especially for those who rely on church as a center for their social network (Benda et al. 2006). African-Americans are more likely than any other racial group to report believing in God, and are the racial group most likely to report that religion is “very important” in their lives (Pew Research Center 2014). Latinos were the next largest group in that category, as well as, for church attendance, which African Americans also led (Pew Research Center 2014). Less explored is the interaction between religiosity and offending when it comes to race, though there are some exceptions. Johnson et al. (2000) studied drug-related deviance for about 2400 young African-American men living in urban areas marked by poverty. They found church attendance had an inverse relationship with non-drug crimes, drug use, and, especially drug dealing. While they did not have a comparison group, they did call for research that looks at the interactions of race, sex, and the effect of religiosity on deviant behaviors. Stevens-Watkins and Rostosky (2010), using the National Longitudinal Study of Adolescent Health, did not find an association between religiosity (measured by indexing attendance, importance and frequency of praying) and binge drinking for African-American adolescent males; the authors theorized that the effect of adolescent religiosity might diminish as African-American males enter young adulthood, pointing to a possible evolution in the effect of religion over the life course. Most studies of race as a protective factor against offending included only African-American respondents, or African-American, and Caucasian respondents.

Gender. Girls and women consistently report higher levels of religiosity (see Miller and Hoffmann 1995 for a review), and this holds across the life course (Cornwall 1989). There
may also be a difference in the effect of religiosity on girls and women in comparison to boys and men. In their study of the effect of religiousness on youth, Benda et al. (2006) found the effect was stronger on girls than boys. They posited the results were related to higher levels of monitoring of girls, and the early development of girls relative to boys. In their longitudinal study of 705 African American high school students in the Midwest, Steinman and Zimmerman (2004) found the frequency of religious activity had a smaller impact on boys’ than girls’ use of alcohol, cigarettes, and marijuana. In their study of alcohol and drug use, and various forms of delinquency on more than 3000 students in the Southern U.S., Benda et al. (2006) found the effect of religiosity was stronger on girls than boys.

Sexuality. So far, the effect of religion on the offending of sexual minority youth and adults has been an underexplored area of scholarship, with several notable exceptions. Rosario and colleagues (2005) surveyed sexual minority youth (aged 14-21) in Manhattan, and found the effect of religious affiliation varied by gender. For males, it was protective against risky sexual behaviors but not substance abuse. For female respondents, a religious identity was associated with family stressors, but, not protective against risky sex or substance abuse, perhaps pointing to the complex interplay of sexual minority status and gender with religion. Rostosky, Danner and Riggle (2007; 2008) used The National Longitudinal Study of Adolescent Health to explore the relationship between religiosity and alcohol and substance use across several stages of the life course. In their 2007 article, they found that adolescent religiosity was protective against binge drinking and marijuana use for heterosexual respondents, but, not sexual minority young adults. In their 2008 article, they found that religiosity decreased over the life course, and that the effect of religiosity was associated with lower levels of alcohol use and binge drinking for heterosexual respondents, but, not sexual minority young adults. While these studies offer a baseline examination of the effect of religiosity on sexual minority youth and adults, the focus has so far been on risky sexual behaviors, or problem drinking/substance use. No studies to date look specifically at the effect of religiosity on offending behaviors for sexual minority youth or adults. Also, while the latter studies did look at more than one stage of the life course, they both stopped at early adulthood; it is unclear how the trends they found might continue into later adulthood.

Religion and Crime: Over the Life Course

Religiosity may increase over the life course, as older adults report higher levels of spiritual commitment than younger adults (Winseman 2003). This is not necessarily a linear progression, as some young adults report less religiosity as they enter adulthood (Smith and Snell 2009). Salas-Wright and colleagues (2014; 2015) have found the effect of religiosity, as a protective factor against a variety of behaviors, exists through both adolescence and early/emerging adulthood. They found the strongest effect for those with the highest levels of religiosity. The effect of religiosity has mostly been tested on adolescents, with a few studies that look into early adulthood (see Salas-Wright et al. 2014 for a review). We contribute to these studies by adding a third developmental period of the life course—adulthood—and testing the effects of religiosity on three life course phases in one study.

