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INFLUENCE OF RELIGIOSITY ON JUVENILE DEVIANCE

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ABSTRACT

What effect does religiosity have on adolescent deviance? Past research suggests that adolescent religiosity serves a role in predicting youth deviant behavior. However, does the extent of one's religiosity and the different types of religious behavior affect all types of deviance the same or do these variables differ? And is the effect that religiosity has on deviant behavior in juveniles the same across all denominations? This thesis seeks to explore these questions by utilizing the National Study of Youth and Religion, Wave 1. Data were analyzed using binary logistic regression modeling and linear regression (OLS), to support the author's hypothesis that those with higher reported levels of religiosity correlate with lower levels of generalized deviance. It also explores the association between different denominations and the effects this has on the outcome variables. In the end, the results show that although higher levels of religiosity overall relate to lower levels of deviance, there is not enough support to conclude the effect that religiosity has across different denominations in regards to deviance in adolescents. Peer effects show that those who view themselves as more popular are more likely to engage in deviant behavior and that the differences in religiosity affects individual acts of deviance to a larger extent than a general deviance scale. These results and discussion of outcomes support further research into the context of religiosity and deviance.

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Chapter 1

Introduction

Deviance is a frequently studied area in the field of criminology including the origins, effects, types of deviance, and causes of such deviance. There have been numerous studies into the causes of such deviance, including the effects that various variables have on deviance. One such relationship that has been previously studied is that between religion and deviance. This paper seeks to expand on that research by exploring that particular relationship with specific focus on adolescents. The study will analyze the effects that varying levels of religiosity corresponds with various types of deviance, as well as a general deviance scale comprised of differing individual deviance variables. Previous research has focused more specifically on individual variables, whereas this paper will analyze a variety of individual types of deviance as well as creating a general deviance scale. In order to effectively study this relationship between religiosity and deviance, the past literature on the topic must be taken into account.

Review of Past Research

Prior research suggests that religiosity is protective of deviance and research has explored a variety of facets that correspond to this relationship. Beginning in 1969 with Hirschi and Stark, the field of religiosity and deviance began with their results showing a lack of influence between religion and delinquent behavior (Chitwood, Weiss and Leukefeld 2008). After this, many more studies followed which aimed to explore this relationship further and to research why the results in Hirschi and Stark's "Hellfire and Delinquency" study did not garner the results many researchers had believed it would (Johnson, Jang, Larson and De Li 2001). Since then, many of the studies in the field of deviance and religiosity have focused on a few core concepts. Through systematic reviews and meta-analyses there is a

prevailing idea in the field that religious involvement always correlates to delinquent behavior, even when controlling for varying measurement characteristics (Kelly, et. Al 2014). Some previous research suggests that these results are not true across the board, but through these systematic reviews, researchers have been able to prove that the literature is not as varied and contradictory as others have suggested (Johnson, et al. 2000).

One of the relevant areas of study into religiosity and deviance has been the analysis of a spurious relationship. Some have argued that the results from the Hirschi and Stark experiment depict that the relationship between religiosity and deviance is in fact spurious (Johnson, Jang, Larson and De Li 2001). Some research has also been expressed in the idea that it is the parent's role that controls for the relationship between religiosity and deviance, and that the relationship between religiosity and deviance in adolescents is spurious because of this (Landor, et. Al 2011). Parent's involvement is frequently cited as a factor in the relationship between child's religiosity and deviance, for they teach their children their similar religiosity and values. The children internalize these views and this impacts their deviant behavior. Peer involvement and peer groups have also been claimed to be the factor behind the relationship between religiosity and deviance. Adolescents seek to fit in with those around them, and if they associate with others involved religious activities, that is the cause of the decreased risk of deviance not solely religious beliefs (Adamczyk 2012).

Additionally, some researchers argue that the relationship between religiosity and deviance can be explained through social bonding theory, as well as social learning theory (Jang and Johnson 2001). Social bonding theory postulates that religious individuals are bonded to a specific organization, their place of worship, that nonreligious adolescents are not. First hypothesized by Hirschi, social bond theory claims that because of attachment, commitment, involvement, and belief an individual is bonded to society and less likely to engage in deviance that could endanger that social bond (Desmond et al. 2008). Social learning theory adds that because religious youth have bonds that nonreligious youths do not have, they learn a specific set of values and rules that the other adolescents do not. Also, religious communities

enforce values upheld in morality and virtuous activities that adolescents learn from. Adolescents learn the social norms of their community and the values associated with religiosity affect their attitudes, social structure, and peers. This in turn affects their behavior and could be used to support various ideas of why religiosity has such an effect on deviance (Gryczynski and Ward 2011). Hence, there is some theoretical framework for understanding the relationship between religiosity and deviance, but it is not extensively developed or universally accepted.

When looking at how religiosity is characterized, studies show that there is no singular standardized definition of religiosity. Frequency of practice tends to be a factor traditionally used in religiosity studies. Others tend to include organizational religiosity variables which include participating in formal group religious activities such as youth groups or bible studies groups (Chitwood et al. 2008). Other traditional factors that focus on religiosity include religious affiliation which ties into denomination or what specific religious group one views themselves as a part of. There is also the aspect of religious belief that is frequently tied in with religiosity that simply focuses on the idea of whether or not one believes in God. An additional aspect of religiosity traditionally measured is subjective religiosity, where participants address the salience of their own religious beliefs (Johnson et al. 2000). Religious practices are traditionally included in the study of religiosity in the form of non-organizational religiosity measures which focus on religious activities that are individually based. Religious coping as a means of seeking support through praying for relief and comfort is also a typical aspect of religiosity measures. Finally, multi-dimensional aspects are used as a combination of the aforementioned practices and religiosity also traditionally includes a measure of spirituality (Chitwood et al. 2008). Though there is not a standardized aspect of religiosity, the factors mentioned above are either used individually or together traditionally to compose a religiosity measure.

