THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF SOCIOLOGY AND CRIMINOLOGY

Religiosity and Adolescent Participation in Deviant Behaviors

MADISON CAMPSEY
SPRING 2024

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degree
in Criminology
with honors in Criminology

Reviewed and approved* by the following:

Jeffrey T. Ulmer
Professor of Sociology and Criminology
Thesis Supervisor

Stacy Silver
Associate Professor of Sociology and Human Development and Family Studies
Honors Advisor

*Electronic approvals are on file.

ABSTRACT

The impact of religion has long been debated by criminologists with studies showing varying results. For this study, I utilized Wave I of the National Longitudinal Study of Adolescent to Adult Health to analyze the effects of religiosity on adolescent deviant behaviors including substance use and violence. In addition, I analyzed the effect of gender on the results. My results supported social control theory in that no significant results were found to support a correlation between religiosity and adolescent deviant behavior past a bivariate relationship. With this effect, there was no gendered results regarding religiosity's impact. However, a mild inverse relationship of gender and violence was observed supporting the well known concept that crime is gendered.

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

Chapter 1

Introduction

Since the beginning of society, religion has been a significant factor in lives of humans and it continues to be found everywhere in the world today. "[M]ore than eight-in-ten people identify with a religious group" worldwide with the third largest group being "unaffiliated" (PRC 2012). In a landscape study on religion in the United States by the Pew Research Center, it was found that 89% percent of respondents have a belief in God carrying across differing religions (PRC 2024). People find their lives to be impacted by their beliefs in varying ways, ranging from the most miniscule thought to a thoroughly dictated lifestyle. The extent to which one is religious is the concept of religiosity. The dictionary defines religiosity as "the quality or state of being religious[;] religious feeling or devotion," and it is evident that one's belief in God and their level of religiosity is not the same as the next person's (Mirriam-Webster 2024).

As history has proven, belief drives humans to do extraordinary things, fighting for their beliefs to be upheld, respected, followed. Consequently, it can impact how people treat others or whether to follow societal norms or laws. Rejecting societal norms or acting outside of the law are proper examples of deviance. Adolescent deviance has persisted in society and evolved to include behaviors such as substance use and engagement in violence. The Centers for Disease Control and Prevention (CDC 1991) describes adolescence as "a critical phase of development and is frequently a period of initiating and engaging in risky behaviors" (CDC 2023).

The 1990s was a time period marked by significant substance use in adolescents, as studies such as the 1990 Youth Risk Behavior Survey have demonstrated (CDC 1991; CDC 1992). This thesis aims to understand the relationship of religiosity and crime in adolescents by utilizing another study from the 1990s, the 1994 data collection of the National Longitudinal

Study of Adolescent to Adult Health. The broad question that encompasses the discipline of

criminology regards why people commit crimes, what drives them to do so, and what factors

deter criminal actions. Therefore, it is the goal of this paper to answer the following questions:

How does religiosity affect adolescent participation in violent behaviors versus alcohol and drug

behaviors? In what ways do men and women differ in how religiosity affects participation in

deviant behaviors?

Chapter 2

Literature Review

The relationship of religiosity and deviance has been of extensive interest to criminologists for decades. The beginning of this research started in the 1960s with Hirschi and Stark's "Hellfire and Delinquency" study and the surprising finding that there was not a significant relationship between religiosity and delinquency. A jumpstart of studies followed with the general consensus of an inverse relationship (Kelly et al. 2015). Researching a relationship between these two concepts is an extension of the goal in the field of criminology to find the reason behind individual's criminal actions or a lack thereof; theories of protective factors, including social control, and arousal may impact this.

Salas-Wright, Vaughn, Hodge, et al. explain that "[i]n response to the issues of adolescent substance use, violence, and delinquency, researchers have attempted to identify protective factors that can serve to buffer youth from involvement in problem behaviors" (2012). There is a wide range of protective factors that research has found to potentially foster positive development of adolescents in order to combat risk factors that could lead to delinquency. Established "factors include neighborhood social control, positive school attachment, consistent parental monitoring, prosocial peer bonds, belief in the moral order, and social skills such as empathy and self-control" and range "across multiple levels including community, school, family, peers, and the individual" (Salas-Wright, et al. 2012). Religiosity as a protective factor has had growing literary support, especially in the twenty-first century (Salas-Wright, et al. 2012).

Social control theory in regards to religion as a protective factor has two sides of reasoning. The first argues that religion is a factor preceeding other social controls that prevent

an environment of deviance: "[o]nce these other social controls are added to the religion-crime equation, the inverse, bivariate correlation between religion and deviance reduces to nonsignificance" (Cochran, Wood, and Arneklev 1994). The other side states that "other more powerful sources of control mask or duplicate the influence of religion" (Cochran et al. 1994). Social control theory does not deny the correlation between religion and deviance. Rather, the social controls that are associated with reduced deviance are produced by religion and religiosity and so religion itself is not preventative. Arousal theory argues that "persons vary in the degree to which they are neurologically predisposed to criminality" and "those prone toward criminality are said to become bored quickly and easily" (Ellis 1987, Cochran et al. 1994). It is believed that criminal behaviors are used to satiate this, especially those without other legal opportunities; qualities of such people include being "highly impulsive, risk-taking thrill-seekers, and they are unlikely to find religion and/or religious services neurologically satisfying" (Cochran et al. 1994). Thus, social control and arousal theories are "challenges" to deviance's relationship to religiosity (Cochran et al. 1994).