Jang, Bader and Johnson (2008) theorized the effect of religiosity on preventing drug use could be understood in terms of the “cumulative advantage” of religious involvement over time. They found respondents raised by parents who value religion and church attendance to be less likely to use drugs in adolescence and early adulthood, compared to their peers raised by parents who did not value religion or enforce attendance. The authors posited this
demonstrated a cumulative advantage of religiosity, starting with parents. While the authors explore two life course stages, it is unclear if the effect of parental religiosity remains or diminishes over time. As individuals gain independence and their own identity over the life course, they may participate less in their religious communities, or may change affiliations (Petts 2009). This could change the effect of religiosity over the life course.

Religion and Crime: Measurement

Most studies of religiosity and antisocial behaviors use measures of attendance, importance, belief and/or frequency of prayer. As several scholars have noted, the protective effect of religion varies by the way it is measured. Benda et al (2006) used several measures of religiosity in their study of alcohol and drug consumption including church attendance, the importance of religion, belief in God and a measure of religiousness (indexed from five questions about self-reported religiosity). They found belief in God to be inversely related to both alcohol consumption and delinquency, while the measure of religiousness was a better predictor of drug use. Evans and colleagues (1995) tested a comprehensive crime measure, as well as, three separate dimensions of religiosity, on adult criminality. They found religious activities to be the best protective measure. Hirschi and Stark’s (1969) “hellfire hypothesis” theorized the protective effect of religion came from the belief in supernatural rewards and punishments. More recent scholars have argued involvement in a religious community is what the protective effect is, giving practitioners a normative set of standards, as well as, social attachments (Petts 2009). Church attendance and participation in activities perhaps demonstrate some level of involvement, but juveniles may not be attending by choice. This could especially be the case for some queer youth, for whom religion may be enforced as a normative or corrective element in their lives, but is not necessarily a place of comfort or social networking.

A growing number of religiosity scholars have argued that single-item measures of religiosity are insufficient to understand the influence of religion on lives (Benda and Corwyn 1997; Benda et al. 2006; Johnson et al. 2000). Johnson et al. (2000) call for measures of religiosity that include more than one component, such as including attendance for understanding behavior, and religious salience to account for attitudes. Cotton and colleagues (2006) have given these measures a taxonomy for understanding religiosity, called the proximal-distal framework. Proximal religiosity refers to personal belief, and the meaning found in religion, where distal measurements cover behavior and attitudinal components of religiosity, including attendance, participation in activities, and the importance of one’s religion in her or his life. To align with scholars asking for more dynamic measures of religiosity, we explore three different components of religiosity in this study: importance, attendance, and belief.

Based on the prior literature, we developed four hypotheses:

H1: Sexual minority youth and adults are more likely to sell drugs than the sexual majority youth and adults of the same age.

H2: Respondents with higher levels of religiosity will be less likely to sell drugs than respondents with lower levels of religiosity.

H3: Religiosity will have a lower effect on sexual minority youth and adults than their sexual majority peers at each stage of the life course.

H4: The effect of religiosity will vary, based on the sexual minority status and gender of the respondent.

Data

The National Longitudinal Study of Adolescent to Adult Health (Add Health) is a national, longitudinal study of adolescents,
following students from their 7th to 12th grade years in the 1994-1995 school year. Respondents have been interviewed in four waves; Wave II (1996) was conducted when the respondents were ages 12-20, and Wave III (2001-2002) was conducted when respondents were ages 17-25. Wave IV was most recently conducted (2008), when respondents were age 24-32. Wave II closely follows Wave I (an 11-month difference), and did not interview the full sample from Wave I. Because sexual minority individuals are a relatively small proportion of the sample (between six and nine percent), it is important to utilize the most respondents possible. Therefore, we skip Wave II and use Waves I, III and IV for our analyses.

