

Living up to Expectations

How Religion alters the Delinquent
Behavior of Low-Risk adolescents

by Mark D. Regnerus



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Behavior of Low-Risk adolescents

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Several recent studies of resilient youth have documented the helpful influence of religion in their lives. In the absence of positive influences enjoyed by low-risk youth, religion and religious organizations in particular often serve to promote prosocial outcomes. This study, however, examines low-risk youth (kids who have the resources to avoid drinking, drug use, delinquency, and school problems but fail to do so) and seeks to establish if religion and religious change is a comparable influence in preventing them from such trouble. Two-stage regression analysis using two waves of data from the National Longitudinal Study of Adolescent Health indicate that for each type of behavior, there is at least one influential aspect of religion serving as a protective effect. I discuss the findings and consider the variable influence of religion on youth.

In any community, some young people fail to live up to social expectations, while others rise above their disadvantage and manage to “make it,” in spite of the odds. That is, some youth struggle in spite of the numerous opportunities presented to them, while others defy expectations and succeed—they stay in school, avoid trouble and substance use, find employment, and start families of their own.¹ These two types could be classified as the “disappointers” and the “pleasantly surprising” or resilient youth. The latter (resilient youth) are the subject of a growing number of studies examining the pathways by which some adolescents develop into well-adapted individuals in spite of life stresses. Simply being labeled “at risk,” however, is an unhelpful term. Risk is a probability of a future event, given a certain condition or set of conditions that may be individual (e.g., family income) or shared (e.g., neighborhood poverty). In other words, risk factors vary by contexts and populations. African-American teenage girls are traditionally at greater risk for early pregnancy and dropping out of high school², while white adolescent boys are at greater risk for alcohol use and abuse.³ Simply being a 15 year-old boy constitutes a considerable risk for becoming delinquent.⁴

This research study, however, examines the *other* type of youth mentioned above—those youth who disappoint, failing to meet expectations despite their advantages. Such youth experience outcomes in life opposite that of resilient adolescents. They come from families of privilege, or enjoy the security of two-parent families, or exhibit other low-risk traits (e.g., young, female), and are simply not expected to give in to drugs, alcohol, or crime. Yet invariably many adolescents do, and in this paper I ask whether some low-risk youth are more likely to succumb than others. I examine the factors that stimulate, as well as inhibit, youth from failing to live up to expectations. In particular, I consider four outcomes: drug use, delinquency, alcohol use, and having trouble progressing in school.

This study pays particular attention to religion—something which is not entirely personal or familial, but communal as well. I assess the role that religion and religious change during adolescence plays in either promoting or inhibiting disappointing outcomes among low-risk youth. That is, does religion prevent some young people from doing worse than expected based on their background? This study builds upon previous research that details religious influences in resilience among at-risk children.⁵ Moreover, this study employs an innovative analytic approach to identify youth who are failing to live up to expectations, in spite of their advantages, and then compares them with other low-risk youth who manage to avoid such pitfalls. This study’s particular research questions are these: (1) Are low-risk adolescents who devalue and/or do not practice religion inclined to fare worse with respect to (a) drinking, (b) drug use, (c) delinquency, and (d) poor academic progress? (2) Does religious change in their lives matter in regards to these four outcomes? (3) Are religious influences direct effects on such behavior, or are they largely indirect, mediated⁶ through other important personal and familial factors?

Religion and Avoiding Trouble

Much more (though by no means a great deal) is known about the religious practices and religious influences on the lives of high-risk youth. Much less is known about its influence, if any, on adolescents who are considered low-risk for a variety of undesired outcomes. Yet evidence supporting the behavioral and health benefits of religious practice is growing.⁷ Some of what scholars know comes by way of others' studies of resilience, those youth who are doing better than expected given certain risks. One study found that while church attendance contributed to the educational success of youth in impoverished neighborhoods, its influence on youth from more affluent neighborhoods, while still positive, was considerably less substantial.⁸ Church attendance creates, the study argued, a form of social integration that has the consequence of reinforcing values favorable to educational achievement and goal-setting. The author speculates that churches are no less functional in low-risk neighborhoods, but rather that they simply comprise one among many functional communities established there.

A recent longitudinal study of Iowa youth sheds considerable light on the influence of religion and religious change on rural youth.⁹ They were particularly interested in change in religious involvement (measured as a difference score between 8th and 12th grades) and its effect on the development of competence in academics and peer relations. They found that positive change in a youth's religious involvement predicted more extensive competence by their senior year on several counts, from academics to self-confidence to relations with parents and success with peers. Moreover, using a similar method to identify poorly-performing youth, the same Iowa study reported that eighth-grade religious activity, as well as increased involvement over time, distinguished successful youth regardless of their levels of risk. Greater religious involvement reduced the likelihood that the adolescent would fare more poorly in school than expected. This was also the case for success with one's peers.

In brief, how has religion been found to shape the four behaviors of concern here—drinking, delinquency, drug use, and education? To begin with, how religion affects drinking is not unlike how it has been found to affect delinquency. Generally, religiosity shows modest protective effects against drinking, yet is considered to be a less important factor than, say, parent or peer drinking or age effects. But how religion affects alcohol use (a behavior illegal only because of age) is often different than how it affects illegal drug use. The religion/drug use connection is less clear. One study also found a connection between religion and beliefs about drinking that tended to subsequently prevent alcohol use among religious adolescents.¹⁰ As measures for peer influence improve, however, data on drug use is beginning to display fewer direct relationships with religion. A different study evaluated 322 adolescents in a western state, applying a complex modeling approach to evaluating religion's influence.¹¹ The authors found that after accounting for peer drug use, parental agreement and adolescent religiosity showed no relationship with either cocaine or marijuana use, as well as general substance abuse. In terms of its effect on educational outcomes, one of the best recent studies found that religious involvement appears to modestly benefit two distinct groups of students, the best and worst performers—stimulating the brightest and shielding those most at risk of failure.¹² Its authors note that the results suggest that “religious involvement may bridge family life and a wider set of intergenerational ties, providing a broader base of community structure and access to resources for some youth.”¹³

It should be clear, then, that religion has mattered for a number of previous studies on these four outcomes using samples that certainly included many low-risk adolescents. Space does not allow me here to document more studies, though others have done exactly this elsewhere.¹⁴ Few studies have examined the role of religious change during adolescence. Indeed, it is the life stage during which such change is most likely to occur.¹⁵ Given religion's influence in several studies of resilient youth noted above, will it still matter to youth who have more resources and/or are less risky? To restate the research questions, then, I ask the following: are low-risk adolescents who do not profess and practice religion more likely to concede to several behaviors (drinking, drug use, school success, and delinquency) when compared to their more-observant peers? Put differently, I ask whether the lack of religiosity is a trait that often characterizes adolescents who fail to live up to behavioral expectations, given their low-risk status.