Religiosity has often been measured by the importance of religion in an individual's life, sometimes categorized into levels, and/or by church attendance (Kelly et al. 2015; Johnson et al. 2000; Salas-Wright et al. 2012). Deviant behaviors in adolescence have been measured in research by participation in delinquent activities. Delinquency is youth participation in criminal activities like violence and substance use, among others such as theft and vandalism (Cochran et al. 1994; Salas-Wright et al. 2012). To address my first research question, how does religiosity affect adolescent participation in violent behaviors versus alcohol and drug behaviors, prior research regarding religiosity and violence and religiosity and substance use are of interest.

Regarding the former, the level of severity in violent behavior differs in its relationship with religiosity. In a study published in 2012, individuals with higher religiosity showed larger decreases in likelihood of fighting (40%) compared to those who do not engage in religion. Even those with more mild religious involvment still were 23% less likely to participate in fighting (Salas-Wright et al. 2012). This study was found not only consistent with a negative relationship of religiosity and violence, which much of previous research suggests, but also a negative relationship among religiosity and substance use. Another study, however, enacted out of skeptical views of the relationship of religiosity and adolescent delinquency in 1994 had opposing findings. Cochran et al. found that controlling outside factors such as social control and arousal theories shows a reduced significance for delinquent behaviors that are not involving legal substances, such as "assault, theft, vandalism…and truancy" (Cochran et al. 1994). This finding, specifically of assault and theft, is consistent with Kelly et al.'s "meta-analysis of 62 relevant studies over four decades" that had the overarching finding that religiosity has less of an effect on more severe crimes having to do with violence, such as assault, because of a general lack of support from citizens regardless of religiosity (2015). These larger crimes are already discouraged by conventional institutions and norms so, the addition of religion discouraging such actions does not effect this norm's influence. Religion, however, discourages more minor deviant behaviors such as substance use that may not be discouraged by conventional institutions and norms. Overall, prior research seems to show a more significant relationship for less serious violent behaviors.

In regards to religiosity and substance use, overall there is a decreased likelihood of substance use among adolescents that have a sense of religiosity, regardless of that level (Ulmer et al. 2012; Salas-Wright et al. 2012; Ford and Hill 2012). When religiosity is broken down by

level there is a difference in results as is demonstrated in a 2012 study by Salas-Wright et al. For example, individuals with even mild religiosity do show an association in decreased likelihood of marijuana use compared with non-religious youth. However, despite the least likely to use marijuana being the most religiously involved individuals, "privately religious youth who rarely attend religious services or faith-based activities yet place a great value on the importance of religious beliefs and their influence on decision-making" followed as second in likelihood of marijuana use (Salas-Wright et al. 2012). Looking at other differences such as specific religiosity elements and ages in adolescence, one study found that Church attendance shows a significant inverse effect with delinquency, however, importance of religion does not. In addition, religiosity has stronger effect on illicit drug use later in adolescence (Johnson et al. 2000; Johnson et al. 2001). Finally, to revisit Cochran et al.*,* outside factors such as social control and arousal theories also show a reduced significance for illicit drug use (1994). To sum up, the effect of religiosity on substance use differs by level of religiosity, elements of religiosity, age of adolescence, and type of substance used, with outside factors having a lessening effect.

After reviewing this information, I return to the initial research question, how does religiosity affect adolescent participation in violent behaviors versus alcohol and drug behaviors? Moving forward with this thesis, I hypothesize that religiosity will have a more significant effect on participation in substance use behaviors than participation in violent behaviors. In addition, after controlling for other variables, I hypothesize that these relationships will be less significant. To continue, the second research question asks in what ways do male and female adolescents differ in how religiosity affects participation in deviant behaviors? The following information will help determine my hypothesis for this research question.

Do the Effects of Religion on Deviance Vary by Gender?

Women as offenders is an area of criminology that was neglected for the greater part of crime research. Historically, men have been the main participants and focus of criminological studies. Some scholars have suspected this is because female criminologists were left out of the research process and thus did not have the ability to propose the possibility of a gendered difference. It was not until the latter half of the twentieth century, specifically the late 1970s, that women gained traction as participants in studies. Such a statement is interesting considering "gender is the strongest factor indicating a person's likelihood to break the law" (Belknap 2020, p. 9). This lack of historical focus on a gendered divide in crime is why this second research question was chosen. Not only is there a gendered divide in crime, there are also gendered differences in religiosity. There has been a consistent finding among researchers that women are more religious than men with various theories proposed to reason why this is, including risk aversion theory (Collett and Lizardo 2009).