Add Health asks respondents a long series of questions pertaining to their social, psychological and economic wellbeing, as well as, extensive contextual questions about their community, school, friendships, and relationships. The Add Health researchers used Audio-CASI (audio computer-aided self-interview) for asking highly sensitive questions, such as those about sexuality. We chose Add Health for this study because (1) it is a national, random sample with enough respondents to do quantitative analysis on a relatively small population; (2) it asks questions about respondents’ attractions, allowing researchers to examine the experiences of sexual minority individuals, whether or not they have self-identified as gay, lesbian or bisexual; (3) it differs vastly from many other studies of sexuality and offending in that it contains both offenders and non-offenders in the sample. Many prior studies have relied on institutionalized samples, limiting the ability to explore resistance and protective factors. Add Health allows researchers to examine both positive and negative outcomes, to explore potential preventative measures. (4) Because it is longitudinal, we are able to examine offending and religiosity over several stages of the life course.

Add Health also presents several limitations: (1) Offending behaviors reported by respondents are not verified against official data. There is a possibility respondents are not remembering, or admitting to, the full scope of their victimization or offending histories, or do not relate their behaviors to the questions being asked. However, by not relying on official data, Add Health may be capturing a more accurate picture of offending. While arrest and official data are able to measure the crimes and offenders that are observed, self-report measures are able to capture the offenses less likely to be reported (usually those that are less severe), as well as, those that would not have been detected by law enforcement. (2) Add Health is a school-based sample. Sexual minority youth may have a weakened connection with school, and, are therefore less likely to be represented in a school-based studies. The most delinquent youth may also be less likely to be captured in school-based studies. Sexual minority students drop out of high school at three times the rate of the national average (Lambda Legal 2003), so it may be that the most delinquent sexual minority youth are also the ones not being captured in this study; we may be underestimating the frequency of sexual minority offending more than the offending of their majority peers. (3) It is difficult to measure sexual minority status, as it may be that the effects of being a sexual minority are from internal (identity formation) or external (bullying or exclusion) sources. We align with other Add Health researchers (see for example Battle and Linville 2006; Teasdale and Bradley-Engen 2010) to use a measure of attraction, to capture those that might not be participating in sexual behaviors and/or ready to self-identify as gay, lesbian or bisexual (Russell, Franz and Driscoll 2001; Savin-Williams 2006). We use this, despite the limitations of relying on attraction to represent both internal and external forces. Despite these limitations, Add Health is still a powerful dataset for understanding the experiences with offending for an understudied group, sexual minority youth and adults.
offers a unique opportunity to explore offending, and sexual minority status, over several stages of the life course.

Measures

Dependent Variable

Selling Drugs: At all waves, respondents were asked if they had participated in selling “marijuana or other drugs” in the past 12 months. Respondents could answer never (=0), one or two times (=1), three or four times (=2) or five or more times (=3). We collapsed categories to make a dichotomous dependent variable (yes = 1, no = 0). At Wave I, 7.5 percent of respondents reported selling drugs at least once. At Waves III and IV, selling drugs was reported by 8.4 and 4.6 percent of respondents, respectively.

Independent Variables

Sexual Minority Status: We coded respondents as a sexual minority individual (0 = sexual majority, 1 = sexual minority) at each wave based on their reported attractions at that wave. At Waves I and III respondents were asked, “Have you ever had a romantic attraction to a female/male?” At Wave IV they were asked, “Are you romantically attracted to females/males?” We checked this measure of sexual minority status in comparison to other measures (behavior and relationships) by conducting analyses using all three measures. There was no systematic difference between the three.

Sex: Respondent’s sex was recorded by interviewers, who were instructed to confirm the sex of the respondent, asking for clarification if
necessary. It is unknown if gender or sex was recorded, but, the terminology “sex” is used in Add Health documentation, and was recorded dichotomously (Female = 0, Male = 1). It is unknown how many, if any, respondents changed sexes over four waves of Add Health, or how many identified outside of the gender binary or the sex category recorded.

Religiosity Index: To understand the role of religion in a holistic way, across the life course, we compiled an index of religiosity, encompassing importance, attendance and prayer, covering both proximal and distal measures of religiosity (Cotton et al. 2006). Similar questions were asked across all three waves, as seen in Table 1. Respondents could score between 0 and 13, with 13 as the highest level of religiosity. We categorized respondents into low (0-4), medium (5-8) and high religiosity (9-13).