Data

The data for this analysis come from the National Longitudinal Study of Adolescent Health, a longitudinal nationally representative study of American adolescents in grades 7–12 that began in 1994. A sample of schools was selected from a list of American high schools provided by the Quality Education Database. To ensure diversity, sampling was separated by region, urbanicity, school type (public vs. private), racial composition, and size. Each high school in the sample was matched to one of its feeder schools, with the probability of the feeder school being selected proportional to its contribution to the high school's student body. Over 70 percent of the originally selected schools agreed to participate. Replacement schools for those that refused to participate were selected within each community. This multi-stage design resulted in a final sample of 134 middle and high schools in 80 communities. "Add Health," as the data are commonly referred to, was funded by the National Institute of Child Health and Human Development (NICHD) and 17 other federal agencies.¹⁶ Fieldwork was conducted by the National Opinion Research Center of the University of Chicago. All analyses in this study are based on the subsample of Add Health adolescents who completed both waves of in-home interviews (1994, 1995), and also had valid data from a parent. This resulted in a study sample of just under 12,000 adolescents. Following listwise deletion, the final sample size is 9,705.¹⁷

Method of Analysis

This paper is a bit unusual in that it specifically examines youth who fail to live up to social expectations in spite of the resources available to them to succeed. While elsewhere researchers have considered the better-than-expected academic progress (i.e., resilience) of youth from poor neighborhoods or broken families, etc., here I seek to understand which adolescents fare decidedly worse than expected, given certain advantages.

I classified adolescents into three categories: those who perform better than expected, worse than expected, and all those in-between. I classified each respondent based on their residual score from a regression analysis of the Wave II outcomes (alcohol use, delinquency, drug use, and failure to progress in school) on a series of risk factors.¹⁸

A residual score is the difference between the expected value and the observed value for each adolescent on a given outcome. On any given delinquent outcome, the larger the positive difference between expected and observed values, the more remarkably resilient the youth is to the behavior. In other words, given a higher level of risk, a particular youth still managed to largely avoid the behavior. The opposite is true for negative differences—lower levels of risk yet greater exhibition of the behavior. I classified the 15 percent of adolescents with the largest residuals for each outcome as those youth whose avoidance of that behavior notably exceeded what would be predicted by their risk factors, while the 15 percent of adolescents with the smallest (negative) residuals were classified as those youth whose avoidance of the particular behavior was considerably less than expectations, given the low levels of risk they faced.

These latter cases are my focus—those youth that do worse than expected given their low levels of risk. Once classified, I report average scores for each of the outcomes (e.g., drinking more than expected, more delinquent than expected, etc.) by different levels of the adolescents' church attendance and their self-rating of the importance of religion in their lives. Second, using logistic regression, I predict the probability that the respondent is failing to live up to expectations on each of the four outcomes—first using only religion and religious change measures, then adding several other control variables to examine religion's effect when accounting for other important factors. For this part of the analysis, I drop “resilient” youth from the sample, since they are high-risk and cannot statistically fare worse than expected, given already low expectations. Thus I essentially am predicting adolescents' probability of falling into the category of the 15 percent of youth who fare worse than expected, compared to the 70 percent who fare more closely to what was expected given their risk status.¹⁹

Outcomes of Interest

I focus on four outcomes here: drinking, drug use, delinquency, and falling behind in school.²⁰ The modeling approach outlined above makes for an unusual description of the dependent variables. Each indicates whether the adolescent is doing worse than expected or not (e.g., are they drinking more than expected given their age, gender, socio-economic status (SES), race, and family status).

The original outcomes themselves are as follows. Respondents indicate the number of days in the past 12 months in which they drank alcohol. It ranges from one (1 or 2 days) to six (every day or almost every day). Each respondent was asked about their participation in 13 delinquent behaviors during the previous 12 months. Behaviors ranged from deliberately damaging property, to fighting, theft, and threatening to use a weapon. The index ranges from 0 to 39. Drug use is measured by asking the respondent if (since their Wave I interview) they had ever tried or used marijuana, any kind of cocaine (e.g., powder, crack), or “any other type of illegal drug, such as LSD, PCP, Heroin, etc.” Finally, I analyze the extent to which the adolescent is “off track” in school. Six standardized indicators measure the lack of progress through school, not simply poor grades. The measures are: (1) low grade point average (reverse coded 0–4); (2) has trouble getting homework done (range 0–4); (3) does not get along with teachers (range 0–4); (4) has been expelled or suspended from school (range 0–2); (5) has skipped classes this year without excuse (coded 1 if the respondent reported skipping class without an excuse and 0 otherwise); and (6) has repeated a grade or been held back in school (coded 1 if the respondent reported repeating a grade or being held back in school or 0 otherwise).

Independent Variables

The key independent variables fall into one of four categories (religion, other risk and protective factors, personality traits, and academic ability) of which there is considerable overlap. Some scholars argue straightforwardly that risk factors are those personal, family, or community characteristics that are linked to problem behavior, and protective factors are those that provide or strengthen personal or social controls.²¹ Others alter the protective factor definition to refer only to characteristics that “interact with sources of risk such that they reduce the probability of negative outcomes under conditions of high risk but do not show an association with developmental outcomes under low risk.”²² This study, while not arguing the merits of either approach, considers factors that have been shown to protect all adolescents (e.g., parent education) as well as those that interact with risk factors to protect only some (e.g., intergenerational closure, religion).

Church (or religious service) attendance is a variable that ranges from 0 (never attends) to 4 (once per week or more). It is a reliable and traditional measure of the public and collective expression of religion. While a more detailed list of religious activities might more accurately depict adolescent religiosity, church attendance entails considerable theoretical power since it captures involvement in an adult-child community. I include the importance of religion in the life of the respondent, a common measure of basic religiosity. Uniquely, I also look at the change in church attendance and the importance of religion, calculated simply as the Wave I outcome subtracted from the Wave II outcome.

While religion may be considered by some to be a protective factor for at-risk youth, it is necessary to assess the relationship while accounting for other protective and risk factors may artificially inflate its influence. To reduce alternative explanations, therefore, I include these other documented factors: an index of the child-reported level of family satisfaction (ranges from 3–15); an index of the child’s self-image (ranges from 6–30); level of personal autonomy or freedom (ranges from 0–6); if the child has a temper as judged by their parent (1=has a temper); intergenerational closure (number of parents of respondent’s friends that the respondent parent knows); the education level of the parent (typically mother) respondent (1=college education or more); parent’s identification of a learning disability in their adolescent child (1=learning disabled); if the respondent sees little opportunity for a future (doesn’t think will live to age 35); an index of the respondent’s attachment to school (ranges from 3–15); and the respondent’s Wave I score on the Peabody Picture Vocabulary Test (an indicator of academic ability).

