Making the Grade:
The Influence of Religion Upon the Academic Performance of Youth in Disadvantaged Communities
by Mark D. Regnerus
The Baylor Institutes for Studies of Religion exists to involve scholars having many different interests and approaches in creative efforts to grasp the complexities and interconnections of religion in the life of individuals and societies. The aim is to combine the highest standards of scholarship with a serious commitment to faith, resulting in studies that not only plumb basic questions, but produce results that are relevant to religious organizations, address moral controversies, and contribute to social health.

This research was released in 2002 as a CRRUCS Report at the University of Pennsylvania and is being re-issued as a Baylor ISR Report at Baylor University in 2008.
Making the Grade:

The Influence of Religion Upon the Academic Performance of Youth in Disadvantaged Communities

Mark D. Regnerus, Ph.D.
Assistant Professor of Sociology and Faculty Research Associate, Population Research Center
University of Texas at Austin
Non-Resident Fellow
Baylor Institute for Studies of Religion
# Table of Contents

3 Executive Summary  
4 Introduction  
4 Religion and Resilience in Youth  
5 Key Study Variables  
7 Analytic Strategy  
8 Summary of Findings  
10 Conclusions  
6 Figure 1  
9 Figure 2  
9 Figure 3  
12 Appendix A: Items Used for Index Construction  
13 Appendix B: Table 1  
14 Appendix B: Table 2  
15 Notes
Religious institutions are often the only, or at least the primary, institutions committed to the welfare of poor, inner-city neighborhoods. These neighborhoods rarely enjoy the social benefits that result from extensive legal commerce, plentiful good jobs, and strong schools that more stable communities enjoy. However, they do benefit from the significant presence of religious institutions in their neighborhoods. In fact, churches in high-risk settings are numerous. Nevertheless, these churches can vary widely in the degree to which they provide stability for the neighborhood. Storefront churches, for example, may be popular on Sundays yet play little role in neighborhood life from Monday morning to Saturday night.

The question that is at the heart of this study is this: What role, if any, do churches in poor neighborhoods play in helping kids stay in school? According to data from the National Longitudinal Study of Adolescent Health, adolescents in low-income neighborhoods do not differ in their church attendance patterns from their peers in higher-income areas. However, their church attendance (and general religious involvement) is much more likely to positively contribute to their academic progress than it is among youth in higher-income neighborhoods (even with adjustments for key risk and protective factors). This study will conclude with explanations for the effect and its broader implications.
n spite of the numerous challenges and misfortunes in their lives, many at-risk youth continue to “make it”. That is, they stay in school and graduate, avoid serious trouble and substance abuse, find employment, and start families of their own. Recent studies of resilient young people and families living in poor urban neighborhoods suggest this. A number of factors seem to contribute to such successes. This study asks whether religion is one of those factors. It also asks whether religion makes a more significant difference in advantaged or disadvantaged neighborhoods. The differences between advantaged and disadvantaged neighborhoods are substantial: an advantaged neighborhood has low rates of broken families, poverty, and unemployment, compared to disadvantaged areas where all of these conditions are common. Does religion offer more to disadvantaged young people precisely because they have more significant, unmet needs?

Risks, resilience, and vulnerability vary by contexts and populations. For example, African-American teenage girls are traditionally at greater risk for early pregnancy, while white adolescent boys are at greater risk for alcohol use and abuse. In general, youth who live in impoverished neighborhoods are at high risk for academic failure. Susan Mayer and Christopher Jencks’ seminal study of neighborhood effects concluded that “teenagers who live in high SES (socio-economic status) neighborhoods attain more schooling than teenagers from similar families who live in lower SES neighborhoods.” Several studies corroborate this very robust, consistent relationship. With this relationship in mind, we ask the following research questions:

1. Are adolescents who profess and practice religion apt to fare better academically when compared to their less-observant counterparts (regardless of economic background)?

2. As an extension, does religion matter more (for educational progress) in high-risk settings?

Essentially, we want to know if religiosity is a quality that characterizes resilient youth (i.e. youth who overcome significant obstacles and challenges in life). Are adolescents from poor neighborhoods who fare unexpectedly well in school characterized by committed religious behavior?