Control Variables

Demographics: We used two measures of race and ethnicity as control variables, and a measure of age. Race was determined using the question, “What is your race? You may give more than one answer.” Respondents were asked to mark boxes on the categories of White, Black or African-American, American Indian or Native American, Asian or Pacific Islander, or Other. Because of the relatively small numbers of sexual minority respondents, we created a dichotomous variable for race, Nonwhite (0 = White, 1 = nonwhite), which includes all respondents that did not mark White in the race questions. In regression analyses, White is excluded. For the measure of Latino we used the question “Are you of Hispanic or Latino origin?” The variable was dichotomized (0 = no, 1 = yes). At each wave, respondents’ Age was recorded (Waves III and IV), or calculated, based on birthdate and date of interview (Wave I). This was used as a control variable in all models.

Other Control Variables: We have included two additional controls, for levels of parent education and family structure, to control for other facts shown to correlate with crime. In Wave I, respondents were asked about the educational attainment of their residential parents, biological or custodial. We created a variable that measured the maximum level of education among any residential parents the respondents discussed to accommodate a wide variety of family structures. We recoded combined categories to make a higher score correlate with a higher level of education (never went to school = 0, less than high school = 1, GED or high school graduate = 2, some college, trade or vocational school past high school = 3, college or university degree = 4, professional training beyond a four-year college or university = 5). We used this as a proxy for class, in that education and income potential are so closely linked. Also at Wave I, respondents were asked a series of questions to develop a household roster. Those were used to create dummy variables for four types of family structure: two biological parent family, single-parent family, step family and other family. Because of the relatively small numbers of sexual minority respondents, we simplified family structure into a dichotomous variable (0 = other family type, 1 = two biological parents).

Methods

We performed these analyses using Stata Version 13. In order to account for the weighting, and nesting of respondents within schools and geographic regions, we used survey commands (svy: in Stata) and weights on all analyses. Analyses were weighted according to the waves being used, and whether the analyses were cross-sectional or longitudinal. There were 12,940 respondents from Wave I, 10,742 from Wave III and 8,362 from Wave IV.

Since the dependent variable—whether one sold drugs in a particular wave—was binary, we estimated a set of multivariate logistic
regression models to test our hypotheses. We developed four models to test the hypotheses. Model 1 tested the effects of being a sexual minority on selling drugs, while controlling for relevant individual-level variables. Model 2 estimated the effect of both sexual minority status and religiosity on the dependent variable. Model 3 had two sub-models: Model 3a included both of the above-mentioned variables, and, in addition to that, Model 3b included an interaction term between the two variables of interest. Last, Model 4 tested the interactive effect of sexual minority status, religiosity, and gender by including an interaction term that incorporated all three variables.

We used Stata to obtain linearized odds ratios for each model. The outcome in a logistic model was coded as “0” if the outcome of interest (in this case, having sold drugs in a particular wave) was absent, and “1” if the outcome of interest was present. A coefficient (e.g. b1) obtained from such a model indicated the change in the expected log of the odds that the outcome was present, relative to one unit change in the variable (e.g. X1), holding all else constant. Therefore, the anti-log of a coefficient, exp(b1), produced an “odds ratio”.

We also estimated predicted probabilities for each model, using the -margins- command in Stata. This function allowed for statistics to be calculated from predictions of a previously fit model at fixed values of given covariates; other covariates were averaged or otherwise integrated. For each model, holding all else at their means, we predicted the probabilities of having sold drugs along different lines of distinction: sexual minority individuals vs. sexual majority individuals; three levels of religiosity; and, males vs. females. In addition, because prior research suggested that the effect of religiosity may differ across sexual minority status AND gender, we predicted the probabilities of having sold drugs for the terms that capture the interactive effects of those variables. For example, the interaction term between sexual minority status, religiosity, and gender yielded nine predicted probabilities; the results would provide a way to gauge the substantive differences in the outcome variable across nine combinations of these three variables.