Summary of Results

Figures 1–4 display graphs detailing the percent of respondents that do considerably worse than expected (who drink, do drugs, are delinquent, and fail to progress well in school in spite of their advantages) split by categories of whether or not one is religiously affiliated, importance of religion, and church attendance. While visually the differences may be striking, not all of them are actually significant between groups. Several things are worth noting here. First, the percent of weekly church attenders fare consistently better on each of the four negative outcomes considered here than the percent of youth who attend church less than monthly or not at all. The differences are even stronger for youth who rate religion as very important for them. On all outcomes but academic trouble, this group of youth is significantly less likely to do worse than expected than each of the other groups, including those who rate religion as fairly important. In other words, the key difference is between the very religious and

Figure 1a. Religious Affiliation and Unexpected Alcohol Use
Percent Drinking Alcohol More Than Expected ($N=9222$)

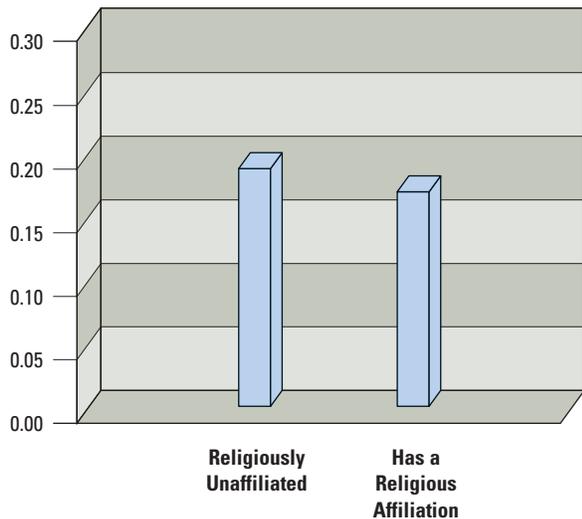


Figure 1b. Importance of Religion and Unexpected Alcohol Use
Percent Drinking Alcohol More Than Expected ($N=9222$)

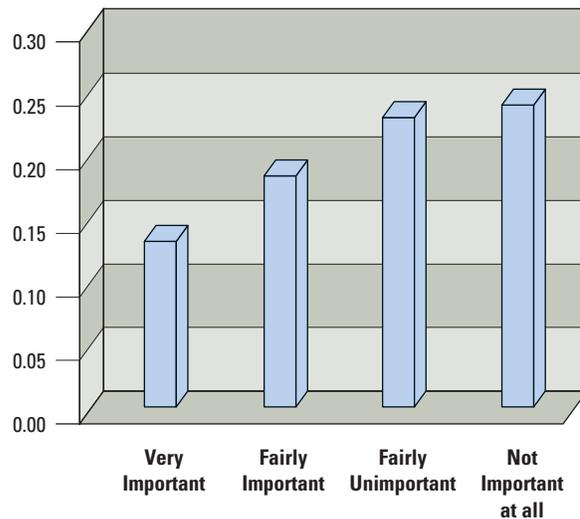
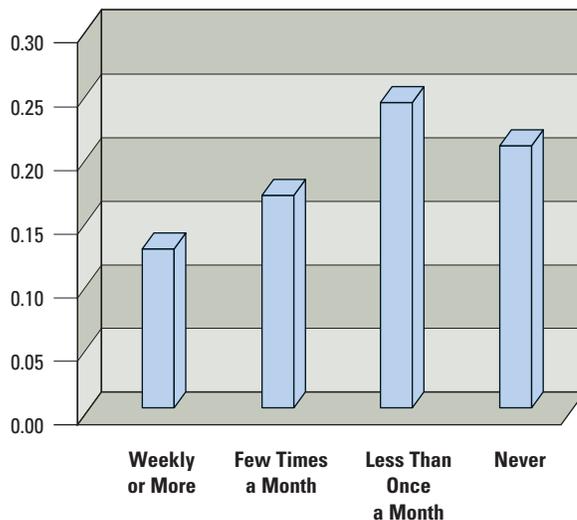


Figure 1c. Church Attendance and Unexpected Alcohol Use
Percent Drinking Alcohol More Than Expected ($N=9222$)



everyone else. While such bivariate relationships are interesting, they cannot help us determine whether religion directly affects these outcomes. To do that I account for other factors that may reduce religion’s role to an indirect, though not necessarily unimportant, one.

The logistic regression tables found in Appendices C–F first employ only religious factors before also including a number of important family, risk, and academic factors. From the estimated model fit scores, it should be acknowledged that predicting which youth will not perform up to expectations is difficult, even with traditional correlates. Appendix C shows results from a two-stage logistic regression model identifying those youth who drink more than expected. To reiterate, this strategy analyzes the 15% of the sample that is—with respect to alcohol use—drinking more than would be expected given their age, race, gender, and SES. The first model examines the four religious effects only. Church attendance, as well as the personal importance of religion, is inversely and significantly related to unexpected alcohol use. That is, a unit increase in attendance corresponds with a 17 percent

Figure 2a. Religious Affiliation and Delinquency
Percent More Delinquent Than Expected ($N=9187$)

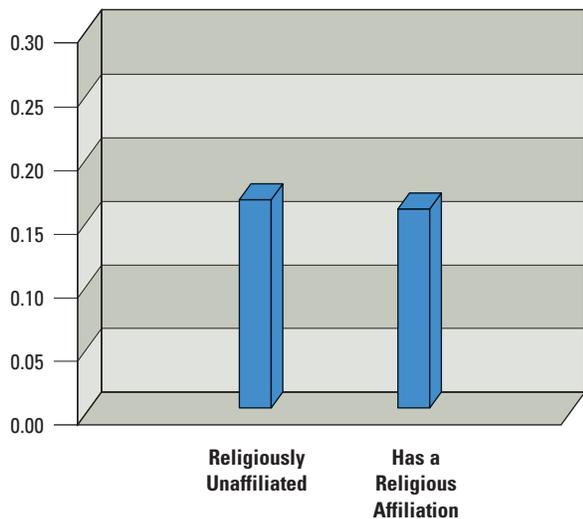


Figure 2b. Importance of Religion and Delinquency
Percent More Delinquent Than Expected ($N=9187$)