Of the areas of deviance that are most commonly studied in regards to religiosity, most focus on drugs and alcohol. Religiosity, though mediated with parental and peer relationship, is negatively associated with cigarette smoking adolescents (Gryczynski and Ward 2010). In a systematic review of

religiosity and substance abuse studies, Chitwood and his team of researchers found that in 85 studies they looked at, 73 found a significant relationship between religiosity and alcohol use (Chitwood et al. 2008). When there was at least one aspect of religiosity studied, it significantly related to a drop in the risk of substance use. When looking at religious adolescents in relation to non-religious youth, the religious adolescents were less likely to engage in risky alcohol related behavior, such as drinking and driving (Wallace and Forman 1998). In addition to studies focusing on alcohol use, there has also been sufficient amount of research into the relationship between marijuana use and religiosity. In the same study as mentioned above carried out by Chitwood, in 31 of the 37 studies involving marijuana use, religiosity was found to be negatively correlated with marijuana use (Chitwood et al. 2008). Religiosity affects marijuana use in that religious adolescents are significantly more likely to never use marijuana than their less religious peers (Ulmer et al. 2010). Also, though there have been recent increases overall in marijuana use, religious students were relatively unaffected by these changes (Wallace and Forman 1998). Though not many, there has been some studies into the relationship between religiosity and other illicit drugs besides marijuana. Because there is a low number of studies of the effects of religiosity on cocaine/crack, opiates and other illicit drugs, it is difficult to draw conclusions on these relationships. However, for the most part, the relationship observed in these studies depicted at least one protective relationship (Chitwood, et al). Again, because of the limitations on the number of these studies the relationships cannot be generalizable.

One of the often cited factors for these relationships between religiosity and substance use is self-control. Some argue that because religious youth exhibit higher levels of self-control this is the mediating factor for the effect of religiosity on substance use (Desmond, Ulmer and Bader 2013). However, there is some contradictory studies as to the extent that self-control plays in the effects of religiosity and the usefulness of predicting deviance based off self-control and religiosity is limited.

Other areas of deviance that are typically focused on in regards to religiosity, is sexual behavior. Again, more religious adolescents are less likely to engage in activities that could compromise their health

which would include risky sexual behavior (Wallace and Forman). Overall, there is a negative relationship between religion and risky sexual activities, with parent's religiosity also having a significant effect on the reduction of their children's participation in risky sexual behavior (Landor et al. 2011). This relationship between parent's religiosity and subsequent teen's sexual behavior also ties in with the parent's authoritative parenting style, which in turn effects the adolescent's religiosity which then can lead to adolescent's being more likely to associate with other teens that are less sexually permissive (Landor et al. 2011). Hence, perhaps the relationship is again tied in with peer involvement and not simply a teen's individual religiosity or parental affect.

Peer involvement is also a frequently mentioned factor in the study of adolescent religiosity and deviance. Those who are involved in religion based activities are associated with less alcohol use than those involved in secular based groups. The strongest predictor for this is not simply involvement in a religious based activity, but rather the number of friends who also belong to a religious youth group (Adamczyk 2012). Hence, the effect that peers have can be tied into affecting not just one's deviance but also on their religiosity.

Objective

There is an extensive amount of research done studying the relationship between religiosity and deviance. While many individual studies have focused on one or two of the deviance variables above, including alcohol use, marijuana use, and sexual behavior there have been few that analyze a general deviance variable that incorporates many aspects of deviance into a single variable. The purpose of this study is to look deeper into the relationship between adolescent delinquency and self-reported religiosity

and to look at the effect that religiosity has for overall deviance. It analyzes the responses given on a variety of religiosity based questions and the impact that these have on a variation of deviant behaviors. The general deviance scale used is comprises of sexual behavior, smoking cigarettes, smoking marijuana, alcohol consumption, school deviance (cheating in school), and deviance in regards to parents (lying and keeping secrets from parents). These variables were chosen because they cover a wide variety of types of deviance including illegal behavior (marijuana and underage drinking), behavior in school, behaviors in the home, and behaviors that affect their health. The aim of the study is to see what effect religiosity variables have on deviance overall, as well as in each of those specific categories. The main research question seeks to explore what effect religiosity has on adolescent deviance taking into account various peer related variables. The main hypotheses that will be tested are:

1) Those who have higher levels of religiosity are less likely to engage in deviant behavior
2) There will be varying levels of deviance across denominations
3) Peer impact and perceived judgement by others will impact deviant behaviors and those that value more what other adolescents think will have higher degrees of deviance
4) General deviance will be less affected by individual levels of religiosity than individual variables of deviance will be

