



Published in final edited form as:

Rural Sociol. 2012 September ; 77(3): 355–379. doi:10.1111/j.1549-0831.2012.00086.x.

The Role of Social Capital in Educational Aspirations of Rural Youth*

Soo-yong Byun,

The Pennsylvania State University

Judith L. Meece,

University of North Carolina at Chapel Hill

Matthew J. Irvin, and

University of North Carolina at Chapel Hill

Bryan C. Hutchins

University of North Carolina at Chapel Hill

Abstract

Drawing on a recent national survey of rural high school students, this study investigated the relationship between social capital and educational aspirations of rural youth. Results showed that various process features of family and school social capital were important to predict rural youth's educational aspirations beyond sociodemographic background. In particular, parents' and teachers' educational expectations for their child and student respectively were positively related to educational aspirations of rural youth. In addition, discussion with parents about college was positively related to educational aspirations of rural youth. On the other hand, there was little evidence to suggest that number of siblings and school proportions of students on free lunch and minority students are related to educational aspirations of rural youth, after controlling for the other variables. The authors highlight unique features of rural families, schools, and communities that may combine to explain the complexity of the role of social capital in shaping educational aspirations of rural youth.

Over the past few decades, the concept of social capital has been of particular interest to sociologists, educational researchers, and policymakers in the United States (Dika and Singh 2002; Portes 1998). This interest may be largely due to its positive role in shaping various educational outcomes. Numerous studies document the positive influence of social capital on academic achievement (e.g., grades, test scores) (Crosnoe 2004; Israel, Beaulieu, and Hartless 2001; Sun 1999) and educational attainment (e.g., high school graduation, college enrollment) (Coleman 1988; McNeal 1999; Kim and Schneider 2005). However, with a few exceptions (Qian and Blair 1999), relatively little research has explicitly examined the role of social capital in educational aspirations, which are one of the most important predictors of youth's educational and occupational attainment (Haller and Portes 1973; Sewell, Haller, and Portes 1969).

*This research was supported by a grant from the U.S. Department of Education's Institute of Education Sciences Grant (R305A04056) awarded to the National Research Center on Rural Education Support at the University of North Carolina at Chapel Hill. The views expressed in this article are those of the authors and do not necessarily reflect those of the granting agency. We wish to thank three anonymous reviewers for their thoughtful comments and suggestions on earlier versions of this manuscript. Any remaining errors are the authors' responsibility.

Correspondence concerning this article should be addressed to Soo-yong Byun, Department of Educational Psychology, Counseling, and Special Education, Social Dynamics and Special Populations Program, College of Education, The Pennsylvania State University, 208F Rackely Building, University Park, PA 16802. szb14@psu.edu; Phone: (814) 865-9271.

Furthermore, prior research on social capital has focused mainly on the general student population (Coleman 1988; Kim and Schneider 2005; Sun 1999) or on rural youth in comparison to metro youth (Israel et al. 2001; Roscigno and Crowley 2001; Roscigno, Tomaskovic-Devey, and Crowley, 2006; Smith, Beaulieu, and Seraphine, 1995). Only limited research has exclusively examined rural youth (Dyk and Wilson 1999; Howley 2006; Singh and Dika 2003). As a large body of literature suggests, if social capital shapes youth's educational outcomes, it may have important policy implications for rural youth. This is because rural youth often experience unique forms of social capital such as long-standing and supportive student–teacher relationships and close community-school relationships, compared to suburban and urban youth (Lyson 2002; Schafft, Alter, and Bridger 2006). Yet with a few exceptions for comparative studies involving rural, suburban, and urban youth (e.g., Smith et al. 1995), few studies have empirically investigated how social capital is related to educational aspirations of young adults in a rural setting.

In this article, we address these issues by investigating the relationship between social capital and educational aspirations of rural youth, using data from a recent national survey of rural high school students (N = 5,663). Obtaining such large-scale data on the rural youth population across the country has been challenging (Capizzano and Fiorillo 2004). Several studies have examined educational aspirations of rural youth but they involved only certain regions, most notably the Appalachian region (Bajema, Miller, and Williams 2002; Chenoweth and Galliher 2004; Dyk and Wilson 1999; Singh and Dika 2003). Although these prior studies contribute to the literature on educational aspirations of rural youth, generalizability is limited as rural communities significantly differ in ethnic composition, occupational structure, and access to major cities (Johnson and Lichter 2010; Johnson and Strange 2009; Lobao, Hooks, and Tickamyer 2007; Provasnik et al. 2007). In that regard, drawing on data for rural high school students across 34 states, the current study may better address how social capital is related to educational aspirations of rural youth.