Risk aversion theory began with Alan S. Miller and John Hoffman's 1995 study to determine if risk preference could explain the gendered difference in religiosity. According to Miller and Hoffman, this stems from "the classic apologetic argument known as Pascal's wager: [r]eligious beliefs are desirable because one has nothing to lose by believing in God but potentially much to gain" (1995). With this understanding, Pascal's Wager is the belief that one should live as if God does exist even if unsure (Rota 2017). Religious behavior is then risk averse and non-religious behavior is risk taking when considering the unknown that is after death. The finding of this study was that "the addition of risk preference strongly attenuates gender differences in religiosity…[and] is a significant predictor of religiosity within each gender" (Miller and Hoffman 1995).

In the early 2000s, researchers Miller and Rodney Stark began a study to focus on "an alternative model involving risk preference," building on Miller's original risk-aversion theory developed with Hoffman in 1995 by flipping the question to determine why men are less religious than women. From this study they found that "[w]omen are more religious than men to the extent that being irreligious constitutes risk-taking behavior" (Miller and Stark 2002). This describes the idea that women are less likely to take risks, in this case regarding losing "supernatural rewards." So, with men consistently found to engage in high-risk behaviors, they must also be irreligious (Collett and Lizardo 2009).

In addition to risk-aversion theory, there is also support for a religiosity influence by gender in-group pride and expression. A study using the 2014 General Social Survey found significant results; gender expression is linked more with religion for women than men, but men who find more pride in being men are more religious than others (Schnabel 2017). Some theorists argue that it is not actually gender that directs this relationship with religiosity, however. Rather, it is the concept of a "feminine gender orientation…defined as a durable socioemotional trait and that may be present or absent in varying degrees regardless of an individual's biological sex, that is connected to higher patterns of religiosity" (Collett and Lizardo 2009). Some researchers believe this to be a "positive development" because it is a factor that varies within biological sex and supports the fact that within sex there is variation (Collett and Lizardo 2009).

After the consideration of factors such as risk aversion theory and gender in-group pride and expression, I hypothesize that regardless of religiosity level women will have engaged in less deviant behaviors compared to men that are of the same religiosity.

Research Questions

1. How does religiosity affect adolescent participation in violent behaviors versus alcohol and drug behaviors?

2. In what ways do men and women differ in how religiosity affects participation in deviant behaviors?

Chapter 3

Data and Methods

The dataset in use is the National Longitudinal Study of Adolescent to Adult Health (Add Health), 1994-2018, and its data from Wave I. There were a total of five waves of data collection. Wave I data consists of both an in-home questionnaire and an in-school questionnaire of the adolescents in addition to an in-home questionnaire of a parent, preferably a maternal figure. The data were taken between September 1994 and December 1995 with the target sample participants, both male and female, from grades seven through twelve. The raw data from Wave I includes over 2,000 variables and "combines longitudinal survey data on respondents' social, economic, psychological, and physical well-being with contextual data on the family, neighborhood, community, school, friendships, peer groups, and romantic relationships" (Harris).

(Table 1 about here)

Due to the large amount of variables, the dataset was reduced to only variables that were related to religion, religiosity, substance use, or violence and variables that have the potential to impact those areas of life. After reducing the dataset, the independent variables selected included religious affiliation, how often the respondant attended religious services in the past year, importance of religion, and how often the respondant prayed. Religious affiliation was recoded to fit the Religious Traditions scheme and the latter three variables were combined into one variable titled "Religiosity Scale" ranging from 0 to 10 that had a mean of 7.35 and standard deviation of 2.53.

In order to create this scale, all initial variables were categorical or recoded to be categorical. Unless a no or yes question, the categories ranged in number from 3 to 7 answer

options and were all recoded to range from options such as not marked, none, never, not at all, etcetera. through the highest frenqency option such as marked, nearly everyday, everyday, very important, etcetera. No or yes questions had the answers no recoded as 0 and yes recoded as 1. Each categorical option was coded as a number, beginning at 0, that could sum with the other variables to their total on the corresponding scale.

The final independent variable selected was gender. Though the twenty-first century has brought conversation and education regarding gender as a spectrum, the data of concern in the Add Health study was gathered in 1994 with only an option for biological sex on survey responses. For the purposes of this thesis, gender will be defined by biological sex as answered by participants with men corresponding to "male" and women corresponding to "female." Men, coded as 0, and women, coded as 1, were rather equally represented with women only outweighing by 3%.

The dependent variables were selected to create three additional scales that would represent alcohol behavior, drug behavior, and violent behavior. The alcohol behavior scale includes four variables. This scale ranges from 0 to 14 with a mean of 5.28 and a standard deviation of 3.32. The drug behavior scale includes six variables. This scale ranges from 0 to 18 with a mean of 8.91 and a standard deviation of 4.72. The violent behavior scale includes ten variables. This scale ranges from 0 to 23 with a mean of 3.61 and a standard deviation of 3.56.

Finally, thirteen control variables were chosen. These reflect areas of life including peer influence, home life, presence of maternal and paternal figures, parental influence, and social life. As discussed in the literature review, prior research shows that outside factors such as these can have an impact on adolescent behavior and religiosity.