Chapter 2

Data and Research Methodology

Data

The data for this research comes from the National Study of Youth and Religion (NSYR), Wave 1. The study is nationally representative and was conducted through a telephone survey. The sample included English and Spanish speaking adolescents between the ages of 13 and 17 as well as their parents. For the purpose of this study, only Wave 1 was included as there is a specific focus on juvenile deviance. Wave 2 followed up on the same respondents at ages 16 through 21 and Wave 3 the respondents were between 18 and 24. These waves of data would not be relevant for this study is specifically looking at juvenile deviance and includes some variables aimed at studying deviance towards parents and deviant behavior in school. The NSYR oversampled Jewish households to have 80 Jewish respondents and a total of 3,290 teenagers and their parents. The purpose of the survey was to research the influence that religion and spirituality had on the lives of American juveniles, identify effective practices in the formation of a religious identity in adolescents, the effectiveness and magnitude of religious programs available to youth and to encourage informed discussion about the influence of religion on adolescent's lives. Since it is nationally representative and covers a wide variety of both religious based and deviance based questions, the dataset was applicable for the present study. This dataset is available to the public via the Association for Religious Data Archive (ARDA) and because it is publicly available, the study was exempt from needing IRB approval (See Appendix A).

Strengths and Limitations of Dataset

As the dataset is nationally representative, it makes the results generalizable to adolescents who fall within the same age range, aged 13 through 17, in the study. One of the limitations found when choosing variables in the dataset, was the variables that dealt with peer relationships. There was none that specifically mentioned other religious peers, as well as none that directly addressed fellow deviant peers. Regardless, the variables chosen cover the necessary grounds to warrant the usage of the dataset.

Independent Variables

The purpose of this study is to analyze the effects that religiosity has on deviance in adolescents. The independent variables are those that focus on religiosity and included denomination, frequency, strength, practices, and social activities. These variables were chosen based off the factors traditionally used in the previous research. Denomination was analyzed through creating dummy variables to represent the categories of: Protestant, Catholic, Jewish, Muslim, other and not religious. Protestant included both protestants and other Christians. Frequency of practice was measured by the attending religious services more than once or twice a year not counting weddings, baptisms, and funerals and was coded as: 0 being no and 1 being yes. Strength of belief was measured through two variables including whether or not the respondent believes in God, or not and whether or not they related more to being spiritual than religious. Belief in God was coded as 0 for Yes and 1 for No. Spirituality was addressed through the question: "Some teenagers say that they are "spiritual but not religious" How true or not would you say that is of you?" and this was scaled from 0 being very true, 1 somewhat true, and 2 Not true at all. Religious practices included a combination of numerous religious practices that were asked to all respondents regardless of whether they indicated if they were religious or not. Responses were coded as 0= No and 1= Yes for all of the included religious practice variables. The variables included if the juvenile reported viewing religious or spiritually-oriented websites, attended a religious Sunday school or

other religious education class, burned candles that had religious or spiritual meaning, attended a religious concert, practiced a religious or spiritual meditation technique, worn jewelry or clothing that expressed religious beliefs, fasted or denied themselves something as a spiritual discipline, listened to religious music, and practiced a weekly day of rest to keep the Sabbath. Social activities were measured through the question how openly participants expressed their religious beliefs at school and were coded 0= a lot, 1= some, 2= a little, 3= none and 4= Does not apply. These independent variables were selected to cover a wide basis of individual religiosity including subjective religiosity, religious belief, non-organizational practices, religious affiliation, spirituality, and organizational religiosity (Chitwood, et. Al 2008).

Dependent Variables

Dependent variables were used to analyze the effects aforementioned religiosity variables had on deviance. Individual variables were looked at as well as combination of deviant behavior to calculate an overall general deviance variable. The general deviance variable was a cumulative scale comprising of deviance towards parents (keeping secrets from parents and lying to parents), sexual behavior (viewing X-rated pornographic websites, viewing X-rated pornographic videos, movies or cable programs, engaging in oral sex, engaging in sexual intercourse and number of times engaging in sexual intercourse), drugs and alcohol (ever having smoked cigarettes, frequency of alcohol consumption, frequency of getting to the level of drunk and frequency of marijuana use), and school deviance (cheating on assignments or homework in school, cutting class and ever having been suspended). Deviant behavior towards parents was measured through how often participants lied to their parents, which was coded 0= Never, 1= Rarely, 2= Occasionally, 3= Sometimes, 4= Fairly often and 5=Very often. It also includes how often they engaged in behavior they hoped their parents would not find out about, which was coded the same as lied to their parents. The next deviant variable studied was sexual behavior which comprised of five variables. Two of these focused viewing pornography, one focused on viewing X-rated,

pornographic movies, videos or cable programs and was reported on a scale from 0-6 continuously and then 7-10, 11-20, 20-50 and 51-100. The other was viewing X-rated, pornographic websites and was coded 0= Never, 1= less than once a month, 2= About once a month, 3= A few times a month, 4= About once a week, 5= A few times a week and 6= About once a day. The other sexual behavior variables included ever engaging in oral sex either 0=No and 1= Yes, and ever engaged in sex 0= No and 1=Yes. The next category of deviance studied was drugs and alcohol. This comprised of regularly smoking cigarettes, either 0= No or 1= Yes. Alcohol consumption was measured by how often one drank alcohol not at religious services, coded as 0= Never, 1= A few times a year, 2=About once a month, 3= A few times a month, 4= About once a week, 5= A few times a week, 6= Almost every day. Alcohol consumption also included a variable of how often, if ever, respondents got drunk in the last year, coded as 0= Never, 1= Once or twice, 2= A few times, 3= Every couple of weeks, 4= Once a week, and 5= More than once a week. Marijuana frequency was measured as 0= Never, 1= You tried it once or twice, 2= You use it occasionally, and 3= You use it regularly. Finally, deviance in school was measured by analyzing cheating in school, cutting class, and number of times being suspended or expelled. Cheating in school was scaled the same as lying to parents and doing things they hoped their parents would not find out about. Cutting class was coded 0= Never, 1= Once or twice, 2= 3-5 times and 4= More than 5 times. Suspended was measured as 0= Never 1= at least once. All categories were combined to form a cumulative overall general deviance measure. The variables individually analyzed were smoking cigarettes, lying to parents, smoking marijuana, alcohol consumption, sexual intercourse, and cheating in school to represent each category of deviance studied.