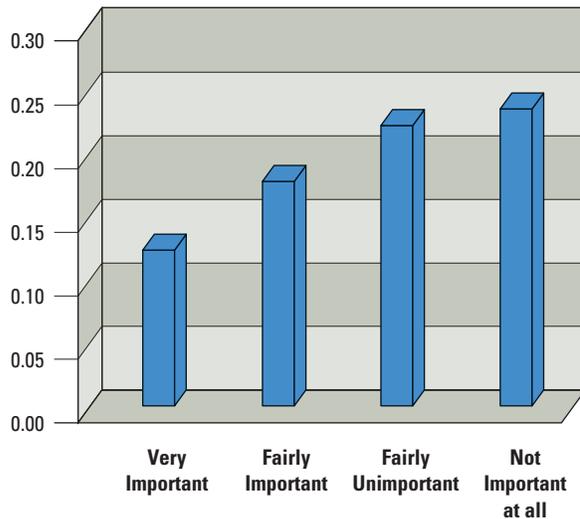
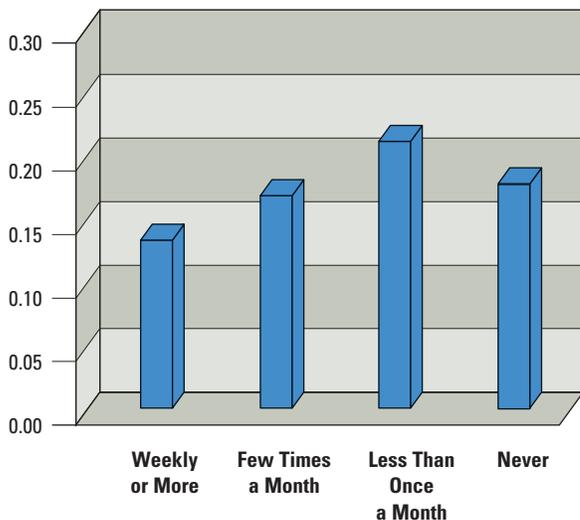


Figure 2c. Church Attendance and Delinquency
Percent More Delinquent Than Expected ($N=9187$)



decline in the odds that the respondent drinks more than expected. The self-rated importance of religion displays an even stronger relationship. Inter-wave change in both attendance and importance of religion also show minor protective effects. That is, increasing religiosity over time corresponds with less unexpected drinking. In the second model of Appendix C, several variables are added to examine the direct effect of the religious variables. Family satisfaction and independence, as well as the respondent's temper, each show a strong relationship with unexpected drinking. However, accounting for these does little to affect the direct effect of church attendance and heightened attendance over time.

Appendix D displays comparable models predicting unexpected delinquency. Unlike with drinking, there is little relationship whatsoever between church attendance and delinquency. At the same time, there is a substantial and sizable relationship with the self-rated importance of religion and change in the same negative outcome. With each unit increase in the importance of religious faith, the odds of unexpected delinquency decline about 23 percent.

Figure 3a. Religious Affiliation and Vulnerability to Drug Use
Percent Using Drugs More Than Expected ($N=9187$)

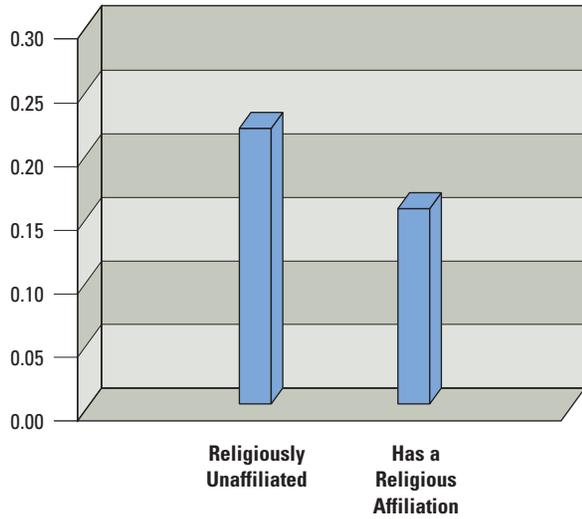


Figure 3b. Importance of Religion and Vulnerability to Drug Use
Percent Using Drugs More Than Expected ($N=9187$)

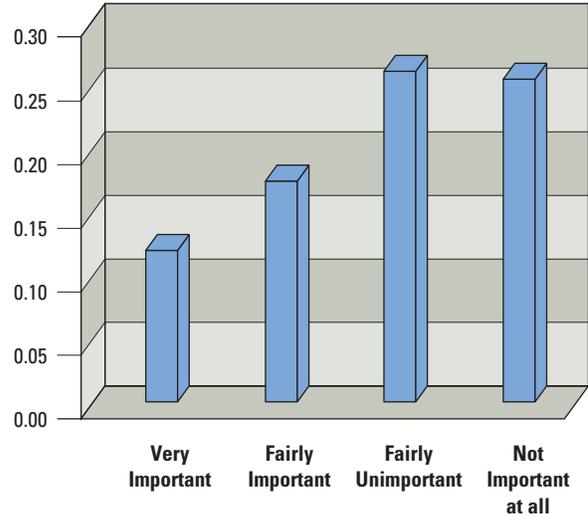
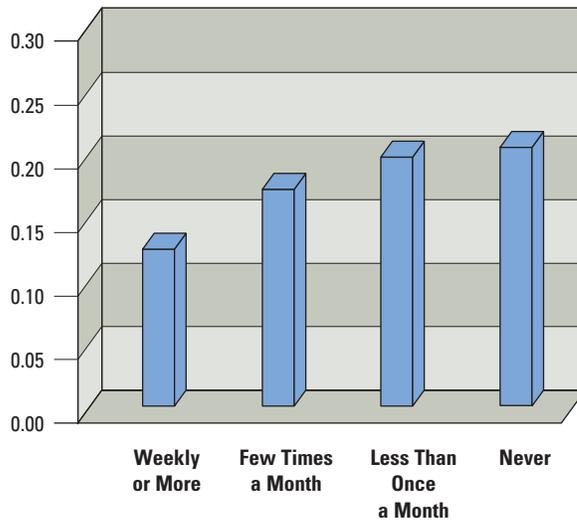


Figure 3c. Church Attendance and Vulnerability to Drug Use
Percent Using Drugs More Than Expected ($N=9187$)



A comparable effect is apparent in youth for whom religion grows in its importance. These youth were less likely to become more delinquent than expected. A positive self-image as well as satisfaction with one's family are similarly quite protective against unexpected delinquency. Here again the addition of other risk and academic factors does little to undermine the strong, direct relationship with the significant religious measures. And here again the respondent's temper is shown to distinguish in part those who fare worse than expected from those who do not.