Background

Definitions, Measures, and Effects of Social Capital

French sociologist Pierre Bourdieu (1986) and American sociologist James Coleman (1988) contributed to the initial theoretical development of the concept of social capital by highlighting the benefits accruing to individuals or families from their social ties. Yet their interpretations of the role of social capital with respect to social mobility are somewhat different. For example, Bourdieu views social capital as a mechanism of social reproduction, whereas Coleman sees social capital as positive social control that can collectively help children's life chances (see Portes 1998 for review). In line with the Coleman's positive view of social capital, Robert Putnam (1993), a political scientist, also contributed to the theoretical development of social capital by expanding its concept to communities, cities, and nations (see Portes 1998 and Dika and Singh 2002 for useful reviews). However, most empirical work on social capital in the United States is built on Coleman's (1988) seminal work. Given the quantitative nature of our study, we also draw on Coleman's work as well as subsequent studies.

Coleman (1988:S100) defined social capital as capital inherent in “the relations among persons,” which is separable from other forms of resources such as financial capital (e.g., income) and human capital (e.g., years of schooling). Following this notion, earlier studies focused mainly on social capital available in the family but subsequent studies expanded social capital views of educational attainment to school environments. Additionally, there were important refinements in dimensions of social capital by including structural and process components within each of these forms (Israel and Beaulieu 2004; Israel et al. 2001;

Smith et al. 1995). In the following, we briefly describe these refinements of the concept of social capital.

Family social capital—Within the family, social capital consists of relations among family members, especially between parents and children (Coleman 1988). Social interactions within the family, however, are shaped and constrained by structural features of the family. In that regard, Coleman (1988) proposed several indicators that could measure family social capital, including (a) family structure, (b) number of siblings, (c) mother's expectation of the child's going to college, and (d) frequency of discussions with parents about academic issues. Using data from High School and Beyond (HS&B), Coleman (1988) investigated whether these measures of family social capital predicted children's high school dropout. He found that children from two-parent and smaller families, as well as children whose mother had higher educational expectations for them, were significantly less likely to drop out of high school (Coleman 1988). Although Coleman's (1988) original work did not find a significant relationship between frequency of discussions with parents and children's high school dropout, numerous subsequent studies have shown that this measure of family social capital positively shapes various educational outcomes, including academic achievement (Crosnoe 2004; Israel et al. 2001), high school dropout (McNeal 1999), and college enrollment (Kim and Schneider 2005).

Smith and colleagues (1995) refined the concept of family social capital by highlighting its two important features: structure and process. According to Smith et al. (1995), structural characteristics of family social capital include the presence of one or both parents and the number of siblings because these family features determine the opportunity, frequency, duration of parent-child interactions. Israel and colleagues (2001; see also Israel and Beaulieu 2004) added the number of siblings who dropped out of school to the family structural features. On the other hand, the process attributes of family social capital include specific forms of interactions, such as parent-child discussion, parental involvement in their adolescent's schooling, and parental educational expectations. Using data from the National Education Longitudinal Study (NELS), Israel et al. (2001) found that these structural and process attributes of family social capital mattered to youth's academic achievement.

School social capital—Pointing out parallels between home and school, several researchers have extended the concept of family social capital to the school context (Crosnoe 2004; Parcel and Dufur 2001, 2009). For example, Parcel and Dufur (2001, 2009; see also Parcel, Dufur, and Zito 2010 for review) highlighted the importance of bonds between parents and schools that can combine to facilitate educational outcomes. They considered (a) private school, (b) teacher-student and counselor-student ratios, (c) various dimensions of school environment (i.e., school social problems, school physical environment, communicate, and teachers care), and (d) parental involvement in school activities as measures of school social capital (Parcel and Dufur 2001). Using data from the National Longitudinal Survey of Youth, Parcel and Dufur (2001) found a significant positive effect of parental involvement at school and school environment on math achievement.

Israel and Beaulieu (2004) further refined the concept of school social capital by pointing to its key structural attributes in terms of the composition of the student body (e.g., minority enrollment) and school size (e.g., number of enrolled students). For the process features of school social capital, they included (a) parental involvement in school organizations (e.g., PTA), (b) students' access to teachers outside class, and (c) the number of organizations in which student is involved. Using data from the NELS, Israel and Beaulieu (2004) found that these measures of school social capital shaped the likelihood of staying in school.