Control Variables

The control variables in this study included variables involving peer relationships as they could have a spurious relationship with deviance. These included whether or not the student would report being part of the popular group in school, scaled from 0= A lot, 1=Some, 2=A little, and 3=None. Another variable was whether or not other students generally look down on teens who are openly religious or not, scaled 0= Yes, 1= No. How important it is to them that other kids think they are cool was coded as 0= Extremely important, 1= Very important, 2= Somewhat important, 3= Not very important, 4= Not important at all. These are important because this could more affect a teen's expressed religiosity and also have an impact on their deviance. If a teen is impacted by other student's beliefs this could have an outcome on the dependent variables. Also, the study aimed to see if those who were more affected by other's views had an effect on their deviance because this could too impact the effect that religiosity had on deviance.

Method of Analysis

To analyze the predictor variables effect on the outcome variables, either binary logistic regression or linear regression was used. Binary logistic regression was used for dependent variables that were dichotomous, with responses being either yes or no. This was utilized for the dependent variables of ever having smoked cigarettes and ever engaging in sexual intercourse. Linear regression was used in cases of ordinal or interval dependent variables. This was done for the general deviance scale, smoking marijuana, alcohol frequency, lying to parents and cheating in school.

Chapter 3

Findings

Table 1 Smoking Cigarettes Binary Logistic Regression

N= 3073

Do you smoke cigarettes regularly, that is, at least 1 cigarette a day, or not? 0= No, 1= Yes

Smoked Cigarettes- Logistic Regression	Full Model		Reduced Model	
Protestant is the reference category	Odds	p-value	Odds	p-value
Jewish	.458	.194	.441	.170
Catholic	.660	.063	.671	.050
Muslim	.000	.999		
Not religious	1.139	.559		
Other	1.971	.033	1.894	.037
Combination of Practices	.966	.012	.963	.005
Attend Services	1.011	.957		
Believe in God, or not	1.628	.007	1.635	.004
Spiritual but not religious	.781	.023	.776	.018
Openly express beliefs at school	.720	.000	.701	.000
Part of the popular group	.802	.006	.799	.005
Other students look down on those who are openly religious	.853	.377		
Important or unimportant to fit in with other teens	1.252	.001	1.260	.000

Table 1 uses logistic regression to explore the relationship between smoking cigarettes and the independent religiosity and control variables. Analyzing the results shows that the only denominations that was statistically significant for relationship with smoking cigarettes were Catholics and those that

reported a religion other than the ones listed. From the regression, Catholics were associated with 33% lower odds of smoking cigarettes than Protestants (the reference category) at a statistically significant level of .05. Also, those who reported a different religion than the one's stated in the table were at an 89% increase in odds of smoking cigarettes than Protestants at a .037 significance. Those that engaged in a combination of the aforementioned religious practices were at a lower odds of smoking cigarettes at a statistically significant rate of .005. Those who reported they did not believe in God were at 63% higher odds of smoking cigarettes than those who did not at a statistically significant rate. Respondents who disagreed with the statement of being spiritual but not religious were at a .776:1 odds of smoking cigarettes at a statistically significant rate. Those that reported agreeing with the statement of being more spiritual than religious were at a higher likelihood of smoking cigarettes at a statistically significant rate of .018. Those who reported openly expressing their religious beliefs at school were at a .701 decrease in odds at a statistically significant rate. Hence the less likely one was to openly express their religious beliefs at school, the less likely they were to smoke cigarettes. Those who were more likely to report being in the popular group were at a statistically significant rate more likely to report smoking cigarettes. For every decrease in view of involvement in the popular group, there was approximately a 20% reduce in odds of smoking cigarettes. Finally, teens who reported that it was more important for them to fit in with other teens thought was cool were less likely than those who valued fitting in with a 26% increase with each decrease in interval of importance.