Appendix E estimates drug use among low-risk youth. As with delinquency, the religious influence is primarily a private religiosity one. When religion both is and becomes more important to the low-risk respondent, their likelihood of doing drugs drops considerably, even when controlling for an extended list of academic and risk factors typically associated with the outcome. The odds of unexpected drug use decline by about 30 percent for each unit increase in the importance of religion, and by 15 percent for unit changes in the importance of religion between

Figure 4a. Religious Affiliation and Vulnerability to School Trouble
Percent Having More Trouble With School Than Expected
(N=9187)

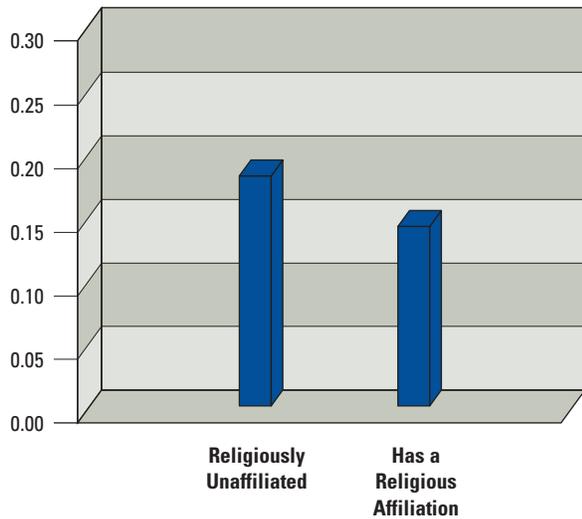


Figure 4b. Importance of Religion and Vulnerability to School Trouble
Percent Having More Trouble With School Than Expected
(N=9187)

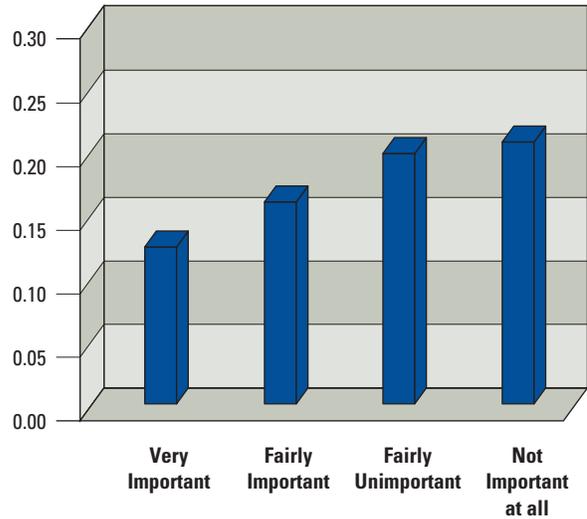
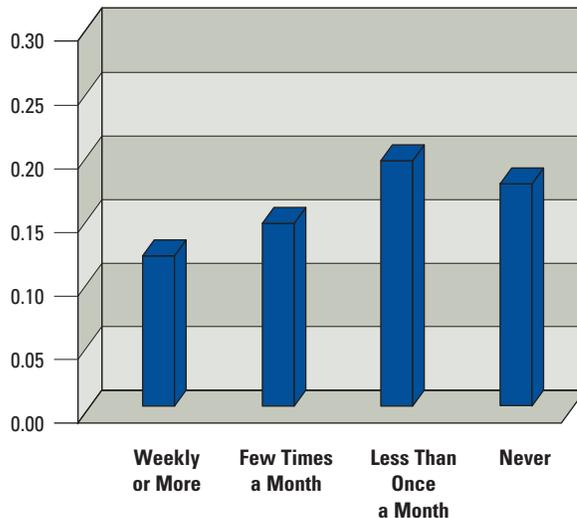


Figure 4c. Church Attendance and Vulnerability to School Trouble
Percent Having More Trouble With School Than Expected
(N=9187)



waves. In addition to religious influences, family satisfaction and a positive self-image each serve as protective influences here, while again a temper is more likely to characterize those low-risk youth who nevertheless take drugs.

Finally, Appendix F parallels the other regression models in identifying factors that contribute to respondents' unexpectedly becoming "off-track" in school utilizing a composite index of several indicators of failure to progress in school. Here, in keeping with research on religion's effect upon educational resilience²³, the substantive religious influence comes primarily through church attendance. The odds of unexpected academic difficulty decline by around 15 percent for each step increase in church attendance. Understandably, scoring well in academic ability and school attachment are both helpful in reducing the likelihood of deviance. Family satisfaction once again appears to help youth, while having a temper hurts them. Through it all, the independent contribution of church attendance to helping adolescents avoid doing poorly in school remains consistent.

Discussion and Conclusion

Positive religious influences affect more than just at-risk youth. Religion also shapes the behavior of low-risk kids and steers some of them away from trouble of the types examined here—drinking, drug use, delinquency, and trouble in school. The effects shown here are not of massive magnitude, nor do the models exhaust the predictable variance. This is not unusual in studies of behaviors such as delinquency and alcohol use, behaviors that can be quite common during adolescence. Thus there has been and will remain a considerable measure of randomness to predicting such behaviors. What this analysis has done is document the presence of influences that work to prevent some youth from failing to meet expectations, given their general lack of risk. In other words, this study looks at youth who have several advantages (from a two-parent family, to higher SES, to racial/ethnic risks, etc.) and then asks if religion can help these youth like research has shown it to help more at-risk youth. The data outlined here suggests that religion—both public and private forms—appears to help prevent some youth from performing more poorly than expected given their lower level of risk. Why?

To begin with, church attendance enables the attendee to tap social support provisions from fellow churchgoers.²⁴ Churches reinforce parental support networks and parental control, and reinforce norms with its power as a formal institution.²⁵ Yet unlike the dynamic among at-risk youth (especially those who live in poorer neighborhoods, where religious or religiously-based institutions comprise a considerable share of the available prosocial institution) the generally positive influence of religion among low-risk youth requires a different explanation, one less focused on community social capital and organizational provision.

Most research on religion and adolescents suggests religion is largely about social control. It makes adolescents not do something they otherwise might have done. When it comes to risky behaviors like drinking, drug use, and sex, the results of this analysis suggests religion does appear to distinguish between those who participate in those behaviors and those who refrain. One study proposed that religiosity “gives rise to a belief system that produces norms that are directly and indirectly linked to youth competence.”²⁶ Participation in religious groups is “hypothesized to promote conventional values, to facilitate interaction, and to establish strong social bonds that encourage academic and socioemotional competence.”²⁷ Nevertheless, resisting certain temptations (like that to use drugs or steal) is easier, I would argue, when religious beliefs and practices are internalized, as perhaps indicated by the self-rated importance of religion. Youth who say religion is “very important” to them are more likely to understand certain behaviors (e.g. drinking alcohol) as making a distinction between devout and less-devout youth. Such appears to be the case among evangelical Protestant youth.²⁸

Another study’s similar conclusions prompted researchers to suggest that church-based activities may help youth create friendships among like-minded peers who encourage each other toward adherence to mainstream values and academic success.²⁹ The authors note that the religion effect may be indirect, linked to competence by way of religion’s positive influence on more cohesive family relationships. Yet the direct religion effects in my results presented here stand independently of the influence of the respondent’s satisfaction with their family life.