To analyze the relationships of these variables, I conducted bivariate correlations of the alcohol, drug, and violence scale variables with the independent variables and control variables. In addition, I conducted multivariate regression analysis in order to evaluate the strength of the relationship of the scale variables with the independent variables after accounting for controls.

Table 1: *Descriptive Statistics*

Variable	Frequency	Percent
Dependent Variables		
Religious Traditions		
None	751	11.8
Catholic	1448	22.7
Mainline Protestant	852	13.4
Black Protestant	96	1.5
Evangelical Protestant	2592	40.7
Jewish	54	.8
Muslim	25	.4
Other	547	8.6
Past Year Attend Religious Services		
Never	664	11.8
Less than once a month	1105	19.7
Once a month or more/less than once a week	1274	22.7
Once a week or more	2567	45.8
How Important is Religion		
Not important at all	193	3.4
Fairly unimportant	391	7.0
Fairly important	2218	39.5
Very important	2812	50.1
How Often Do You Pray		
Never	440	7.8
Less than once a month	496	8.8
At least once a month	586	10.4
At least once a week	1370	24.4
At least once a day	2722	48.5
Religiosity Scale (Not including RELTRAD)	7.35 (mean)	2.53 (st. dev.)
Biological Sex		
Male	3147	48.4
Female	3356	51.6
Alcohol Use Variables		
Drank Alcohol More Than 2 or 3 Times in Life		
No	1946	43.1
Yes	2570	56.9
Past 12 Months, How Often Drank Alcohol		
Never	2031	45.3
Once or twice	1153	25.7
Once a month or less	450	10.0
2 or 3 days a month	386	8.6
Once or twice a week	288	6.4
3-5 days a week	93	2.1

Nearly everyday	79	1.8
Past 12 Months, How Often Got Drunk		
Never	3129	70.3
Once or twice	611	13.7
Once a month or less	228	5.1
2 or 3 days a month	212	4.8
Once or twice a week	169	3.8
3-5 days a week	45	1.0
Nearly everyday	57	1.3
Ever Drank Alcohol While Using Drugs		
No	943	58.0
Yes	682	42.0
Alcohol Use Scale	5.28 (mean)	3.32 (st. dev.)
Drug Use Variables		
Past 12 Months, How Often Smoked Cigarettes		
Never/Once or twice	3516	78.5
Once a month or less	142	3.2
2 or 3 days a month	116	2.6
Once or twice a week	162	3.6
3-5 days a week	120	2.7
Nearly everyday	425	9.5
Ever Drank Alcohol While Using Drugs		
No	943	58.0
Yes	682	42.0
Past 30 Days, How Many Smoked Cigarettes		
None	1081	39.6
A few	418	15.3
Frequently	407	14.9
Almost everyday	232	8.5
Everyday	590	21.6
Past 30 Days, How Many Chewed Tobacco		
None	5940	93.2
A few	227	3.6
Frequently	101	1.6
Almost everyday	37	.6
Everyday	69	1.1
Past 30 Days, How Many Smoked Pot		
None	826	51.5
A few	403	25.1
Frequently	248	15.5
Almost everyday	82	5.1
Everyday	44	2.7
Past 30 Days, How Many Used Other Illegal Drugs		

None	270	56.1
A few	122	25.4
Frequently	62	12.9
Almost everyday	14	2.9
Everyday	13	2.7
Drug Use Scale	8.91 (mean)	4.72 (st. dev.)
Violent Behavior Variables		
Been In Fights Last Year		
Never	2385	55.3
1 or 2 times	1226	28.4
3 to 5 times	329	7.6
6 or 7 times	97	2.3
More than 7 times	273	6.3
Serious Physical Fight		
Never	4386	68.0
1 or 2 times	1474	22.9
3 or 4 times	324	5.0
5 or more times	262	4.1
Seriously Injure Someone		
Never	5279	81.9
1 or 2 times	896	13.9
3 or 4 times	144	2.2
5 or more times	123	1.9
Use or Threaten With a Weapon		
Never	6194	95.9
1 or 2 times	196	3.0
3 or 4 times	37	.6
5 or more times	29	.4
Past 12 Months, Take Part in a Group Fight		
Never	5129	80.9
1 or 2 times	956	14.8
3 or 4 times	149	2.3
5 or more times	128	2.0
Ever Use a Weapon in a Fight		
No	6039	93.6
Yes	415	6.4
Past 12 Months, Got Into a Physical Fight		
Never	4410	68.3
Once	1189	18.4
More than once	856	13.3
Past 12 Months, Pulled a Knife/Gun on Someone		
Never	6143	95.1
Once	232	3.6