Religion and Resilience in Youth

What is the evidence concerning the influence of religion upon academic performance? Since religion is multifaceted— involving beliefs, behaviors, and social networks— any links between religion and academic competence should reflect this. Some studies have looked at the connection between religious beliefs and academic performance. For instance, several recent studies have focused on the ambivalent attitudes towards education and learning among conservative Protestants and the effect this has upon their children. Even more rare are studies that link religious practice to educational achievement during high school. Those that have studied this connection generally find positive influences, regardless of religious tradition. One study detected a
robust positive influence of church attendance on both reading and math achievement—though one which did not vary in its influence across poverty contexts. Another research team found in their sample of rural Iowa families that religiously involved youth tend to excel in school, and as their religiosity increased, so did their academic progress. This same model proved true in Harvard economist Richard Freeman’s study of church-going’s influence on the school performance of African-American male youth in high-poverty neighborhoods. James Coleman’s foundational research on education revealed that Roman Catholicism’s strong commitment to separate schooling systems has resulted in positive influences on educational achievement when contrasted to public schools, especially in lower-income areas. Finally, one study’s analysis of educational attainment among African-Americans concluded that religion and church involvement improved academic achievement, independently of particular denominational affiliations.

What is it about religion that makes a difference in the lives of youth, particularly those that live in high-risk settings? Broadly conceived, religion as traditionally practiced performs several social functions: it reinforces collectively-held values and beliefs; it provides social networks to individuals; it encourages caring; it has enduring faith in the possibility of individual transformation; it galvanizes and organizes moral indignation; and its practitioners are committed to the next generation. The list could continue. Still, why should religion lead to investment in education? Simply put, religion helps to reinforce the importance of staying in school, working hard to attain good grades, and achieving a diploma. Thus, it could be argued that religion is about various commitments. And commitment is about obligations to act in ways consistent with one’s relationships. In contrast to personal beliefs and motivations, commitment entails external constraints that structure lives that are linked to others. Youth in church communities are motivated to excel (and behave properly, etc.) not simply by their own will, but by their connection to others who expect it.

But why should this relationship look any different between low and high-poverty communities? Figure 1 suggests why. It displays the typical sources of positive, prosocial influence on youth in low and high-poverty neighborhoods. As you can see, high-poverty neighborhoods lack several key sources of positive influence: strong schools, lower unemployment, extensive legal commerce, fewer broken families, lower teen birth rate, etc. They do not, however, lack religious institutions. Figure 1 suggests that a strong relationship exists between religion and satisfactory school performance for youth in both neighborhoods. However, organized religion accounts for a much greater share of the total available prosocial influences. Thus religion’s influence on education among adolescents in high-income, low-risk neighborhoods is greatly diminished by the presence of numerous, competing positive influences. Religion might simply be one good influence among several. Its influence on education among youth in high-risk neighborhoods, on the other hand, should be stronger because churches have little competition from other prosocial influences.

**Key Study Variables**

All data for this study come from the National Longitudinal Study of Adolescent Health. This was a longitudinal nationally representative study of American adolescents in grades 7–12 that began in 1994. The National Institute of Child Health and Human Development (NICHD) and 17 other federal agencies funded it. Fieldwork was conducted by the National Opinion Research Center of the University of Chicago. Data was obtained from
students in 134 middle and high schools in 80 communities. All analyses in this study are based on a subsample of adolescents who completed both waves of interviews, and also had valid data from a parent, school administrator, and about their residential census tract. This resulted in a study sample of 13,500 adolescents. Following listwise deletion, the final analytic sample size is 9,771. Index construction and psychometric properties are described in detail in Appendix A.

**On-track School Performance**

Staying on track is about making educational progress, and differs from more traditional measures of achievement (grades, standardized test scores, etc.). It entails maintaining an adequate GPA, keeping up with homework, maintaining progress through grades, getting along with classmates, avoiding disciplinary action, and refraining from skipping class. It is an index of six standardized measures. The measures are: (1) grade point average (coded 0–4); (2) has no trouble getting homework done (range 0–4); (3) gets along with teachers (range 0–4); (4) no experience of ever being expelled or suspended from school (range 0–2); (5) has not skipped classes this year without excuse (dichotomous—did or did not); and (6) has never repeated a grade or been held back in school (dichotomous—did or did not). The second interview (Wave II) asks the questions as they pertain to the time elapsed since their first interview, and includes each of the above measures except the sixth.
Neighborhood Poverty

Neighborhoods are defined here as the census tract in which adolescents resided at Wave I. The measures come from the 1990 U.S. Census Bureau. For purposes of reliability, we use four interrelated measures of poverty: (1) the proportion of persons living at or below poverty status; (2) the proportion of households that have below $15,000 annual income; (3) the unemployment rate for males; and (4) the proportion of households headed by a female, with no male present. Other neighborhood measures serving primarily as controls include the proportion black, mean age, and proportion of residents who have lived inside the tract for the previous five years.