The Iowa study of rural adolescents and their families reinforced this, finding that religiously involved youth often stood out among their peers in terms of academic competence.³⁰ The Iowa youth study’s authors argued that the involvement of youth, their friends, and their elders in church programs “establishes a culture that supports personal integrity, the virtues of civic life and civility, and an ethic of achievement.”³¹ Such adolescents are seen by parents as displaying considerable personal maturity.

A compelling question arising not only from this analysis but also from numerous other studies of religious influences on behavior is this: why have we found only private religiosity influences (e.g., personal importance of faith) on behaviors like drug use and delinquency, and only public religiosity influences (e.g., attendance) on other behaviors like academic progress? Why do researchers typically fail to find consistent, across-the-board religious effects? And what does this tell us about religious influences and their directions? Unfortunately, this is a discussion that seldom occurs, leaving me with little to draw upon in mounting an argument.

To begin with, it is easiest to understand the inverse relationship noted here and elsewhere between church attendance and having trouble in school. Both practices require some measure of commitment, diligence, and routine. While lighting up a joint or drinking a few beers can be isolated and brief events, faring poorly or well in school is a longer-term process. Take for example an illustration about a hypothetical teenage girl. While she may attend religious services frequently, she may not personalize or internalize the belief system or religious identity. In other words, she may just be “going through the motions.” Yet the ritual practice of rising and going to church, whether from her own sense of commitment or her parents, contributes to the successful development of commitment to a practice and routine, a skill that translates into tools needed for schooling success. On the other hand, if the religious belief system and identity is not internalized, that is, if she does not understand herself as, say, chosen by God or believe her actions to reflect her relationship with God, then ritual practice (i.e., attendance) alone may fail to motivate her to resist the more spontaneous opportunities to drink, do drugs, or shoplift. This explanation may well capture why the results here document a significant relationship between the self-rated importance of religion and each of the outcomes except trouble in school. Even the most devoutly religious students can still suffer academic difficulties, since schooling taps talents and tools that may have little to do with how religious one considers oneself.

To summarize, while recent research has pointed to a beneficial effect of youth religious practice and commitment among at-risk populations, less is known about its role, if any, in the lives and outcomes of low-risk youth. This study uses a novel method of categorizing those youth who fare less well than expected to, given their lower levels of risk and thus heightened expectations for better outcomes. Both lower church attendance and lesser importance of religion in adolescents’ lives—as well as change in these religious measures—proved to be effective identifiers of those youth who failed to meet expectations, that is, those who are delinquent or use drugs, etc., in spite of being considered at low risk to do so.

APPENDIX A .

Results from OLS Regression Predicting Wave II Outcomes

	Alcohol Use	Delinquency	Drug Use	Academically Off-track
Family Economic Advantage	0.019 (.01)	0.016 (.03)	-0.008* (.00)	-0.100*** (.02)
Male	0.099** (.03)	0.518*** (.08)	-0.006 (.01)	0.594*** (.05)
Age	0.643*** (.16)	2.212*** (.45)	0.431*** (.07)	1.792*** (.25)
Age-squared	-0.014** (.01)	-0.078** (.01)	-0.013** (.00)	-0.061*** (.01)
White	0.327*** (.04)	-0.247* (.10)	0.052*** (.01)	-0.139* (.05)
N	9221	9186	9188	9243
R ²	.06	.01	.02	.03

* p < .05 ** p < .01 *** p < .001 (two-tailed)

APPENDIX B .

Items Used for Index Construction

1. Delinquency (Wave II Alpha=0.83)

In the past twelve months, how often did you...

1. Paint graffiti on someone else's property or in a public place?
2. Deliberately damage property that didn't belong to you?
3. Lie to your parents or guardians about where you had been or whom you were with?
4. Take something from a store without paying for it?
5. Run away from home?
6. Drive a car without its owners permission?
7. Steal something worth more than \$50?
8. Go into a house or building to steal something?
9. Use or threaten to use a weapon to get something from someone?
10. Sell marijuana or other drugs?
11. Steal something worth less than \$50?
12. Take part in a fight where a group of your friends was against another group?
13. Become loud, rowdy, or unruly in a public place?

2. Academic Trouble (Wave II Alpha= 0.26)

A sum of six standardized measures, reverse coded to indicate poor progress:

1. GPA (0-4)
2. How often have you had trouble getting your homework done? (0-4)
3. How often have you had trouble getting along with teachers? (0-4)
4. Have you ever been expelled from school? (0,1)
5. Have you ever received an out-of-school suspension from school? (0,1)
6. How many times have you skipped school for a full day without an excuse? (0, >1)

Items Used for Index Construction

3. Economic Advantage (Alpha=0.58)

Summed score on 6 dichotomous items:

1. Mother is married or had first child after age 18.
2. Mother has at least a high school education.
3. Parent respondent is not on welfare.
4. Parent respondent has enough money to pay bills.
5. Family income is above the median (\$35,000).
6. Child/parent ratio in household is below 1.0.

4. Family satisfaction (Alpha=0.78)

How much do you feel that...

1. People in your family understand you? (1=not at all, 5=very much)
2. You and your family have fun together?
3. Your family pays attention to you?

5. Autonomy from parents (Alpha=0.55)

Do your parents let you make your own decisions about...

1. The time you must be home on weekend nights? (0=no, 1=yes)
2. The people you hang around with?
3. What you wear?
4. How much television you watch?
5. Which television programs you watch?
6. What time you go to bed on week nights?

6. Child's Positive Self-Image (Alpha=0.85)

How much do you feel that...

1. You have a lot of good qualities? (1=strongly disagree, 5=strongly agree)
2. You have a lot to be proud of?
3. You like yourself just the way you are?
4. You are doing everything just about right?
5. You feel socially accepted?
6. You feel loved and wanted?

7. School Attachment (Alpha=0.82)

How much do you agree or disagree with the following statements...

1. You feel close to people at your school.
2. You feel like you are part of your school.
3. You are happy to be at your school.

APPENDIX C.