More than once	83	1.3
Past 12 Months, Shot/Stabbed Someone		
Never	6335	98.1
Once	86	1.3
More than once	36	.6
Past 12 Months, Serious Injury in Fight		
None	3165	84.9
A few	512	13.7
Less than 10	32	.9
Less than 20	14	.4
20 or more	5	.1
Violent Behavior Scale	3.61 (mean)	3.56 (st. dev.)
Control Variables		
3 Friends, How Many Smoke >1 Cigarette Daily		
No friends	3518	55.2
One friend	1292	20.3
Two friends	773	12.1
Three friends	789	12.4
3 Friends, How Many Drink >1 A Month		
No friends	2777	43.7
One friend	1400	22.0
Two friends	901	14.2
Three friends	1273	20.0
3 Friends, How Many Smoke Pot >1 A Month		
No friends	4267	67.2
One friend	1007	15.9
Two friends	516	8.1
Three friends	556	8.8
Easy Access Cigarettes in Home		
No	4479	69.5
Yes	1965	30.5
Easy Access Alcohol in Home		
No	4625	71.7
Yes	1825	28.3
Easy Access Drugs in Home		
No	6266	97.1
Yes	187	2.9
Easy Access Gun in Home		
No	4875	75.7
Yes	1568	24.3
Tries to Do School Work Well		
I never try at all	49	1.1
I don't try very hard	440	9.7

I try hard enough/but not as hard as I could	2283	50.1
I try very hard to do my best	1786	39.2
Lives With Mother		
No	312	6.8
Yes	4303	93.2
Lives With Father		
No	1094	23.8
Yes	3501	76.2
How Important is Religion - Parent		
Not important at all	61	1.2
Fairly unimportant	208	3.9
Fairly important	1374	26.0
Very important	3642	68.9
How Often Do You Pray - Parent		
Never	67	1.3
Less than once a month	519	9.8
At least once a month	140	2.7
At least once a week	760	14.4
At least once a day	3790	71.8
Does Not Participate in Any Clubs, Orgs, Teams		
Not marked	4097	86.2
Marked	654	13.8

Chapter 4

Results

(Table 2 about here)

Referring to Table 2: Bivariate Correlations and the independent variables, the RELTRAD variable showed no significant correlation to any of the dependent variables: alcohol scale, drug scale, and violence scale. The religiosity scale was significantly negatively correlated at the 0.01 level with both the alcohol scale and the violence scale. These correlations are very weak. However, there was no significant correlation found with the drug scale. Biological sex also had very weak negative correlations found to be significant at the 0.01 level for both the alcohol scale and the violence scale. Again, there was no significant correlation found with the drug scale.

Overall, the statistically significant control variables only showed a maximum of a moderate bivariate correlation. Regarding the alcohol scale, seven control variables were found to be statistically significant at either the 0.01 level or 0.05 level. The following variables were found to have very weak positive correlations: easy access to cigarettes in home and easy access to drugs in home. Weak positive correlations were found for the following variables: out of 3 friends, how many smoke >1 cigarette daily and out of 3 friends, how many smoke pot >1 a month. Weak negative correlations were found for tries to do school work well and how important is religion – parent. A moderate positive correlation was found for out of 3 friends, how many drink >1 a month. Regarding the drug scale, three control variables were found to be statistically significant at either the 0.01 level or 0.05 level: easy access to cigarettes in home had a very weak positive correlation, out of 3 friends, how many smoke pot >1 a month had a weak positive correlation, and out of 3 friends, how many smoke >1 cigarette daily had a moderate

positive correlation. For the violence scale, eleven control variables were found to be statistically significant at either the 0.01 level or 0.05 level. Very weak positive correlations were found for out of 3 friends, how many smoke >1 cigarette daily, out of 3 friends, how many drink >1 a month, easy access to cigarettes in home, easy access to drugs in home, easy access to gun in home, and easy access to alcohol in home. Very weak negative correlations were found for tries to do school work well, lives with mother, lives with father, and how often do you pray – parent. The variable out of 3 friends, how many smoke pot >1 a month had a weak positive correlation.

(Table 3 about here)

Referring to Table 3: OLS Regression – Alcohol, the RELTRAD variable, religiosity scale, and biological sex had no significant results. The correlations for the religiosity scale and biological sex, which were significant at the 0.01 level with bivariate correlations, lost statistical significance with multivariate regression. At the 0.001 significance level, both variables out of 3 friends, how many smoke >1 cigarette daily and out of 3 friends, how many drink >1 a month had weak correlations. The statistical significance of these correlations increased to the 0.001 level which had bivariate correlations at the 0.01 level. Tries to do school work well had the same result after multivariate regression with a negatively weak correlation. All other previously significant bivariate correlations lost significance entirely beyond the 0.05 level after multivariate regression.

(Table 4 about here)

Referring to Table 4: OLS Regression – Drug, the RELTRAD variable, the religiosity scale, and biological sex had no significant results. At the 0.001 significance level, out of 3 friends, how many smoke >1 cigarette daily had a moderate correlation. This variable had an increased statistical significance compared to its bivariate correlation. At the 0.01 significance

level, easy access to cigarettes in home had a weak correlation. This variable also had an increased statistical significance compared to its bivariate correlation. All other previously significant bivariate correlations lost significance entirely beyond the 0.05 level after multivariate regression.