Summary—Recent research elaborates Coleman's notion of social capital by identifying different levels (i.e., family and school) and different features (i.e., structural and process components) of social capital. In this study, drawing on these recent refinements of social capital, we focus on the structural and process features of two forms of social capital (i.e., family social capital and school social capital). In the next section, we describe the definitions of rural and several unique challenges facing rural youth as a group that may have implications for their educational aspirations.

Definitions of Rural

There are numerous definitions of rural (Arnold et al. 2007; Rural Policy Institute 2006). In the present study, rural is defined by the most recent development of the urban-centric locale codes by the U.S. Census Bureau for the National Center for Education Statistics (NCES) (NCES 2011), which classify schools into four major types based on their location in relation to urban areas: city, suburban, town, and rural. In this classification system, schools in rural (as well as town) categories are further classified by their distance from an urbanized area or urban cluster, which include three categories: fringe, distant, and remote. Here, *rural fringe* indicates a rural territory that is less than or equal to five miles from an urbanized area as well as a territory that is less than or equal to 2.5 miles from an urban cluster; *rural distant* indicates a rural territory that is more than five miles but less than or equal to 25 miles from an urbanized areas as well as a territory that is more than 2.5 miles but less than or equal to ten miles from an urban cluster; and *rural remote* indicates a rural territory that is more than 25 miles from an urbanized area and is also more than ten miles from an urban cluster (Arnold et al. 2007).

Although following these latest refinements of the locale code system which has a number of advantages in studying rural schools (NCES 2011), we acknowledge that considering rural students (or schools) as a homogenous group can be still problematic because there is great variability in occupational structure, median income, ethnic composition, population density, geographical isolation, and school quality across rural communities in the United States (Johnson and Lichter 2010; Johnson and Strange 2009; Lobao et al. 2007; Provasnik et al. 2007). Unfortunately, the dataset used itself does not provide alternative measures of rural other than the above locale categories. Thus, generalizations from our results should be appropriately qualified. Meanwhile, we include all three rural locales (i.e., rural, fringe; rural, distant; rural, remote) in the analyses that follow.¹

Rural Youth and Educational Aspirations

Approximately nine million students attend public schools in rural areas (Johnson and Strange 2009). These students represent 19% of the nation's total public school enrollment and face a number of challenges as they prepare for the future, including high poverty, geographic isolation, limited access to postsecondary educational institutions, and restricted employment opportunities in their hometown communities. Specifically, poverty rates are higher for youth in rural than in suburban and urban areas (Lichter and Johnson 2007; Save the Children 2002), whereas postsecondary attainment rates are lower among parents of children in rural areas than in suburban and urban areas (Provasnik et al. 2007). Parents of children in rural areas also have lower educational expectations of their children (Roscigno and Crowley 2001; Roscigno et al. 2006).

In addition, rural schools have long faced challenges in recruiting and retaining highly effective teachers and leaders (Monk 2007; Provasnik et al. 2007). Likewise, many rural

¹We conducted supplementary analyses for each locale to investigate potential variation in the role of social capital in educational aspirations of rural youth across different rural locales but found little variation.

communities have experienced a dramatic job loss with regards not only to technical and business careers but to many agricultural occupations, which for generations have been the mainstay of rural communities (Gibbs, Kusmin, and Cromartie 2005; Conger and Elder 1994; Lichter and McLaughlin 1995). All these socioeconomic challenges may have detrimental effects on the educational aspirations of rural youth. Although economic analyses are useful for understanding the lower educational aspirations of rural youth, such approaches offer “little direction for educators and policymakers for how to affect changes in educational processes and outcomes” (Singh and Dika 2003:114).

For this reason, recent research has begun to emphasize the social processes of rural environments that may shape adolescents' educational aspirations above and beyond the structural elements of rural families, schools, and communities (see Adedokun and Balschweid 2008 for a synthesis review). For example, Howley (2006) argued that the lower educational aspirations of rural adolescents may not be due to disadvantages associated with rural life but to a response to the social interactive processes taking place within rural families and communities. Specifically, rural youth's lower educational aspirations may result from strong emotional attachments to their families and rural communities and from their match with the low-skilled jobs available in their communities (Elder and Conger 2000; Elder, King, and Conger 1996; Howley 2006; Johnson, Elder, and Stern 2005). In other words, rural youth may have higher aspirations for maintaining their connections to their family, community, and rural lifestyle rather than pursuing more individualistic and materialistic goals such as making as much money as possible (Howley 2006). However, some rural youth who want to maintain connections their family, community, and rural lifestyle may also have educational and occupational aspirations that are not available in their area. These youth are apt to experience some tension and conflict over these seemingly disparate goals (Elder and Conger 2000; Corbett 2009; Hektner 1995).