Results

Sexual majority individuals accounted for over 90% of the respondents in all three waves (Table 2). However, the proportions of respondents who have sold drugs who were sexual minority youth and adults were consistently greater than those who were sexual majority youth and adults (Table 2). In addition, the differences in rates of offending between males and females was the starkest in Wave III, regardless of sexual minority status. In Waves I

| Table 2. Respondents by Sexual Minority Status and Gender//Prevalence of Having Sold Drugs |
|---------------------------------|---------------------------------|-----------------|-----------------|-----------------|
|                                 | Sexual Minority               |                  | Sexual Majority   |                  |
|                                 | Female//Sold Drugs | Male//Sold Drugs | Female//Sold Drugs | Male//Sold Drugs |
| Wave I (mean age 16)           | 2.60%                       | 15.74%          | 3.46%           | 15.56%          |
|                                | 48.59%                       | 4.57%           | 45.35%          | 9.53%           |
| Wave III (mean age 21)         | 6.56%                       | 13.25%          | 2.66%           | 20.04%          |
|                                | 44.11%                       | 2.92%           | 46.68%          | 12.47%          |
| Wave IV (mean age 28)          | 4.68%                       | 8.01%           | 1.99%           | 8.65%           |
|                                | 44.79%                       | 1.74%           | 48.53%          | 7.57%           |
and IV, female and male respondents who were sexual minority respondents had almost identical rates of offending, in contrast to their sexual majority counterparts.

The respondents were further categorized by their levels (i.e. low, medium, and high) of religiosity (Table 3). At their youngest (in Wave I), more respondents—regardless of gender or sexual minority status—were identified to have high levels of religiosity than in later waves. For instance, in Wave I, almost 45% of the female sexual minority respondents were highly religious, only about 11% remained so in Wave III. Similarly, close to 49% of the male sexual minority respondents were highly religious in Wave I, and only around 15% were still highly religious in Wave III. However, while the drop in religiosity was uniform and pronounced across all groups from Wave I to Wave III, the difference was less noticeable from Wave III to Wave IV. In fact, the proportion of highly religious sexual majority respondents slightly increased for both genders (from 24% in Wave III to 27% in Wave IV for female respondents; from 15% in Wave III to 16% in Wave IV for male respondents).

### Table 3. Levels of Religiosity, by Gender and Sexual Minority Status

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<td>20.72%</td>
<td>2.56%</td>
<td>2.07%</td>
<td>0.79%</td>
<td>45.19%</td>
<td>34.96%</td>
<td>14.43%</td>
</tr>
<tr>
<td>Wave IV</td>
<td>4.58%</td>
<td>3.89%</td>
<td>1.00%</td>
<td>27.57%</td>
<td>38.91%</td>
<td>24.05%</td>
<td>1.78%</td>
<td>1.46%</td>
<td>0.63%</td>
<td>43.84%</td>
<td>37.17%</td>
<td>15.12%</td>
</tr>
</tbody>
</table>

### Table 4. Model 1: Effect of Sexual Minority Status on Offending

<table>
<thead>
<tr>
<th></th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>2.16***</td>
<td>0.38</td>
</tr>
<tr>
<td>Wave III</td>
<td>3.02***</td>
<td>0.41</td>
</tr>
<tr>
<td>Wave IV</td>
<td>2.53***</td>
<td>0.60</td>
</tr>
</tbody>
</table>

***p < 0.01

### Table 5. Model 2: Effect of Religiosity on Offending

<table>
<thead>
<tr>
<th></th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>0.70***</td>
<td>0.04</td>
</tr>
<tr>
<td>Wave III</td>
<td>0.65***</td>
<td>0.05</td>
</tr>
<tr>
<td>Wave IV</td>
<td>0.60***</td>
<td>0.06</td>
</tr>
</tbody>
</table>

***p < 0.01
instance, in Wave III, the linearized odds ratio for the sexual minority status variable was 3.02, which means that, ceteris paribus, the odds of having a drug offense was about three times greater for sexual minority respondents than sexual majority respondents.

The results from Model 2 showed that there was a negative and statistically significant relationship between religiosity and selling drugs across all waves (Table 5). The linearized odds ratio for religiosity in Wave I, for example, was 0.70. This meant that the odds of a religious respondent offending, holding all else equal, was around 1.43 times greater (1/0.70) than a non-religious respondent.