(Table 5 about here)

Referring to Table 5: OLS Regression – Violence, the RELTRAD variable's correlation still held no significance. The religiosity scale's correlation was no longer was significant but, biological sex's correlation had a higher significance than it's bivariate correlation. At the 0.001 significance level, the following variables had very weak correlations but, higher significance compared to the bivariate correlations: out of 3 friends, how many smoke >1 cigarette daily, out of 3 friends, how many smoke pot >1 a month, and tries to do school work well (negative). At the 0.05 significance level, the following variables had very weak correlations: easy access to drugs in home, easy access to gun in home, and lives with mother (negative). These variables had lower statistical significance with multivariate regression compared to the bivariate correlations. How often do you pray – parent also had a very weak negative correlation that maintained significance at the 0.05 level. All other previously significant bivariate correlations lost significance entirely beyond the 0.05 level after multivariate regression.

Table 2: *Bivariate Correlations*

Variable	Alcohol Scale	Drug Scale	Violence Scale
	Pearson Correlation	**Pearson Correlation**	**Pearson Correlation**
Independent			
Religious Traditions	-.046	.006	-.006
Religiosity Scale	-.130 **	-.056	-.092 **
Biological Sex	-.094 **	-.030	-.170 **
Controls			
3 Friends, How Many Smoke >1 Cigarette Daily	.308 **	.428 **	.193 **
3 Friends, How Many Drink >1 a Month	.339 **	.100	.168 **
3 Friends, How Many Smoke Pot >1 a Month	.242 **	.302 **	.206 **
Easy Access Cigarettes in Home	.099 **	.164 *	.073 **
Easy Access Alcohol in Home	.035	-.043	.050 *
Easy Access Drugs in Home	.085 **	-.033	.096 **
Easy Access Gun in Home	.060	.045	.107 **
Tries to Do School Work Well	-.227 **	-.126	-.142 **
Lives With Mother	.016	.054	-.054 **
Lives With Father	.009	-.035	-.051 *
How Important is Religion - Parent	-.072 *	-.025	-.017
How Often Do You Pray - Parent	-.031	.054	-.046 *
Does Not Participate in Any Clubs, Orgs, Teams	.006	.064	.021

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3: *OLS Regression Predicting Alcohol Behavior*   **N=685**

Variables	Standardized Beta
Religious Traditions	-.013
Religiosity Scale	-.023
Biological Sex	-.056
3 Friends, How Many Smoke >1 Cigarette Daily	.235 ***
3 Friends, How Many Drink >1 a Month	.226 ***
3 Friends, How Many Smoke Pot >1 a Month	.025
Easy Access Cigarettes in Home	.032
Easy Access Alcohol in Home	.013
Easy Access Drugs in Home	.035
Easy Access Gun in Home	.028
Tries to Do School Work Well	-.182 ***
Lives With Mother	-.041
Lives With Father	-.008
How Important is Religion - Parent	-.054
How Often Do You Pray - Parent	.029
Does Not Participate in Any Clubs, Orgs, Teams	-.057

* p ≤ .05, ** p ≤ .01, *** p ≤ .001

Adjusted R Square=.21

Table 4: *OLS Regression Predicting Drug Behavior*   **N=138**

Variables	Standardized Beta
Religious Traditions	.063
Religiosity Scale	.023
Biological Sex	-.108
3 Friends, How Many Smoke >1 Cigarette Daily	.492 ***
3 Friends, How Many Drink >1 a Month	-.128
3 Friends, How Many Smoke Pot >1 a Month	.162
Easy Access Cigarettes in Home	.231 **
Easy Access Alcohol in Home	-.047
Easy Access Drugs in Home	-.096
Easy Access Gun in Home	.032
Tries to Do School Work Well	-.106
Lives With Mother	.076
Lives With Father	-.057
How Important is Religion - Parent	-.194
How Often Do You Pray - Parent	.199
Does Not Participate in Any Clubs, Orgs, Teams	-.042

* p ≤ .05, ** p ≤ .01, *** p ≤ .001

Adjusted R Square=.29

Table 5: *OLS Regression Predicting Violent Behavior*

Variables	N=1615 Standardized Beta
Religious Traditions	.037
Religiosity Scale	.011
Biological Sex	-.147 ***
3 Friends, How Many Smoke >1 Cigarette Daily	.126 ***
3 Friends, How Many Drink >1 a Month	.017
3 Friends, How Many Smoke Pot >1 a Month	.123 ***
Easy Access Cigarettes in Home	.047
Easy Access Alcohol in Home	.022
Easy Access Drugs in Home	.057 *
Easy Access Gun in Home	.050 *
Tries to Do School Work Well	-.090 ***
Lives With Mother	-.047 *
Lives With Father	-.045
How Important is Religion - Parent	.026
How Often Do You Pray - Parent	-.073 *
Does Not Participate in Any Clubs, Orgs, Teams	-.032