Results from Logistic Regression Predicting Unexpected Drinking

Effect	Odds Ratio	Standard Error	Odds Ratio	Standard Error
Church attendance	0.828***	.04	0.843**	.04
Change in church attendance	0.875**	.04	0.888*	.04
Importance of religion	0.803**	.06	0.878+	.06
Change in importance of religion	0.870*	.05	0.900+	.05
Family satisfaction			0.906***	.01
Positive self-image			0.987	.01
Level of personal autonomy			1.212***	.04
Child has a temper			1.399***	.09
Intergenerational closure			1.040+	.02
School attachment			0.976	.01
Peabody Picture-Vocabulary Test score			1.002	.01
Model Fit Statistics				
-2 Log Likelihood	7704.9		7521.6	
Pseudo R-square	0.019		0.043	
N	7,799		7,799	

+ p < .10 * p < .05 ** p < .01 *** p < .001

APPENDIX D.

Results from Logistic Regression Predicting Unexpected Delinquency

Effect	Odds Ratio	Standard Error	Odds Ratio	Standard Error
Church attendance	1.044	.06	1.053	.06
Change in church attendance	1.074	.05	1.091+	.04
Importance of religion	0.674***	.04	0.729***	.06
Change in importance of religion	0.743***	.05	0.761***	.05
Family satisfaction			0.882***	.02
Positive self-image			0.963*	.01
Level of personal autonomy			0.976	.03
Child has a temper			1.311**	.09
Intergenerational closure			1.010	.02
School attachment			0.997	.01
Peabody Picture-Vocabulary Test score			1.003	.00
Model Fit Statistics				
-2 Log Likelihood	7717.2		7489.4	
Pseudo R-square	0.015		0.044	
N	7,812		7,812	

+ p < .10 * p < .05 ** p < .01 *** p < .001

APPENDIX E.

Results from Logistic Regression Predicting Unexpected Drug Use

Effect	Odds Ratio	Standard Error	Odds Ratio	Standard Error
Church attendance	0.916	.04	0.928	.04
Change in church attendance	0.943	.04	0.956	.04
Importance of religion	0.665***	.06	0.728***	.05
Change in importance of religion	0.826**	.06	0.848*	.05
Family satisfaction			0.888***	.01
Positive self-image			0.969*	.01
Level of personal autonomy			1.035	.04
Child has a temper			1.350**	.13
Intergenerational closure			1.013	.02
School attachment			0.975+	.01
Peabody Picture-Vocabulary Test score			1.003	.00
Model Fit Statistics				
-2 Log Likelihood	7624.2		7393.7	
Pseudo R-square	0.023		0.054	
N	7,779		7,779	

+ p < .10 * p < .05 ** p < .01 *** p < .001

APPENDIX F.

Results from Logistic Regression Predicting Unexpectedly Being Off-track in School

Effect	Odds Ratio	Standard Error	Odds Ratio	Standard Error
Church attendance	0.838***	.04	0.878**	.04
Change in church attendance	0.906*	.04	0.932	.04
Importance of religion	0.889+	.05	0.920	.05
Change in importance of religion	0.960	.06	0.958	.06
Family satisfaction			0.900***	.01
Positive self-image			0.997	.01
Level of personal autonomy			0.987	.02
Child has a temper			1.326**	.10
Intergenerational closure			1.014	.02
School attachment			0.938***	.01
Peabody Picture-Vocabulary Test score			0.986***	.00
Model Fit Statistics				
-2 Log Likelihood	7802.4		7563.2	
Pseudo R-square	0.008		0.034	
N	7,855		7,855	

+ p < .10 * p < .05 ** p < .01 *** p < .001

NOTES

- ¹ Carolyn A. Smith, A. J. Lizotte, Terence P. Thornberry, and Marvin D. Krohn, 1995, "Resilient Youth: Identifying Factors that Prevent High-risk Youth from Engaging in Delinquency and Drugs," in John Hagan (ed.), *Delinquency and Disrepute in the Life Course* (pp 217-47), Greenwich, CT: JAI Press.
- ² J. M. Richman and G.L. Bowen, 1997, "School failure: An ecological-interactional-developmental perspective," in M.W. Fraser (ed.), *Risk and resilience in childhood: An ecological perspective* (pp 95-116), Washington, D.C.: NASW Press.
- ³ For one of many examples of research documenting this effect, see Graham Bradley and Karen Wildman, 2002, "Psychosocial predictors of emerging adults' risk and reckless behaviors," *Journal of Youth and Adolescence*, 31: 253-265.
- ⁴ L.N. Robins, 1991, "Conduct Disorder." *Journal of Child Psychology and Psychiatry*, 32, 193-212.
- ⁵ See as examples, Richard B. Freeman, 1986, "Who Escapes? The Relation of Churchgoing and other Background Factors to the Socioeconomic Performance of Black Male Youths from Inner-city Poverty Tracts," In *The Black Youth Employment Crisis*, Editors Richard B. Freeman and Harry J. Holzer, 353-376. Chicago: The University of Chicago Press; Byron R. Johnson, Sung Joon Jang, Spencer De Li, and David Larson, 2000b, "The 'Invisible Institution' and Black Youth Crime: The Church as an Agency of Local Social Control," *Journal of Youth and Adolescence* 29: 479-498; Mark D. Regnerus, 2001, "Making the Grade: The Influence of Religion upon the Academic Performance of Youth in Disadvantaged Communities," Report 01-04, Center for Research on Religion and Urban Civil Society, University of Pennsylvania.
- ⁶ For two examples of these phenomena (religious effects being mediated by other factors in predicting a given outcome), see Mark D. Regnerus, "Linked Lives, Faith, and Behavior: An Intergenerational Model of Religious Influence on Adolescent Delinquency," Forthcoming, *Journal for the Scientific Study of Religion*; W. A. Mason and M. Windle, 2002, "A Longitudinal Study of the Effects of Religiosity on Adolescent Alcohol Use and Alcohol-Related Problems," *Journal of Adolescent Research*, 17: 346-363.
- ⁷ For reviews of such research, see Peter L. Benson, 1990, *The troubled journey: A portrait of 6th – 12th grade youth*, Minneapolis: Lutheran Brotherhood; Christopher G. Ellison and Jeffrey S. Levin, 1998, "The Religion-Health Connection: Evidence, Theory, and Future Directions," *Health Education and Behavior*, 25, 700-720; Byron R. Johnson, Spencer De Li, David B. Larson, and Michael McCullough, 2000a, "A Systematic Review of the Religiosity and Delinquency Literature," *Journal of Contemporary Criminal Justice* 16: 32-52.
- ⁸ Mark D. Regnerus, 2001, "Making the Grade: The Influence of Religion upon the Academic Performance of Youth in Disadvantaged Communities," Report 01-04, Center for Research on Religion and Urban Civil Society, University of Pennsylvania.
- ⁹ Glen H. Elder, Jr. and Rand D. Conger, 2000, *Children of the Land: Adversity and Success in Rural America*, Chicago: The University of Chicago Press.
- ¹⁰ Steven R. Burkett, 1980, "Religiosity, Beliefs, Normative Standards and Adolescent Drinking," *Journal of Studies on Alcohol* 41(7): 662-671.
- ¹¹ S.J. Bahr, R. D. Hawks, and G. Wang, 1993, "Family and Religious Influences on Adolescent Substance Abuse," *Youth & Society* 24(4): 443-465.
- ¹² Chandra Muller and Christopher G. Ellison, 2001, "Religious Involvement, Social Capital, and Adolescents' Academic Progress: Evidence from the National Longitudinal Study of 1988," *Sociological Focus* 34: 155-183.
- ¹³ Muller and Ellison, 2001, page 175.
- ¹⁴ Two recent, high-quality reviews of recent research on religious influences are especially noteworthy: Byron R. Johnson, Ralph Brett Tompkins, and Derek Webb, 2002, "Objective Hope: Assessing the Effectiveness of Faith-Based Organizations: A Review of the Literature," Center for Research on Religion and Urban Civil Society, University of Pennsylvania; C. J. Baier and B.R.E. Wright, 2001, "If you love me, keep my commandments": A meta-analysis of the effect of religion on crime, *Journal of Research on Crime and Delinquency* 38: 3-21.
- ¹⁵ Ronald L. Johnstone, 1997, *Religion in Society: A Sociology of Religion* (5th edition), Upper Saddle River, NJ: Prentice Hall.