Religious Characteristics of the Adolescent

Church (or religious service) attendance is a variable that ranges from 0 (never attends) to 4 (once per week or more), and is a reliable and traditional measure of public religiosity. The second measure captures more internal than external religiosity: the importance of religious faith, ranging from 0 (not at all important) to 4 (extremely important). Two additional measures are whether the respondent self-identified as a “born-again” Christian—a proxy of sorts for conservative Protestantism—and whether they attend a Catholic school.

Risk and Protective Factors, and Demographics

Among the risk factors are: living in a broken home (0 = two biological parents present, 1 = other arrangement); parent’s identification of a learning disability in their adolescent child (1 = learning disabled); child has a temper as judged by their parent (1 = has a temper); an index measuring the level of autonomy the child experiences (ranges from 0–6); whether the child believes he/she has no future (ranges from 1–5); and whether the family receives welfare as reported by the parent (1 = recipient). Protective factors include an index of the child-reported level of family satisfaction (ranges from 3–15); the education level of the parent (typically mother) respondent (1 = college education or more); and an index of the child’s self-image (ranges from 6–30).

Demographic characteristics are often considered risk or protective factors for various developmental outcomes. Included here are a race/ethnicity measure (African-American), an indicator that the respondent is male, as well as their age and its squared term to detect curvilinear relationships.

Analytic Strategy

Multilevel modeling is ideally suited for testing the hypotheses concerning the protective influence of religion in high-risk neighborhoods. The multilevel model allows for more appropriate assessment of neighborhood-level influences since the use of only aggregate-level data does not allow for separation of the effect of shared social conditions from that of the unique characteristics of individuals. They are also critical for testing the hypotheses concerning religion, as they assess variation in the influence of individual-level variables on staying on track in school (e.g., the slope coefficient for church attendance) as a function of neighborhood characteristics. If the slope of church attendance is steeper (and inclining) in poorer neighborhoods, then its positive influence on the dependent variable is greater than in more wealthy neighborhoods.

First, we estimate an unconditional model without covariates (but not displayed) to provide the baseline variance in the dependent variable. Next, we add individual-level variables, assessing their influence on staying on track in school. The presence of several of these risk and protective factors enables us to better assess whether
religion maintains any independent influence on adolescents' educational progress. Then we add neighborhood-level variables to assess their relative influence on staying on track, and conclude with two mixed models that allow the slopes of religious commitment to vary across neighborhoods. The second of these two models adds the “on track” status of the respondent at Wave 1, generating an “improvement” model while controlling for initial level.

Summary of Findings

1. No difference in church involvement across types of neighborhoods
Table 1 (in Appendix B) displays summary statistics for sampled populations split by the density of household poverty in the respondent’s census tract. Low, medium, and high concentrations of poverty refer to those tracts one standard deviation (.16) below the mean (.28), within one standard deviation of the mean, and exceeding one standard deviation above the mean. Aside from some of the more intuitive statistics, it is interesting to note that learning disabilities, family satisfaction, positive self-image, church attendance, and the importance of religious faith do not differ markedly (or statistically) across neighborhoods.

2. Attending church helps teenagers stay on track in school
The first model reported in Table 2 (in Appendix B.) displays estimated effects on on-track academic performance when controlling for four potential religious influences and 17 demographic, risk, and protective factors. Among the four religious measures, only church attendance is negative and significant, indicating a modest protective influence for all respondents (increasing on-track performance by about 1.5 percent, controlling for other influences). Yet it is noteworthy that church attendance remains a significant protective influence while controlling for other standard and reliable risk and protective factors.