Table 2 Lied to Parents Linear Regression (OLS)

N= 3074 r^2= .006

In the last year, how often, if ever, did you: Lie to your parents? Coded 0=Never 1= Rarely 2= Occasionally 3= Sometimes 4= Fairly often 5= Very often

Lied to Parents OLS	Full Model			Reduced Model		
Protestant is the reference category	B	B	p-value	b	B	P-value
Jewish	-1.244	-.007	.687			
Catholic	-.670	-.009	.647			
Muslim	-.095	.000	.991			
Not religious	3.297	.042	.152	4.743	.042	.027
Other	-1.333	-.008	.668			
Combination of Religious Practices	.003	.000	.981			
Attend services	1.842	.024	.285			
Believe in God, or not	2.626	.032	.114	2.864	.025	.201
Spiritual but not religious	.484	.010	.572			
Openly express religious beliefs	-.664	-.028	.296			
Part of the popular group	1.508	.046	.013	1.718	.037	.041
Other students look down on those who reflect their religious views	1.153	.015	.411			
Important or unimportant to fit in with what is cool	.721	.027	.153	1.197	.031	.085

Table 2 explores the relationship between the dependent variable, lying to parents, and the various independent religiosity variables and peer control variables. Of the reported denominations, only those who reported being not religious were at a statistically significant rate. Those who reported being not religious were associated with a .042 increase in lying to their parents as compared to the reference group, Protestants at a significance rate of .027. Of the peer control variables, the only statistically significant variable in the reduced model was to how much respondents would report being part of the popular group at school. Being less likely to report being in the popular group is associated with a .037 increase in lying to parents at a significance of .041.

Table 3 General Deviance Linear Regression (OLS)

N= 3009 r^2 = .009

General deviance is comprised of sexual behavior, smoking cigarettes, smoking marijuana, alcohol consumption, school deviance (cheating in school), and deviance in regards to parents (lying to parents and keeping secrets from parents)

General Deviance-OLS	Full Model			Reduced Model		
Protestant is the reference category	B	B	p-value	b	B	P-value
Jewish	-.187	-.001	.968			
Catholic	-3.107	-.028	.141	-3.248	-.030	.093
Muslim	-3.341	-.005	.788			
Not religious	.927	.008	.780			
Other	-1.949	-.008	.663			
Combination of Religious Practices	-.250	-.031	.101	-.238	-.030	.101
Attend services	-.018	.000	.994			
Believe in God, or not	2.458	.021	.306			
Spiritual but not religious	-1.954	-.029	.115	-1.934	-.023	.106
Express your beliefs	1.286	.038	.159	1.707	.051	.006
Part of the popular group	-.445	-.009	.612			
Other students look down on those who reflect their religious views	1.524	.014	.451			
Important or unimportant to fit in with what is cool	1.444	.037	.047	1.417	.037	.038

Table 3 uses OLS regression to analyze the relationship between general deviance and the explanatory variables. In the reduced model, the only variables that were significant at less than a .005 level were expressing beliefs openly at school and view of whether or not respondents feel it is important or unimportant to fit in with what is cool. The less likely someone was to openly express their religious beliefs at school was associated with a .051 increase in general deviance. Also, teens who viewed it less important to fit in with what others believed was cool were associated with a .037 increase on the general deviance scale.

Table 4 Smoke Marijuana Linear Regression (OLS)

N= 3071 r^2= .061

How often, if ever, have you used marijuana? Scaled 0= Never, 1= tried it once or twice 2= Used occasionally 3= used regularly

Smoke Marijuana						
Protestant is the reference category	B	B	p-value	b	B	p-value
Jewish	.131	.030	.098	.158	.036	.043
Catholic	-.029	-.015	.428			
Muslim	.095	.008	.657			
Not religious	.026	.008	.783			
Other	.333	.048	.008	.333	.048	.007
Combination of Religious practices	-.005	-.034	.062	-.005	-.036	.047
Attend Services	-.037	-.011	.594			
Believe in God or not	.272	.080	.000	.284	.084	.000
Spiritual but not religious	-.076	-.039	.029	-.073	-.038	.034
Openly express religious beliefs	.063	.105	.000	.066	.109	.000
Part of the popular group	-.222	-.163	.000	-.222	-.162	.000
Other students look down on those who are openly religious	-.168	-.052	.003	-.166	-.052	.003
Important or unimportant to fit in with what is cool	.064	.057	.002	.066	.059	.001

Table 4 studies the relationship between frequency of marijuana use and the independent and control variables. Of the different denominations, the only two that had statistically significant results at the .05 level were those who reported being a religion other than the ones listed and those who reported being Jewish. The respondents who reported a religion other than those listed were associated with a .055 increase in marijuana usage. The Jewish respondents were associated a .036 increase in marijuana usage in comparison to the reference group, Protestants. When looking at the religiosity variables those that were significant were those that practiced a combination of the religious practices, belief in God, and expressing religious beliefs at school. Each increase in number of religious practices that respondents engaged in was associated with a .036 decrease in marijuana usage. Those who stated they did not believe in God were associated with a .113 increase in marijuana frequency. Finally, those who did not openly express their religious beliefs at school had a .109 increase in marijuana usage. Of the peer control variables tested, all three were statistically significant. The less likely one was to report being part of the popular group was associated with a .130 decrease in marijuana usage. Second, those who reported that other students did not generally look down on teens who were openly religious were associated with a .35 decrease in marijuana usage. Finally, those who were more likely to report that it was not important to fit in with what teens their age think is cool were associated with a .091 increase in marijuana frequency.