The preceding discussion highlights the complexity of ways in which the structural and process features of social capital may shape rural youth's educational aspirations. Yet little is known about how these measures of social capital are related to educational aspirations of rural youth. Using data from a recent survey of high school students attending rural schools across the United States, this study empirically investigates how the structural and process components of social capital are associated with rural youth's educational aspirations. It should be noted that the current research does not attempt to establish a causal relationship between a particular structural or process feature of social capital and educational aspirations of rural youth. Rather, we hope to offer empirical evidence on how the structural and process elements of family social capital and school social capital shape educational aspirations of rural youth.

Research Questions

Building on recent literature on social capital and rural youth, this study aims to address four research questions:

1. Are the structural and procedural components of family social capital and school social capital related to rural youth's educational aspirations beyond socioeconomic and demographic characteristics?
2. If they are, to what extent do various forms of social capital matter? In other words, to what extent does social capital account for the variation in educational aspirations of rural youth?
3. In what ways do different levels of social capital relate to rural youth's educational aspirations?

4. Finally, how do different levels of social capital interact with sociodemographic background (e.g., parental education, gender, race/ethnicity, etc.)?

Data And Methods

Data and Sample

The current study is part of a broader national investigation to examine students' school adjustment and postsecondary aspirations in rural high schools in the United States. The original sampling frame was limited to public rural high schools in all 50 states that were currently in operation. As noted, rural schools were identified using the metro-centric locale codes developed by the U.S. Census Bureau for the NCES with a basis on schools' geographic location or proximity to an urbanized area as well as on population size and density (NCES 2011). The rural schools in the original sample were further classified into four subtypes based on locale code designations (i.e., small town, rural fringe, rural distant, and rural remote), Rural Education Achievement Program, Small Rural School Achievement (SRSL) Program, and Rural and Low-Income Schools (RLIS) Program with a special emphasis on SRSL and RLIS. The schools in this sample were also classified into four geographic regions (i.e., the Midwest, Northeast, South, and West) as established by the U.S. Census Bureau.

Using this stratified sampling, 114 schools were randomly selected and contacted. Of these, 73 schools (11% from small town and 89% from rural locales) across 34 states agreed to participate in this study. At the time of data collection, 16,295 students in grades 9-12 were enrolled at these 73 study schools, and 8,754 students took part in the study by completing a survey. The overall participation rate was 53.8%. However, one school in the study had an extremely low participation rate (167/1883). Removing this school from the calculation produces an overall participation rate of 59.6%. In addition, the study included 667 teachers (59.5% female and 40.5% male) who completed surveys about themselves and students in the study.

For the present investigation, we included only those students attending rural high schools (i.e., excluding students attending high schools in small towns) for whom teachers and school administrators completed surveys to obtain information about their educational expectations for the student and perception of the extent to which parents and community members were involved in school. In addition, we excluded Asian American students due to small sample sizes (less than 1% of the total sample). We also excluded students who answered "don't know" to the question asking for their educational aspirations (about 7% of the total sample).² This yielded an unweighted N of 5,663 students.

Measures

Educational aspirations—The measure of educational aspirations was based on the question: "How far in school would you most like to go?" Original responses given were: 1 = less than high school graduation; 2 = high school graduation or GED only; 3 = attend or complete a two-year school course in a community college, vocational, or trade school; 4 = attend college but not complete a four-year degree; 5 = graduate from college; 6 = obtain a master's degree or equivalent; 7 = obtain a Ph.D., M.D., or other advanced degree; and 8 = don't know. Previous research treated measured educational aspirations as either continuous (i.e., years of schooling) (e.g., Blackwell and McLaughlin 1999) or categorical (e.g., no college vs. two-year vs. four-year college) (e.g., Schneider, Wyse, and Keesler 2007)