- ¹⁶ Specifically, this research is based on data from the Add Health project, a program project designed by J. Richard Udry (PI) and Peter Bearman, and funded by grant P01-HD31921 from the National Institute of Child Health and Human Development to the Carolina Population Center, University of North Carolina at Chapel Hill, with cooperative funding participation by the National Cancer Institute; the National Institute of Alcohol Abuse and Alcoholism; the National Institute on Deafness and Other Communication Disorders; the National Institute on Drug Abuse; the National Institute of General Medical Sciences; the National Institute of Mental Health; the National Institute of Nursing Research; the Office of AIDS Research, NIH; the Office of Behavior and Social Science Research, NIH; the Office of the Director, NIH; the Office of Research on Women's Health, NIH; the Office of Population Affairs, DHHS; the National Center for Health Statistics, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, Office of Public Health and Science, DHHS; the Office of the Assistant Secretary for Planning and Evaluation, DHHS; and the National Science Foundation. Persons interested in obtaining data files from The National Longitudinal Study of Adolescent Health should contact Francesca Florey, Carolina Population Center, 123 West Franklin Street, Chapel Hill, NC 27516-3997 (email: fflorey@unc.edu).
- ¹⁷ Further details regarding the sample and methods of study can be found in Peter S. Bearman, Jo Jones, and J. Richard Udry, 1997, *The National Longitudinal Study of Adolescent Health: Research Design*, Web page, available at: www.cpc.unc.edu/projects/addhealth/design.html.
- ¹⁸ My predictor variables for this initial regression are several documented risk factors: the youth's sex, age (and its squared term), race/ethnicity, and the level of economic advantage the youth's family is experiencing—an index comprised of mother's education status, not receiving welfare and no difficulty paying bills, above median family income, mother's marital status, and the presence of two biological parents. While not discussed explicitly here, the OLS regression models from which the residuals are then drawn are displayed in Appendix A. While innovative, this residual modeling approach has been employed in previous research (Elder and Conger, 2000, *Ibid*).
- ¹⁹ Including resilient youth in this stage of analysis would have artificially inflated religion's importance. While innovative and appropriate here, this analysis is thus one step removed from analyzing youths' actual behavior per se. I am essentially analyzing whether youth inhabit one of three classes – doing better than expected, about average, or worse than expected. As such, some adolescents perform more poorly than others, yet are grouped together without gradation. Perhaps future research will examine levels of failure to live up to expectations. And my focus is on whether or not religion helps keep youth out of the last category. Another limitation of this study is its sample – only youth who stay in school are available to be sampled, limiting our ability to assess religion's influence on staying in school versus dropping out.
- ²⁰ The variable concerning “falling behind in school” is similar in construction to the nine-measure “getting by” construct in Thomas D. Cook, Melissa R. Herman, Meredith Phillips, and Richard A. Settersten, Jr., Forthcoming, “How Neighborhoods, Families, Peer Groups, and Schools Jointly Affect Changes in Early Adolescent Development,” *Child Development*, and in theory to the “on-track” measure of adolescent developmental competence used in Delbert S. Elliott, Scott Menard, David Huizinga, William Julius Wilson, Amanda Elliott, and Bruce Rankin, 2002, *Good Kids from Bad Neighborhoods*, Forthcoming.
- ²¹ This is an argument reinforced in Richard Jessor, Mark S. Turbin, and Frances M. Costa, 1998, “Risk and Protection in Successful Outcomes among Disadvantaged Adolescents,” *Applied Developmental Science* 2: 194-208.
- ²² Bruce E. Compas, Beth R. Hinden, and Cynthia A. Gerhardt. 1990. “Adolescent Development: Pathways and Processes of Risk and Resilience.” *Annual Review of Psychology* 46: 273.
- ²³ Regnerus, 2001, *Ibid*; Mark D. Regnerus, 2000, “Shaping Schooling Success: A Multi-level Study of Religious Socialization and Educational Outcomes in Urban Public Schools,” *Journal for the Scientific Study of Religion* 39: 363-370.
- ²⁴ This argument has been made in several studies, including Christopher G. Ellison and Linda K. George, 1994, “Religious Involvement, Social Ties, and Social Support in a Southeastern Community,” *Journal for the Scientific Study of Religion*, 33:46-61; Diana Mendley Rauner, 2000, “*They still pick me up when I fall*”: *The role of caring in youth development and community life*, New York: Columbia University Press; Robert J. Taylor and Linda M. Chatters, 1988, “Church members as a source of informal social support,” *Review of Religious Research*, 30, 193-203.
- ²⁵ Robert Wuthnow, 1995, *Learning to care: Elementary kindness in an age of indifference*. New York: Oxford University Press.
- ²⁶ Gene H. Brody, Zolinda Stoneman, and Douglas Flor, 1996, “Parental Religiosity, Family Processes, and Youth Competence in Rural, Two-Parent African American Families,” *Developmental Psychology* 32: 696.
- ²⁷ Brody, Stoneman, and Flor, 1996, *Ibid*, page 696.
- ²⁸ James M. Penning and Corwin Smidt, 2002, *Evangelicalism: The Next Generation*. Grand Rapids, MI: Baker.
- ²⁹ Muller and Ellison, 2001, *Ibid*.
- ³⁰ Elder and Conger, 2000, *Ibid*.
- ³¹ Elder and Conger, 2000, *Ibid*, page 163.

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