Model 3a adds both sexual minority status and religiosity, and both remained statistically significantly related to the outcome variable. For all three waves, the results from the adjusted Wald test (which tests the influence of the additional parameter—religiosity—on the model) were significant. For instance, in Wave III, the results from Model 3a suggested not only a strong and positive relationship between sexual minority status and the outcome variable, they also showed a significant and negative relationship between religiosity and the outcome variable. The odds ratio for religiosity was 0.67, meaning that the odds that a somewhat religious person will have sold drugs in Wave III was about 1.49 times greater (1/0.67) than a non-religious person. See Table 6.

Model 3b for all three waves was the same as Model 3a, but with the addition of an interaction term that combined the sexual minority status and religiosity, given that we have hypothesized religion is a risk factor that varies across sexual minority status. The result from the adjusted Wald test was significant for Wave I ($p = 0.021$), but insignificant (at $p < 0.05$) for Waves III and IV; results from the latter two waves should be interpreted with caution. While the odds ratios for the two variables of interest remained statistically significant in Wave III, the interaction terms were not in any of the waves. However, with the addition of the interaction term, some of the effects of the two main independent variables on the outcome variables were amplified. For example, in Model 3b, a sexual minority respondent in Wave III was now 6.07 more likely than a sexual majority respondent to have sold drugs (vs. 2.93 more likely in Model 3a). Also, the odds that a religious person will have sold drugs was around 2.56 times greater (1/0.39, vs. 1.49 times in Model 3a) than a non-religious person. See Table 7.

Last, in Model 4, we added an interaction term that included sexual minority status, religiosity, and gender to Model 3a. This was to test whether the effect of religiosity varied based on sexual minority status and gender. Unlike in Model 3b, the interaction term in this model was statistically significant ($p < 0.01$) in all three waves. However, the individual independent variables, except for sexual minority status in Wave I, were all statistically insignificant. See Table 8.

**Predicted Probabilities**

Tables 9 through 11 included the predicted probabilities of having sold drugs in all three waves, based on different values of the two main independent variables, as well as two interaction terms discussed above. This method provided predictions based on a fitted model at fixed values of some covariates, while changing the value of one or more covariates. The predicted probabilities gave a more intuitive way of understanding the effects of the variables of interest.

---

1 Part of this result may be due to small sample sizes for certain groups; there are not many who are sexual minority individuals with medium to high levels of religiosity.
### Table 6. Model 3a: Effect of Sexual Minority Status and Religiosity on Offending

<table>
<thead>
<tr>
<th>Wave</th>
<th>Sexual Minority Status</th>
<th>Religiosity</th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>2.34***</td>
<td></td>
<td>0.47</td>
<td>0.04</td>
<td>0.70***</td>
<td>0.05</td>
</tr>
<tr>
<td>Wave III</td>
<td>2.93***</td>
<td></td>
<td>0.39</td>
<td>0.05</td>
<td>0.67***</td>
<td>0.07</td>
</tr>
<tr>
<td>Wave IV</td>
<td>2.39***</td>
<td></td>
<td>0.58</td>
<td>0.07</td>
<td>0.62***</td>
<td>0.07</td>
</tr>
</tbody>
</table>

### Table 7. Model 3b: Effect of Sexual Minority Status and Religiosity on Offending, with Interaction Term

<table>
<thead>
<tr>
<th>Wave</th>
<th>Sexual Minority Status</th>
<th>Religiosity</th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>1.73</td>
<td></td>
<td>0.95</td>
<td>0.35</td>
<td>0.97</td>
<td>0.35</td>
</tr>
<tr>
<td>Wave III</td>
<td>6.07***</td>
<td></td>
<td>4.20</td>
<td>0.21</td>
<td>0.39*</td>
<td>0.21</td>
</tr>
<tr>
<td>Wave IV</td>
<td>5.35</td>
<td></td>
<td>5.59</td>
<td>0.28</td>
<td>0.38</td>
<td>0.28</td>
</tr>
</tbody>
</table>