²We acknowledge the importance of the investigation of those students who said "don't know," given that previous research finds they are more likely to experience conflicting goals (Hektner 1995). But this subject goes beyond the scope of this study, and we hope to investigate this issue in other work.

variable or both (e.g., Goyette and Xie 1999). For our multivariate analysis, we treated educational aspirations as a continuous variable by transforming them into years of schooling (e.g., 2 = 12, 7 = 22), with the exclusion of the “don't know” category. The primary rationale for using educational aspirations as a continuous rather than as a categorical variable was that a relatively larger proportion of rural youth drop out of high school or college (Roscigno and Crowley 2001; Roscigno et al. 2006).³

Family social capital—For the structural components of family social capital, we included (a) family structure, (b) number of siblings, and (c) number of siblings dropping out of high school. Family structure was measured by the student's report on whom the respondent was living with at the time of the survey. We created the dichotomized variable denoting two-parent families where both the mother and father were present. The number of siblings was based on the question of how many brothers and sisters the respondent had. Likewise, the number of dropout siblings was based on the question of how many brothers and sisters had dropped out of school before graduating from high school. For the process elements of family social capital, we included (a) parental expectations of the child to attend college, (b) talk with parents about how to pay for college, and (c) discussion with parents about careers and work. Parental expectations of the child to attend college were based on the student's respond to the question of how disappointed your father (or male guardian) and mother (or female guardian) would be if he or she did not graduate from college. Ranges of original responses were from 1 (not at all disappointed) to 6 (very disappointed). These original responses were included as a continuous variable whose higher values indicate a greater extent of parents expecting the child to attend college. The measure of talk with parents about how to pay for college was based on four-point Likert scales of frequency (1 = never, 2 = once or twice, 3 = three to five times, 4 = more than five times) regarding the question of how often during the past year the student had talked with parents about how to pay for college. The measure of discussion with parents about careers and work was based on the same four-point Likert scales about the question of how often the student discussed with parent(s)/guardian(s) about careers and work.

School social capital—For the structural components of school social capital, we included (a) proportion of students on free lunch, (b) proportion of minority students, and (c) school size (measured by the total number of enrolled students from pre-kindergarten through grade 12). While all these measures of the structural components of school social capital came from the Common Core of Data developed by the NCES, we transformed school by the logarithm function to resemble a normal distribution. For the process components, we included (a) percent of parents involved in school activities and (b) the degree of community members involved in school. Both the percent of parents involved in school activities and the degree of community members involved in school (1 = not at all, 2 = somewhat, 3 = very much) were reported by each school administrator. In addition, we included (c) teacher's educational expectations for the student as a measure of the process feature of school social capital. Teachers' educational expectations for the student were based on the teachers' response to the question of how far in school they thought each student would go. Original responses given were the same as those for the measure of students' educational aspirations and were transformed into years of schooling (e.g., 1 = 11, 7 = 22).

Controls—Educational aspirations and plans are shaped not only by social influences but by individual background characteristics, including socioeconomic background, gender, and

³We conducted a series of multinomial regression with a categorical variable and found few differences in the overall findings. Results (not shown) from multinomial analysis are available upon request from the authors.

race/ethnicity (Goyette and Xie 1999; Kao and Tienda 1998; Rojewski 1999; Trusty 1998), as well as by community characteristics such as college proximity (Turley 2009). Without controlling for these variables associated with educational aspirations, it is not possible to obtain the credible relationship between various forms of social capital and rural youth's educational aspirations. Therefore, drawing on literature, we included a variety of control variables such as (a) parental education, (b) economic hardship, (c) gender, (d) race/ethnicity, (e) grade level, (f) college proximity, and (g) rural locales. Parental education was based on the student's report on the highest level of parental education (years of education). Perceived family economic hardship assessed the constraints felt by the adolescent relating to the difficulty of paying bills and struggles with having enough money to buy items for the family (Conger et al. 1999; Wadsworth and Compas 2002), and was measured using three items (average) with five-point scales of never-all of the time to the statements: (a) there is not enough money in my family to pay bills; (b) we don't have enough money in my family for things that are important; and (c) we don't have enough money to buy things my family needs or wants.⁴ Gender was measured by the student's sex (female = 1). Race/ethnicity was measured by students' self-reported race/ethnicity.⁵ Grade level was based on the student's current grade. College proximity was measured by a distance to the closest college or university (miles) and came from the 2004-05 NCES Common Core of Data. As described above, rural locales included fringe, distant, and remote (reference category).