Table 5 Alcohol Consumption Linear Regression (OLS)

N= 3073 r^2= .055

How often, if at all, do you drink alcohol, such as beer, wine, or mixed drinks, not including at religious services? Scaled: 0=Never, 1= A few times a year, 2= About once a month, 3= A few times a month, 4= About once a week, 5= A few times a week, 6= Almost everyday

Drink alcohol	Full Model			Reduced Model		
Protestant is reference category	b	B	p-value	b	B	p-value
Jewish	.334	.046	.010	.356	.050	.005
Catholic	.098	.031	.099	.093	.029	.100
Muslim	-.534	-.027	.129			
Not religious	.026	.008	.783			
Other	.333	.048	.008	.333	.048	.007
Combination of Religious Practices	.004	.018	.322			
Attend services	-.037	-.011	.594			
Believe in God or not	.272	.080	.000	.284	.084	.000
Spiritual but not religious	-.076	-.039	.029	-.073	-.038	.034
Openly express religious beliefs	.099	.101	.000	-.105	.107	.000
Part of the popular group	-.222	-.163	.000	-.22	-.162	.000
Other students look down on those who are openly religious	-.168	-.052	.003	-.166	-.052	.003
Important or unimportant to fit in with what is cool	.064	.057	.002	.066	.059	.001

Table 5 uses OLS to explore the relationship between alcohol frequency consumption and the different independent and control variables. Of the denominations, only other and Jewish respondents had results that were statistically significant. Those who reported being a religion other than the ones listed were associated with a .048 increase in alcohol consumption when compared to the reference group of Protestants. Jewish respondents had a .050 increase in relation to alcohol consumption. When looking at the various religiosity variables, only belief in god, spiritual but not religious, and openly expressing religious beliefs at school were statistically significant. Those who were more likely to report believing in God were associated with a .084 decrease in frequency of alcohol consumption. Respondents who were more likely to disagree with the statement that they were spiritual but not religious were associated with a .038 decrease in frequency of alcohol consumption. Finally, teens who reported being less likely to openly express their religious beliefs at school were associated with a .107 decrease in frequency of alcohol consumption. Of the control peer relationship variables, all three were statistically significant at a rate under .003. The adolescents who reported that other students did not generally look down on teens who are openly religious were associated with a .052 decrease in alcohol consumption. With every change from a lot to none in regards to how much one would say they were a part of the popular group was associated with a .162 decrease in frequency of alcohol consumption. Finally, those who gave less importance to fitting in with what teens their age think is cool was associated with a .059 decrease in likelihood of alcohol consumption.

Table 6 Sexual Intercourse Logistic Regression

N= 3074

Have you ever had sexual intercourse, or not? Scaled: 0=No, 1=Yes

Sexual Intercourse-Logistic Regression	Full Model		Reduced Model	
Protestant is the reference category	Odds	p-value	Odds	p-value
Jewish	.737	.289		
Catholic	.711	.010	.720	.008
Muslim	.642	.572		
Not religious	.932	.705		
Other	1.294	.291		
Combination of Practices	1.001	.905		
Attend Services	.844	.213		
Believe in God, or not	1.485	.002	1.536	.001
Spiritual but not religious	.834	.011	.823	.006
Openly express beliefs at school	1.159	.007	1.159	.000
Part of the popular group	.620	.000	.623	.000
Other students look down on those who are openly religious	.775	.027	.765	.020
Important or unimportant to fit in with other teens	1.260	.000	1.269	.000

Table 6 uses binary logistic regression to explore the relationship between ever engaging in sexual intercourse and the independent and control variables. Of the denominations reported, only Catholics responded to having sexual intercourse at a statistically significant rate of .008. Reporting being Catholic gives .720 less of odds of reporting sexual intercourse than the reference category of Protestants. Of the religiosity variables, only belief in God, spiritual but not religious and openly expressing religious beliefs at school were statistically significant. Juveniles who reported not believing

in God were associated with odds that are 53% greater than those who reported believing in God to engage in sexual behavior at a .001 significance. Those who were more likely to disagree with the statement that they were spiritual but not religious had an increase in odds of .823 in engaging in sexual behavior. Students were reported being less likely to openly express their religious beliefs at school were associated with nearly a 16% increased likelihood to engage in sexual behavior. Of the control peer variables, all were statistically significant. The less likely one was to report being a part of the popular group was associated with a .623 decrease in odds. Those students who reported that other students did not look down upon teens who are openly religious had less odds of engaging in sexual intercourse. Lastly, the teens who placed less importance on fitting in with what teens their age think is cool were at 26% greater odds of engaging in sexual behavior.

Table 7 Cheated in School Linear Regression (OLS)

N= 3073 r^2= .024

In the last year, how often, if ever, did you: Cheat on a test, assignment, of homework in school? Coded 0=Never 1= Rarely 2= Occasionally 3= Sometimes 4= Fairly often 5= Very often

Cheated in School OLS	Full Model			Reduced Model		
Protestant is the reference category	b	B	p-value	b	B	p-value
Jewish	-.162	-.021	.254			
Catholic	.055	.014	.400			
Muslim	.172	.008	.655			
Not religious	-.155	-.044	.128	-.164	-.047	.070
Other	-.023	-.003	.868			
Combination of Religious Practices	.004	.014	.440			
Attend Services	-.090	-.026	.238			
Believe in God, or not	.094	-026	.200	.114	.031	.109
Spiritual but not religious	-.048	-.023	.210			
Openly express religious beliefs	.055	.052	.051	.063	.059	.020
Popular group	-.196	-.133	.000	-.201	-.137	.000
Others look down on teens who are openly religious	-.202	-.058	.001	-.208	-.060	.001
Important or unimportant to fit in with what's cool	-.020	-.016	.378			

Table 7 uses OLS regression to explore the relationship between lying to parents and the different denominations, religiosity variables and control variables. None of the different denominations were related to cheating in school at a statistically significant result. The only religiosity variable that had a

significant relationship was openly expressing religious beliefs at school with a significance of .020. Those who were less likely to report openly expressing their religion at school were associated with a .059 increase in cheating in school. Of the peer control variables, only reporting how much they were in the popular group and responses to others look down on teens who are openly religious. Those that were less likely to report being a part of the popular group were associated with a .137 decrease in cheating in school at a .000 statistically significant rate. Finally, juveniles who reported that other students did not look down upon those who were openly religious were associated with a .060 decrease in cheating in school at a .001 statistically significant rate.