3. Upon closer examination, church involvement helps youth in low-income, high-risk neighborhoods progress in school much more than it does teenagers in more affluent neighborhoods
In Model 3 we add cross-level interactions between the four religious variables and the tract-level measure of poverty—the proportion of households whose annual income is below $15,000. Model 3 reveals a clear cross-level interaction between church attendance and neighborhood poverty. As the level of poverty rises within the neighborhood, the relationship between church attendance and being on-track in school becomes more positive, indicating a uniquely protective influence of church attendance among youth in more impoverished neighborhoods when compared with their devout counterparts in more prosperous neighborhoods.

Figure 2 graphs this interaction more explicitly. The first thing to be noted about the graph is the proximity of the lines for both respondents in high and low poverty neighborhoods when controlling for variables in the model. Church attendance appears modestly related to enhancing the on-track performance of youth from low-risk neighborhoods, but the incline for adolescents in high-risk tracts is notably steeper, and crosses its counterpart. This indicates that, net of other influences, youth in high-risk neighborhoods who attend church regularly are progressing at least as satisfactorily as their theoretical counterparts in low-risk neighborhoods.
Figure 2. The Influence of Church Attendance on Educational Progress at Low and High Neighborhood Poverty Rates

Low and high proportions of households below $15,000 income are estimated at one standard deviation (.16) below and above the mean (.28), respectively.

Figure 3. The Influence of Church Attendance on Educational Progress at Low and High Neighborhood Poverty Rates (after controlling for initial educational status)

Low and high proportions of households below $15,000 income are estimated at one standard deviation (.16) below and above the mean (.28), respectively.
4. Church involvement not only helps at-risk youth stay on track in school, it helps them improve their educational status

Model 4 estimates influences on change in the adolescent’s academic performance, since we control here for on-track status at the first wave. It is evident that the number of coefficients associated positively or negatively with the dependent variable decreases here now that previous status is controlled for. Indeed, important and intuitive correlates no longer display a relationship, including coming from a broken home, having a learning disability, parent’s education, temper, and believing oneself to have no future. Despite these, the cross-level interaction between church attendance and high-poverty tract remains stable. As the extent of poverty rises in neighborhoods (comparing them to each other), the relationship between church attendance and change in educational progress becomes more positive. Figure 3 helps us interpret this. Unlike in Figure 2, the slopes in Figure 3 diverge. Those youth in higher-risk neighborhoods who are devout in attending religious services obviously improve more than their counterparts do both in high- and low-risk contexts.

Given the mixed and generally weak influence that neighborhood factors have displayed in research on individual-level crime and delinquency, substance use, and academic performance, it is conceivable that the cross-level relationship with church attendance is a statistical anomaly. To dispel that interpretation, we replaced the proportion of households under $15,000 in annual income with several other measures of contextual poverty: proportion of female-headed households, proportion of persons in poverty, and the male unemployment rate. There was little substantive difference in the magnitude of the interaction. Church attendance indeed strengthens the educational progress among children in high-poverty neighborhoods, regardless of how the latter is measured.

Conclusion

Having demonstrated a positive connection between religious involvement and academic performance, two further questions remain. First, what is it about church attendance per se that creates a positive influence on academic progress? And second, why is religion’s influence on educational progress more important for youth in high-risk neighborhoods?

First, the question of “why church attendance?” Church attendance reinforces values conducive to educational achievement. The ritual action of attending worship services or ceremonies is a process that operates independently of particular belief systems and organizational affiliations. And participation in religious groups promotes traditional values, facilitates interaction, breeds self-confidence, and establishes strong social bonds that encourage academic competence, emotional health and intelligent decision-making. What is more, the relationship between church attendance and youth competence is both direct and indirect. We have cited direct evidence above. Indirectly, such participation also may be linked to more cohesive family relationships, and in turn again to youth competence. One recent study of rural adolescents and their families adds, “In theory and reality, the choices that lead youth along this (churchgoing) path establish a functional community that upholds standard community values.”

Thus for all the theological diversity found in American Protestantism as well as Catholicism, the messages concerning ideal adolescent “secular” behavior—such as working hard in school—differ little.

With that in mind, we turn to the second question: why does church attendance matter more (for staying on track in school) for youth in high-risk, high-poverty neighborhoods? We begin by suggesting that churches often
provide functional communities amid dysfunction. They reinforce parental support networks and establish norms with the power of a formal institution. The disappearance of participatory, social capital-building institutions in disadvantaged neighborhoods underscores the church’s pivotal place in fostering social and academic competence in such places. Churches create an “umbrella of legitimacy” for youth, to paraphrase Harvard sociologists Christopher Winship and Jenny Berrien, and establish a place where social attitudes and behaviors, academic achievement, and future-oriented planning is valued and encouraged.