### Table 8. Model 4: Effect of Sexual Minority Status, Religiosity, and Gender on Offending, with Interaction Term

<table>
<thead>
<tr>
<th>Wave</th>
<th>Sexual Minority Status</th>
<th>Religiosity</th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
<th>Linearized Odds Ratio</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>6.21*</td>
<td></td>
<td>6.28</td>
<td>0.76</td>
<td>0.76</td>
<td>0.36</td>
</tr>
<tr>
<td>Wave III</td>
<td>2.95</td>
<td></td>
<td>2.30</td>
<td>0.47</td>
<td>0.49</td>
<td>0.47</td>
</tr>
<tr>
<td>Wave IV</td>
<td>3.26</td>
<td></td>
<td>9.86</td>
<td>0.89</td>
<td>0.89</td>
<td>0.89</td>
</tr>
</tbody>
</table>

### Table 9. Predicted Probabilities of Offending by Sexual Minority Status

<table>
<thead>
<tr>
<th>Wave</th>
<th>Sexual Minority</th>
<th>Sexual Majority</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>13.33%</td>
<td>6.39%</td>
<td>6.94%***</td>
</tr>
<tr>
<td>Wave III</td>
<td>18.45%</td>
<td>7.69%</td>
<td>10.76%***</td>
</tr>
<tr>
<td>Wave IV</td>
<td>9.79%</td>
<td>4.48%</td>
<td>5.31%***</td>
</tr>
</tbody>
</table>

### Table 10. Predicted Probabilities of Offending by Religiosity

<table>
<thead>
<tr>
<th>Wave</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>8.82%</td>
<td>8.68%</td>
<td>4.90%</td>
</tr>
<tr>
<td>Wave III</td>
<td>10.23%</td>
<td>8.67%</td>
<td>4.05%</td>
</tr>
<tr>
<td>Wave IV</td>
<td>6.33%</td>
<td>4.25%</td>
<td>2.40%</td>
</tr>
</tbody>
</table>

---

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Table 9 showed the predicted probabilities of selling drugs by sexual minority status. Sexual minority respondents were more likely to offend than sexual majority respondents across all three waves. For example, when holding all else constant, the difference between the probabilities of having sold drugs for sexual minority respondents and sexual majority respondents was almost 11% in Wave III. Regardless of wave, the differences between the two groups were statistically significant at $p < 0.01$.

The differences in the predicted probabilities of different levels of religiosity, while also significant, were not as great as the difference between the predicted probabilities for sexual minority individuals and sexual majority individuals. The differences were most pronounced between those with low/medium levels of religiosity and those with high levels of religiosity. See Table 10.

The predicted probabilities for the interaction terms, likewise, suggested that there were statistically and substantively significant differences across various factors. To see if religiosity varied based on sexual minority status and/or gender, we examined the interactions between these variables. To illustrate the interactions more concisely, Table 11 provided the predicted probabilities for four hypothetical persons, categorized either by sexual minority status and gender. The predicted probabilities suggested that the gender effects were larger than the sexual minority status effects. In Wave III, for instance, the difference in the predicted probabilities of having sold drugs for a sexual minority male (Person 1) and a sexual majority male (Person 2) (holding religiosity constant at medium) was around 16% (28.67% - 12.35%), whereas, the difference between sexual minority female (Person 3) and sexual minority male (Person 4) was about 19%. Also, the difference in the predicted probabilities between sexual minority respondents and sexual majority respondents, for both males and females, was the smallest for those who were the most religious. For instance, whereas the difference in the probability of offending between a highly religious sexual minority male (Person 1) and female (Person 2) in Wave III was a little over 10% (15.03% - 4.49%), the difference in the probability was almost doubled (28.67% - 9.77%) when the level of religiosity drops to a medium level. Last, as religiosity increased, the predicted probability of having sold drugs decreased, regardless of gender or sexual minority status. This was consistent with the regression results from Model 2 (see above).

### Table 11. Predicted Probabilities of Offending by Interaction Terms

<table>
<thead>
<tr>
<th>Religiosity</th>
<th>Person 1 (Sexual Minority, Male)</th>
<th>Person 2 (Sexual Majority, Male)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave I</td>
<td>21.34% 21.06% 12.64% 10.63% 10.47% 5.92%</td>
<td>12.88% 12.69% 7.26% 21.34% 21.06% 12.64%</td>
</tr>
<tr>
<td>Wave III</td>
<td>32.65% 28.67% 15.03% 14.55% 12.35% 5.78%</td>
<td>11.58% 9.77% 4.49% 32.65% 28.67% 15.03%</td>
</tr>
<tr>
<td>Wave IV</td>
<td>19.45% 13.64% 8.02% 9.24% 6.22% 3.53%</td>
<td>6.24% 4.15% 2.33% 19.45% 13.64% 8.02%</td>
</tr>
</tbody>
</table>