Chapter 4 Discussion

Review of Hypotheses

The data analysis detailed above was done in order to explore the potential relationship between the various religiosity variables and overall general deviance, as well as specific deviant behaviors in adolescents. With the regression analysis, some conclusions can be drawn about the validity of the previously mentioned hypotheses. Below, each hypothesis will be reviewed in greater depth to explain the level of support each had through the data.

Hypothesis 1: Those who have higher levels of religiosity are less likely to engage in deviant behavior: Supported

In some of the deviance variables religiosity had a stronger effect than in others. In the general deviance scale, the only significant religiosity variable was those who openly expressed their religious beliefs at school and it showed that the less likely someone was to express their religious beliefs at school was associated with a positive increase in general deviance. Since the combination of religious practices and belief in God were not significant in this case, perhaps the reason for the effect seen here is that people who were outwardly religious felt a higher obligation to uphold said values. On the individual deviance variables, the results also supported the hypothesis. For instance, sexual intercourse regression showed that those who reported believing in God were less likely to engage in sexual intercourse, as well as those who openly expressed their religious views and students who were more religious than spiritual. This was seen in marijuana usage, and more significantly in this case was the fact that the increase in number of practices showed a decrease in likelihood of marijuana usage. This is particularly significant because as the combination of religious practices variable was on a cumulative scale, for every one increase in religious practices engaged in was a significant decrease in marijuana usage. Thus those who

engaged in many of the religious practices were very less likely than those who engaged in none or even a few of the religious practices to use marijuana. This is also seen in cigarette smoking, for with every additional practice one engaged in, there was a 4% decrease in likelihood of smoking cigarettes. Also, those who reported believing in God were less likely to smoke marijuana and those who did not openly express their religious beliefs were more likely to use marijuana. This was also seen in frequency of alcohol consumption, for those who did not believe in God were associated with an increase in alcohol consumption, those who did not agree they were spiritual but religious decrease in alcohol consumption and those who did not openly express religious beliefs were associated with an increase in alcohol consumption. With deviance in regards to school, those who did not openly express their religious beliefs were associated with a higher likelihood of cheating in school. Those who reported being not religious were more likely to lie to their parents than any other denomination.

All of this together depicts how the combination of religiosity variables used all showed that the more religious a person was, whether that was engaging in greater number of religious practices, believing in God, being more religious than spiritual or openly expressing their religious beliefs all correlated with a decreased likelihood in deviance across all types of deviance tested. Although not all of the religiosity variables were always significant, there was never a relationship where increased religiosity related to greater levels of deviance. Perhaps some of the reason why some of the religiosity variables were stronger than others were mediated by the peer effects or type of deviance. However, overall the original hypothesis that increased religiosity would relate to decreased levels of deviance was depicted in the data.

Hypothesis 2: There will be varying levels of deviance across denominations: Partially supported

In the analysis of the data mentioned above, there were some instances in which the deviance levels varied across denominations; however, for the most part the differences were not significant or in only a few of the categories. For instance, in cigarette smoking, only those who reported being a different

religion than the ones listed had a significant relationship and were of greater likelihood of smoking cigarettes than Protestants. As previously mentioned, those who reported not being religious were correlated to higher likelihood of lying to their parents in comparison to Protestants. When looking at the data on sexual intercourse, only Catholics had less odds of engaging in sexual intercourse than Protestants at a significant level. Marijuana and alcohol were the only two deviance variables that had more than one denomination at a significant rate. Jewish and other respondents were associated with a higher likelihood of frequency of alcohol consumption and marijuana usage in comparison to Protestants. When looking at general deviance, none of the denominations were statistically significant.

Hence, though some of the denominations were significant, for the most part the results do not really tell much about the differing levels of deviance in regards to varying denominations. This could lead one to conclude that perhaps it is not the particular religions or religious teachings that matter, but the degree that one practices religion overall. Since there were no major differences between the denominations it would not support this hypothesis, and seems to suggest that religiosity, not affiliation, is what is important to the relationship with deviance.

Hypothesis 3: Peer impact and perceived judgement by others will impact deviant behaviors and those that value more what other adolescents think will have higher degrees of deviance: Somewhat

In some of the variables, the relationship between more importance placed on being popular and fitting in with what was cool was associated with higher levels of adolescent deviance, whereas in some of the variables this relationship was not observed. Most significantly to this study, in the case of the general deviance scale, the only peer related variable that was significant was placing importance on fitting in with other adolescents thought was cool. Of that variable, those who placed less importance on what was cool were associated with higher levels of general deviance which is contradictory to this hypothesis. The only deviance variable that was significant that did not show that those who viewed themselves more in the popular group to be at a higher likelihood was lying to parents. However, when

looking at those who valued fitting in with what was cool more, the same relationship is not evident. Those who were more likely to report that it was less important to fit in with what was cool were more likely to smoke marijuana, consume alcohol, smoke cigarettes, and have had sexual intercourse. Students who reported that other students look down on those who reflect their religious beliefs were less likely to smoke marijuana, cheat in school, to consume alcohol and have sexual intercourse.