Churches are no less functional in more advantaged neighborhoods, but they are just one of many functional communities established there, together with schools, organized sports leagues, even shopping malls—wherever social organization is established and law-abiding norms are expected and upheld. Moreover, in low-risk communities day care providers, sports leagues, scouting, and self-help or recovery groups often operate independently or in conjunction with civic organizations or city government. In high-risk communities these activities are much more likely to be connected with and housed in churches.

In lower-income neighborhoods churches often stand alone or with few allies in constituting functional communities where achievement-oriented norms and expectations for youth are upheld and explicitly expressed. They provide families with resources for social control amid moral diversity and normlessness. Diana Rauner’s recent book on caring communities reinforces this argument. In her study of a Gary (IN) inner-city church, she quotes Deion, a 16-year old boy, on the difference between school and church influence on his life: “At school, you receive encouragement, but there is a lot of negativity…at church you know somebody will pick you up if you need it, and there is always a hand on your back, and you always feel it there.”

In their study of Philadelphia families, the Carnegie research team concluded that children living in high-risk environments “are almost five times as likely to succeed if families engage in highly effective in-home practices and are also highly successful at managing the external world.” Among other types, families whose children displayed consistent success include those who were persistent in socializing their children in (often all-encompassing) religious worlds. Other research corroborates this story, indicating that families who closely monitor their children and develop ties to local churches that expose their children to positive models often forge the path of youth success in disadvantaged neighborhoods. And the evidence of religious influence on youth in low-income settings is growing, in step with an emergent political proclivity to federally fund church-based social service delivery. Few have overlooked the influence of churches in a recent, substantial reduction in crime among Boston youth, dubbed the “Boston Miracle.” Others have similarly shown the protective effect of churches amidst crime in African-American communities. This protective influence appears, however, to be more than just about restraining bad behavior, but rather encouraging good behavior toward ideal ends.

In conclusion, the extent and quality of current research on adolescent resilience is impressive. Yet much of it overlooks the particular importance of religious practice in the lives of at-risk youth. Perhaps it is in part a reflection of social scientists’ own personal and professional disinterest in religion. To the subjects of their studies, however, religious faith is often of great personal value. Churches in poor and crime-ridden neighborhoods are often the primary functional communities in an otherwise dysfunctional world. And for the youth who frequent them, such churches reinforce messages about working hard and staying out of trouble, and orient them toward a positive future.
All indices used in this analysis are simple summed scores of the values of multiple variables.

A. Dependent Variable: Staying on Track in School (Wave I Alpha=0.63)
A sum of six standardized measures (measures were reverse-coded to indicate positive outcomes)

1. GPA (0–4) \( \alpha = 0.54 \)
2. How often have you had trouble getting your homework done? (0–4) \( \alpha = 0.62 \)
3. How often have you had trouble getting along with teachers? (0–4) \( \alpha = 0.54 \)
4. Have you ever been expelled or received an out-of-school suspension? (0–2) \( \alpha = 0.56 \)
5. Have you ever repeated a grade, or been held back a grade? (0,1) \( \alpha = 0.56 \)
6. How many times have you skipped school for a full day without an excuse? (0, >1) \( \alpha = 0.60 \)

B. Family Satisfaction (Alpha=0.78)
How much do you feel that...

1. People in your family understand you? \( \alpha = 0.74 \)
2. You and your family have fun together? \( \alpha = 0.71 \)
3. Your family pays attention to you? \( \alpha = 0.67 \)

C. 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? \( \alpha = 0.55 \)
2. The people you hang around with? \( \alpha = 0.52 \)
3. What you wear? \( \alpha = 0.51 \)
4. How much television you watch? \( \alpha = 0.47 \)
5. Which television programs you watch? \( \alpha = 0.47 \)
6. What time you go to bed on weeknights? \( \alpha = 0.51 \)

D. Child’s Positive Self-Image (Alpha=0.85)
How much do you feel that...

1. You have a lot of good qualities? \( \alpha = 0.83 \)
2. You have a lot to be proud of? \( \alpha = 0.81 \)
3. You like yourself just the way you are? \( \alpha = 0.82 \)
4. You are doing everything just about right? \( \alpha = 0.83 \)
5. You feel socially accepted? \( \alpha = 0.82 \)
6. You feel loved and wanted? \( \alpha = 0.82 \)
### Appendix B: Table 1.