**Discussion and Conclusion**

Religion, like marriage, is an important social institution in the United States. While it has been theorized to be a protective factor from offending, it is unclear what role it plays in the life course, and offending, of sexual minority individuals. Our study begins to explore whether and how religion affects patterns of offending for sexual minority individuals, compared to their sexual majority counterparts. It provides support for some of our hypotheses.
For example, the results from Model 1 show that being a sexual minority individual is a statistically significant factor in offending; that is, controlling for other relevant variables, a sexual minority respondent is more likely to sell drugs than a sexual majority respondent. In addition, results from Model 2 suggest a significant and negative relationship between religiosity and offending, providing some support for Hypothesis 2.

The picture becomes more complex when the sexual minority status, religiosity, and gender interact. The results from Models 3a and 3b are mixed in terms of their support for Hypothesis 3. On the one hand, the interaction term (between sexual minority status and religiosity) is statistically insignificant; on the other hand, with it, some of the effects of the two main independent variables on the outcome variable are amplified (than if the interaction term is not included). However, the predicted probabilities from Table 11 suggest that religiosity, as a protective factor, seems to have less of an effect on sexual minority respondents than their sexual majority peers. A sexual minority male in Wave III with a high level of religiosity is almost three times more likely to offend than a sexual majority male during the same time period (15.03% vs. 5.78%).

In Model 4, the interaction term that comprises sexual minority status, religiosity, and gender is included to test whether the effect of religiosity differs, based on sexual minority status and gender; the variable is statistically significant across all three waves. In addition, the predicted probabilities from Table 11 illustrate disparities across sexual minority status and gender. For instance, while a highly religious female sexual majority respondent has a 1.16% predicted probability of offending in Wave III, her sexual minority peer is almost four times more likely to offend (4.49% predicted probability). The predicted probabilities suggest that the gender effects (i.e. the difference in offending between males and females) are larger than the effects of the sexual minority status. In short, both the results from Model 4 and the predicted probabilities provide support for Hypothesis 4.

This study faced several limitations; for example, we do not differentiate between religions, which may obscure some variation between faith systems. It could be that participation or belief in some churches or organizations have more or less of an impact on offending. Additionally, there may be more nuance to the relationships between gender, sexuality, and crime with a more intersectional approach (including race); this was beyond the scope of this paper, but warrants future research. Future research could also explore other social institutions shown to prevent participation in delinquency and crime, such as family, school and politics. Because sexual minority youth and adults face exclusion and sometimes victimization in these institutions, it may be that the protective factors of each are not available. This could mean a cumulative disadvantage for sexual minority adults, or it could mean that other social institutions become more salient to this and other marginalized populations. In the post-marriage equality era, future research could explore the effects of marriage equality on sexual minority offending. It could be that the chosen families of queer individuals (Weston 2013) may have been acting as a protective factor for sexual minority youth and adults, much like birth families for sexual majority youth and adults. With the recent focus on two-person, conjugal, legal marriage, chosen families may become less important, or the increased pressure to conform to a homonormative (Duggan 2003) definition of family may act as another source of exclusion for members of the LGBTQ community that do not benefit from such marriages.

After years of LGBTQ activism, Meredith Conover-Williams returned to school to study gender and sexuality. She is currently an Assistant Professor at Humboldt State University in the Department of Sociology. Her
research is on gender, sexuality and crime; currently, she is exploring how LGBTQ people experience pushes and pulls toward and away from crime. Her study of juvenile delinquency among queer youth was published in the groundbreaking Handbook of LGBT Communities, Crime, and Justice, edited by Dana Peterson and Vanessa R. Panfil.

Joice Chang teaches and researches in various areas of law and policy. In particular, her research focuses on environmental policies and issues in the criminal justice system.

**References**


------. 2007. “Is Religiosity a Protective Factor Against Substance Use in Young Adulthood? Only If You’re Straight!”