Thus, some parts of the hypothesis are supported but others are not. Those who view themselves in the popular group are more likely to engage in the deviant act, and one would think that by extension the people who place more importance on fitting in with others think is cool would also correlate to higher levels of deviance. However, perhaps those who view themselves in the popular group, do not place much importance on what other's think because they already believe they are fitting in with what is cool. It is also interesting to see that teens who do not believe that openly expressing religious beliefs is looked down upon perform higher levels of individual deviant acts.

Hypothesis 4: General deviance will be less affected by individual levels of religiosity than individual variables of deviance will be: Supported

As previously stated when discussing the first hypothesis, there were few variables that impacted general deviance at a statistically significant level. The only significant religiosity variable was socially expressing religious beliefs, which showed that those who were more likely to openly express their religious beliefs were less likely to engage in deviance overall. However, on all the other variables at least one other religiosity variable affects the level of deviance. It seems only practical that with a scale as varied as the general scale, individual changes in religiosity would not have as substantial effect as on specific acts of individualized deviance.

Discussion

Overall, the results shown supported the different hypotheses but there were a few factors that are interesting to note. It appears that social religiosity, in particular openly expressing one's beliefs at school, is one of the greatest predictors of deviance. Individual practices in juveniles was not as large of an effect on deviance as one would have predicted. Perhaps, those who openly express their beliefs have a stronger religiosity, especially for adolescents, because in order to openly express them they must deeply believe them. If such beliefs are so ingrained, then this would also have explained why it has such a profound effect on lowered levels of deviance. What was surprising, was the lack of strong effect that the combination of religious practices had on deviance. The only deviance variables that were affected by the combination of religious practices at a statistically significant level were smoking marijuana and smoking cigarettes. Perhaps, the number of activities that one engages in does not have as significant of an effect unless they are deeply ingrained. Another interesting to note, is that attendance of services was not significant in predicting any of the deviant variables. Thus, similar to practices, perhaps actually engaging in the activity is not what is what causes the effects on deviance but an internalization of said beliefs.

When looking at the r-squared values across the regressions, it is clear that some of the models fit better than others. In particular, the general deviance scale has a r-squared value of only .09 which indicates that there is a great deal of variability within the regression. This could be relevant as to why many of the variables are not statistically significant.

Areas for Future Research

The study provides many interesting insights into the relationship between religiosity and deviance, but there is still adequate research that could be put into the criminology field. One question that remains unanswered that would be an area for future research to explore would be that of the effect that different religions have on individual levels of deviance. Perhaps different religious norms would be learned to varying levels which would impact levels of deviance to vary to a significant level. This study did not find any significant relationship between specific denominations and deviance, but perhaps future studies could illuminate why this is. Seeing as different religions have different teachings, it is interesting to note that it is not the specific religion's teaching that have an effect, but rather religiosity overall that appears to influence deviant behavior. Future research into this could provide some insightful knowledge as to why this is. Also, an area that could be explored further is that of what direct influence religious peers and deviant peers have. The control variables in this study looked at how others view religious youth and importance of being popular or cool, but future research could analyze what direct effect deviant peers have on each other and also religious peers have on each other. Perhaps another area that future research could explore is the results that showed those who reported that others were less likely to look down on those who openly expressed their religious beliefs were more likely overall to engage in deviant behavior. One other area in this field that could be explored is the relationship between religiosity and violence in adolescents. None of the variables in the National Study of Youth and Religion dealt with violence and it would be interesting to see how religion mediates this relationship. Finally, future research could address if some specific practices have more of an effect on deviance than others and particularly which types of deviance are directly affected. The combination of religious practices used in this study was significant in some of the variables but not all of them, so perhaps future research could address if there is some practices that have a greater effect than others

Chapter 5 Conclusion

The objective of the study was to explore what affect individual religiosity had on adolescent deviance and as predicted by the hypotheses, and prior research, those with higher levels of religiosity were associated with lower levels of deviance. This relationship was seen across all types of deviance, with less of an impact on the cumulative deviance scale. Overall, the results found in this study add to the field of religion and deviance by showing how individual acts of deviance are greater affected by religiosity than a total deviance scale and that specific denominations generally do not engage in a greater number of deviant acts than in comparison to each other. The field of religion and deviance is very imperative to understanding deviance overall, for religion is one of the most important social institutions that clearly has a profound effect on deviance. If the factors that influence deviance can be better understood, then perhaps the causes of deviance and its effects can be better understood as well.

Appendix A IRB Approval

PENNSTATE

IRB Program
Office for Research Protections

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NOT HUMAN RESEARCH

Date: November 9, 2016

From: Julie James, IRB Analyst

To: Margaret Purcell

Type of Submission:	Initial Study
Title of Study:	Relationship between Religiosity and Deviance
Principal Investigator:	Margaret Purcell
Study ID:	STUDY00005880
Submission ID:	STUDY00005880
Funding:	Not Applicable

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not meet the definition of human subject research as defined in 45 CFR 46.102(d) and/or (f). Institutional Review Board (IRB) review and approval is not required.

The IRB requires notification and review if there are any proposed changes to the activities described in the IRB submission that may affect this determination. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

This correspondence should be maintained with your records.

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