Characteristics of Respondents in Neighborhoods with Low, Moderate, and High Concentration of Poverty

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>0.06</td>
<td>0.12</td>
<td>0.42</td>
</tr>
<tr>
<td>Learning Disabled</td>
<td>0.12</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>Broken Home (0=intact biological family, 1=broken)</td>
<td>0.33</td>
<td>0.43</td>
<td>0.61</td>
</tr>
<tr>
<td>Academically on-track at Wave 1</td>
<td>1.10</td>
<td>0.26</td>
<td>-0.28</td>
</tr>
<tr>
<td>Academically on-track at Wave 2</td>
<td>0.13</td>
<td>0.05</td>
<td>-0.03</td>
</tr>
<tr>
<td>Church Attendance</td>
<td>2.75</td>
<td>2.70</td>
<td>2.83</td>
</tr>
<tr>
<td>Importance of religious faith</td>
<td>2.90</td>
<td>3.02</td>
<td>3.21</td>
</tr>
<tr>
<td>Attends Catholic School</td>
<td>0.08</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Self-identified “Born Again” Christian</td>
<td>0.17</td>
<td>0.28</td>
<td>0.34</td>
</tr>
<tr>
<td>Parent’s Education (0=LT college, 1=college or +)</td>
<td>0.37</td>
<td>0.21</td>
<td>0.11</td>
</tr>
<tr>
<td>Temper</td>
<td>0.25</td>
<td>0.32</td>
<td>0.36</td>
</tr>
<tr>
<td>Level of autonomy from parents</td>
<td>4.35</td>
<td>4.22</td>
<td>3.98</td>
</tr>
<tr>
<td>On welfare</td>
<td>0.02</td>
<td>0.09</td>
<td>0.26</td>
</tr>
<tr>
<td>Sees no future</td>
<td>1.47</td>
<td>1.57</td>
<td>1.80</td>
</tr>
<tr>
<td>Family satisfaction</td>
<td>11.38</td>
<td>11.31</td>
<td>11.53</td>
</tr>
<tr>
<td>Positive self-image</td>
<td>24.97</td>
<td>24.71</td>
<td>25.10</td>
</tr>
</tbody>
</table>
## Appendix B: Table 2
Multilevel Regression Estimates of Academically On-Track Performance