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Adjusted R Square=.12

Chapter 5

Discussion

To begin, I would like to return to my hypotheses set at the beginning of this project. First, I hypothesized that religiosity would have a more significant effect on participation in substance use behaviors than participation in violent behaviors. This hypothesis was not supported due to multivariate regression showing no significant results for Religious Traditions and the religiosity scale with alcohol, drug, or violent behaviors. Second, I hypothesized that these relationships will be less significant after controlling for other variables. This hypothesis was partially supported by the data. Religious Traditions never showed significant results, however, the religiosity scale initially showed a significant correlation at the 0.01 level for both alcohol and violent behaviors. The religiosity scale lost significance entirely after controlling for other variables with multivariate regression. Lastly, I hypothesized that regardless of religiosity level women would have engaged in less deviant behaviors compared to men that are of the same religiosity. The findings showed that the only dependent variable that biological sex held a relationship of significance with after multivariate regression was violence. This was an inverse relationship in partial support of this hypothesis: women were less violent than men. However, due to religiosity showing no significant results with deviant behaviors, a gendered effect on religiosity and deviance was not supported.

Though there were mixed results for my hypotheses, relationships found with the dependent variables and control variables suggest connections to theory. The variable tries to do school work held an inverse effect shown in both bivariate and multivariate correlations for both alcohol and violent behaviors which supports the theory of protective factors such as "positive school attachment" contributing to positive adolescent behaviors (Salas-Wright et al. 2012).

Another variable about parent prayer habits also had an inverse effect shown in both bivariate and multivariate correlations for violent behaviors, supporting the theory of higher parental religiosity or exposure to such as a protective factor contributing to positive adolescent behaviors. Considering the dataset prioritized having the mother figure answer this question, this result suggests a possible gender-specific relationship regarding exposure to parent's religion that could be further researched as an extension of the previously discussed theory on gender and crime: gender expression. Similarly, the variable lives with mother showed an inverse effect shown in both bivariate and multivariate correlations for violence as well. This boasts the same suggestion. Regarding social control theory, when bivariate correlations were conducted, the religiosity scale results showed significance for an inverse relationship with alcohol and violent behaviors. This would show support for religiosity as a protective factor. However, once controls were considered with multivariate regression, the significance was lost for both behavior categories. This change reflects the social control theory concept that once outer factors are accounted for, the relationship between religiosity and deviance is reduced. Finally, it is important to note that a theme of negative peer and parental influence was among the results of statistical significance. Control results after multivariate regression showed a consistent relationship of negative peer or parental influence and adolescent deviant behaviors; friend's actions regarding alcohol, marijuana, or cigarettes as well as easy access to drugs, cigarettes, or guns in one's home held significant correlations to adolescents' deviant behaviors.

To conclude, it is important to note the limitations of this project. The dataset utilized was conducted thirty years ago and since then there has been a large amount of research conducted on the topic of religion and crime. In addition, the data was not collected in consideration of this project and, therefore, was edited to fit this project. Regardless, further research on more recent

data should be conducted in order to gain a greater and more in-depth understanding of the relationship between religiosity and adolescent deviance and to acknowledge how gender may affect this relationship.

Reference List

Belknap, Joanne. 2020. *The Invisible Woman: Gender, Crime, and Justice.* Thousand Oaks, CA: Sage Publications.

Centers for Disease Control and Prevention 1991. "Alcohol and Other Drug Use Among High School Students -- United States, 1990." Washington, DC: Department of Health and Human Services. Retrieved February 13, 2024 (https://www.cdc.gov/mmwr/preview/mmwrhtml/00015573.htm).

Centers for Disease Control and Prevention 1992. "Physical Fighting Among High School Students -- United States, 1990." Washington, DC: Department of Health and Human Services. Retrieved February 13, 2024 (https://www.cdc.gov/mmwr/preview/mmwrhtml/00016064.htm).

Centers for Disease Control and Prevention 2023. "Alcohol and Other Substance Use Before and During the COVID-19 Pandemic Among High School Students -- Youth Risk Behavior Survey, United States, 2021." Washington, DC: Department of Health and Human Services. Retrieved February 13, 2024 (https://www.cdc.gov/mmwr/volumes/72/su/su7201a10.htm).

Cochran, John K., Peter B. Wood, and Bruce J. Arneklev. 1994. "Is the religiosity-delinquency relationship spurious? A test of arousal and social control theories." *Journal of Research in Crime and Delinquency* 31(1). Retrieved March 13, 2023 (https://journals.sagepub.com/doi/pdf/10.1177/0022427894031001004?casa_token=_KAlM_3Q06QAAAAA:PV-fMlhU_p-b44XaYI31S2FhrErkEYzwg3cJydT-ENv2SXYvDoN6AI8ZDKLMX8p95X3QQr-k74o).

Collett, Jessica L., and Omar Lizardo. 2009. "A Power-Control Theory of Gender and

Religiosity." *Journal for the Scientific Stufy of Regilion* 48(2). Retrieved February 13, 2024

(https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-5906.2009.01441.x).

Ellis, Lee. 1987. "Religiosity and Criminality from the Perspective of Arousal Theory." *Journal*

of Research in Crime and Delinquency 24(3). Retrieved February 13, 2024 (https://

doi.org/10.1177/0022427887024003003).

Ford, Jason A., and Terrence D. Hill. 2012. "Religiosity and adolescent substance use: evidence

from the national survey on drug use and health." *Substance use & misuse* 47(7). Retrieved

March 13, 2023 (https://www.tandfonline.com/doi/abs/10.3109/10826084.2012.

667489?casa_token=lXivZHJRy48AAAAA:ZZqINac9GyGHhqcnxic5VQizwizBS3RycADoaK

ERmpmB9eYYaPxt3B9KHeciWYcKQW5ZA8IL-Qs).

Harris, Kathleen Mullan, and J. Richard Udry. 2022. *National Longitudinal Study of Adolescent*

to Adult Health (Add Health), 1994-2018 [Public Use]. https://doi.org/10.3886/ICPSR21600.v25.

Carolina Population Center, University of North Carolina-Chapel Hill [distributor], Inter-

university Consortium for Political and Social Research [distributor].

Johnson, Byron R., David B. Larson, Spencer De Li & Sung Joon Jang. 2000. "Escaping from

the crime of inner cities: Church attendance and religious salience among disadvantaged youth."

Justice Quarterly 17(2). Retrieved March 13, 2023 (https://www.tandfonline.com/doi/ abs/ 10.1080/07418820000096371).

Johnson, Byron R., Sung Joon Jang, David B. Larson, and Spencer De Li. 2001. "Does adolescent religious commitment matter? A reexamination of the effects of religiosity on delinquency." *Journal of Research in Crime and Delinquency* 38(1). Retrieved March 13, 2023 (https://journals.sagepub.com/doi/pdf/10.1177/0022427801038001002?casa_token=eJdaufM2Xi AAAAAA:IpHhJJCzuc4iQEH0gUKmvQgnobQ-ewHCpPK_GQ_qg_e3TjM5oCZUA8Q9ys2so01Sv-QA8Xag6Pk).

Kelly, P. Elizabeth, Joshua R. Polanin, Sung Joon Jang, and Byron R. Johnson. 2015. "Religion, delinquency, and drug use: A meta-analysis." *Criminal Justice Review* 40(4). Retrieved March 13, 2023 (https://scholarlycommons.obu.edu/articles/131?utm_ source=scholarlycommons.obu.edu%2Farticles%2F131&utm_medium=PDF&utm_campaign=P DFCoverPages).

Miller, Alan S., and John P. Hoffman. 1995. "Risk and Religion: An Explanation of Gender Differences in Religiosity." *Journal for the Scientific Study of Religion* 34(1). Retrieved February 13, 2024 (https://www.jstor.org/stable/1386523).

Miller, Alan S., and Rodney Stark. 2002. "Gender and religiousness: Can socialization explanations be saved?" *American Journal of Sociology* 107(6). Retrieved February 13, 2024 (https://doi.org/10.1086/342557).

Mirriam-Webster 2024. "Religiosity." Springfield, MA: Mirriam-Webster Incorporated.

Retrieved February 13, 2024 (https://www.merriam-webster.com/dictionary/religiosity).

Pew Research Center 2024. "Religious Landscape Study: Belief in God." Washington, DC: Pew

Research Center. Retrieved February 13, 2024 (https://www.pewresearch.org/religion/religious-

landscape-study/belief-in-god/).

Rota, Michael. 2017. "Pascal's wager." *Philosophy Compass* 12(4). Retrieved February 13, 2024

(https://compass.onlinelibrary.wiley.com/doi/full/10.1111/phc3.12404).

Salas-Wright, Christopher P., Michael G. Vaughn, David R. Hodge, and Brian E. Perron. 2012.

"Religiosity profiles of American youth in relation to substance use, violence, and delinquency."

Journal of youth and adolescence 41. Retrieved March 13, 2023. (https://idp.springer.com/

authorize/casa?redirect_uri=https://link.springer.com/article/10.1007/s10964-012-9761-

z&casa_token=P9SOOj23fNIAAAAA:u5A1T_8JROaoTJfFO_fXz4O6-GgjB6GevQFbr-

MGJQQZn_kzAKkbWVef0azO-5PuXdkUtuqsrbP8000).

Schnabel, Landon. 2017. "Gendered Religiosity." *Review of Religious Research* 59. Retrieved

February 13, 2024 (https://link.springer.com/article/10.1007/s13644-017-0302-9).

Ulmer, Jeffery T., Scott A. Desmond, Sung Joon Jang, and Byron R. Johnson. 2012. "Religious

involvement and dynamics of marijuana use: Initiation, persistence, and desistence." *Deviant

Behavior* 33(6). Retrieved March 13, 2023. (https://www.tandfonline.com/doi/abs/10.1080/

01639625.2011.636653?casa_token=Om8-oRJrkn0AAAAA:hSBH42-

BmeZ1BZ0NUn5nUukKOZzAV5ZQF2BcYj3UmvRUCossYdccSDn0oH82J0RZ44URC0FhgG

I).