<table>
<thead>
<tr>
<th>Effect</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept (mean tract score)</td>
<td>8.423d</td>
<td>8.465d</td>
<td>8.956d</td>
<td>9.007d</td>
</tr>
<tr>
<td><strong>Neighborhood-level Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of HH’s w/income below $15k</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion black</td>
<td>-0.317a</td>
<td>-0.345a</td>
<td>-0.078</td>
<td></td>
</tr>
<tr>
<td>Median age</td>
<td>-0.014</td>
<td>-0.015a</td>
<td>-0.017</td>
<td></td>
</tr>
<tr>
<td>Geographic stability</td>
<td>0.675b</td>
<td>0.714b</td>
<td>0.418d</td>
<td></td>
</tr>
<tr>
<td><strong>Individual-level Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Church attendance</td>
<td>0.126d</td>
<td>0.125d</td>
<td>0.035</td>
<td>-0.080d</td>
</tr>
<tr>
<td>Interaction with prop. HH’s below $15k</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of religious faith</td>
<td>0.016</td>
<td>0.017</td>
<td>0.031</td>
<td>0.035</td>
</tr>
<tr>
<td>Interaction with prop. HH’s below $15k</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attends Catholic school</td>
<td>0.119</td>
<td>0.168</td>
<td>0.416</td>
<td>0.268</td>
</tr>
<tr>
<td>Interaction with prop. HH’s below $15k</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considers self “Born Again” Christian</td>
<td>-0.041</td>
<td>-0.043</td>
<td>-0.136</td>
<td>-0.074</td>
</tr>
<tr>
<td>Interaction with prop. HH’s below $15k</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broken home</td>
<td>-0.168d</td>
<td>-0.165c</td>
<td>-0.164d</td>
<td>0.046</td>
</tr>
<tr>
<td>Male</td>
<td>-0.647d</td>
<td>-0.647d</td>
<td>-0.643d</td>
<td>-0.267d</td>
</tr>
<tr>
<td>Age</td>
<td>-1.576d</td>
<td>-1.574d</td>
<td>-1.607d</td>
<td>-1.522d</td>
</tr>
<tr>
<td>Age-squared</td>
<td>0.056d</td>
<td>0.056d</td>
<td>0.057d</td>
<td>0.057d</td>
</tr>
<tr>
<td>African-American</td>
<td>-0.271d</td>
<td>-0.225c</td>
<td>-0.216d</td>
<td>-0.145d</td>
</tr>
<tr>
<td>Learning disabled</td>
<td>-0.359d</td>
<td>-0.355d</td>
<td>-0.364d</td>
<td>0.045</td>
</tr>
<tr>
<td>Parent’s education</td>
<td>0.170c</td>
<td>0.184c</td>
<td>0.174d</td>
<td>-0.041</td>
</tr>
<tr>
<td>Family satisfaction</td>
<td>0.143d</td>
<td>0.143d</td>
<td>0.141d</td>
<td>0.092d</td>
</tr>
<tr>
<td>Temper</td>
<td>-0.329d</td>
<td>-0.300d</td>
<td>-0.325d</td>
<td>-0.080d</td>
</tr>
<tr>
<td>Level of personal autonomy</td>
<td>-0.027</td>
<td>-0.025</td>
<td>-0.022</td>
<td>-0.028d</td>
</tr>
<tr>
<td>Family on welfare</td>
<td>0.070</td>
<td>0.063</td>
<td>0.087</td>
<td>0.246d</td>
</tr>
<tr>
<td>Sees no future</td>
<td>-0.083d</td>
<td>-0.084d</td>
<td>-0.085d</td>
<td>-0.011</td>
</tr>
<tr>
<td>Positive self-image</td>
<td>0.049d</td>
<td>0.049d</td>
<td>0.049d</td>
<td>0.015d</td>
</tr>
<tr>
<td>Academically on-track at Wave I</td>
<td></td>
<td></td>
<td></td>
<td>0.280d</td>
</tr>
</tbody>
</table>

### Model Fit Statistics

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-2 Log Likelihood</td>
<td>48935.6</td>
<td>48939.0</td>
<td>48898.6</td>
<td>47520.2</td>
</tr>
<tr>
<td>Prop. of within-tract variance explained</td>
<td>0.087</td>
<td></td>
<td></td>
<td>0.228</td>
</tr>
<tr>
<td>Prop. of between-tract variance explained</td>
<td></td>
<td>0.121</td>
<td>0.294</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>9,771</td>
<td>9,771</td>
<td>9,771</td>
<td>9,771</td>
</tr>
</tbody>
</table>

*a*<.10  
*b*<.05  
*c*<.01  
*d*<.001
NOTES


5 Alfred Darnell and Darren E. Sherkat, 1997, “The Impact of Protestant Fundamentalism on Educational Attainment.” American Sociological Review 62: 306-315; Evelyn L. Lehrer, 1999, “Religion as a Determinant of Educational Attainment: An Economic Perspective.” Social Science Research 28: 358-379; Kraig K. Beyerlein, “Specifying the impact of conservative Protestantism on educational attainment. Journal for the Scientific Study of Religion, Forthcoming, 2001. Darnell and Sherkat’s research using the Youth-Parent Socialization Panel Study focuses on contemporary intra-Protestant differences, providing evidence that Protestant fundamentalist students lag behind their non-fundamentalist peers in both educational aspirations and achievement itself. Subsequent research includes evidence that the negative fundamentalist effect on higher education pertains even more to females than males (Lehrer 1999). Beyerlein tempers these findings by offering related evidence that religious influence on perceiving the merit of a college education vary significantly by the choice of conservative Protestant measures. They found that while self-identified fundamentalist and evangelical Protestants did not differ on this count from other religious identities, self-identified Pentecostals and conservative Protestant denominational affiliation did lower respondents’ perceived merit of a college degree.


15 Brody et al., 1996, Ibid.
16 Elder and Conger, 2000, Ibid.
17 Winship and Berrien, 1999, Ibid.
20 Furstenberg et al., 1999: 181, Ibid.
22 Winship and Berrien, 1999, Ibid.