Analytic Strategies

To answer the research questions, we first completed preliminary descriptive analyses. Then we conducted a series of ordinary least square (OLS) regression analyses to systematically investigate the relationships between social capital and educational aspirations.⁶ Specifically, we estimated the six models. For the first four models, we subsequently entered (a) family structural social capital (Model 1), (b) family process social capital (Model 2), (c) school structural social capital (Model 3), and (d) school process social capital (Model 4) variables. The aim was to investigate how the structural and process components of family and school social capital worked together to shape rural youth's educational aspirations, and results from these first four models would allow for a more nuanced understanding of the relationships between different levels and dimensions of social capital and rural youth's educational aspirations.⁷ Next, we added the control variables to determine whether the relationships between social capital indicators and educational aspirations, if any, held even after controlling for other socioeconomic and demographic background (Model 5). Finally, we included a series of interaction terms between social capital indicators and background variables to evaluate variation in the relationship between social capital and educational aspirations of rural youth by the background variables (Model 6). Although we assessed all possible combinations of social capital indicators and background variables, we present only those interaction terms that were statistically significant.

To address missing data for the control variables (see Table 1), we employed a multiple imputation technique with the *ice* option in the Stata software package (Royston 2004). We generated five data sets with five sets of imputed values and averaged the coefficients and

⁴Reliability statistics (Cronbach's alpha) were .879, and item factor loadings ranged from .889 (items 1 and 3) to .920 (item 2).

⁵Respondents were given the option of selecting one or more race categories to indicate racial identities, which led to a higher proportion of a multiracial group (see Table 1). Because of the nature of the questions asked, our data on race/ethnicity are not directly comparable with data from a series of studies administered by the NCES, including the NELS.

⁶We conducted multilevel analysis, often referred to as Hierarchical Linear Models (HLM) (Raudenbush and Bryk 2002), to assess within and between school variation in educational aspirations among rural youth. We found that 97% of the total variance was attributable to the student level; while only 3% attributable to the school level (results not shown but available upon request from the authors). This suggested that the use of HLM offers little advantages over OLS regression. Thus, we report the results from OLS regression.

⁷We thank an anonymous reviewer for suggesting this useful analytic strategy.

standard errors from analyses across the five data sets using the *mim* option in Stata (Royston 2004). To address the nested nature of the current data (i.e., students within sampled schools), we used the *cluster* option in Stata, which generates robust standard errors by downwardly adjusting for the inflated standard errors resulting from the violation of the independent errors assumption (Rogers 1993).

Results

Descriptive Findings

Table 1 presents the descriptive statistics for the variables included in the analyses. Briefly described, a majority of student participants indicated they would aspire to a four-year college education or above ($M = 16.9$). In terms of family social capital, 53% of the 5,663 student participants came from two-parent families. On average, student participants had three siblings.⁸ In addition, they perceived a high degree of their parents expecting them to have a college education and talked with their parents about college three to five times on average during the preceding year.

In terms of school social capital, the sampled students on average attended a school where 35% of the student body used a free-lunch program and 26% of the students were minorities, and whose average number of students from pre-kindergarten through grade 12 (i.e., school size) was 863 (= exp [6.76]) students. On average, teachers of the sampled students expected their students to have more than a two-year college education ($M = 14.6$). School administrators on average indicated that 46% of their students' parents were involved in school activities and that their community members were somewhat involved in school.

Finally, in terms of socioeconomic background, the student participants indicated that the level of their parents' education was slightly less than a two-year college. In terms of gender and race, 53% were female and 67% were White. In terms of grade levels, 28% were ninth graders; 28% were 10th graders; 25% were 11th graders; and 20% were 12th graders. The average distance to the closest college or university was 42.4 miles. In terms of rural locales, 2% were rural fringe; 44% were rural distant; 54% were rural remote.

OLS Regression Results

Table 2 presents the estimated coefficients for the six OLS regression models predicting rural youth's educational aspirations. As indicated previously, we first included the family structure social capital variables only (Model 1). Results suggested that coming from two-parent family was associated with higher educational aspirations, whereas having more siblings dropping out of school was associated with lower educational aspirations. The number of siblings was not significantly related to educational aspirations.

Next, we included the family process social capital variables (Model 2). Results indicated that all family process social capital variables were significantly related to educational aspirations of rural youth. Specifically, perceiving high expectations to go to college from parents, talking with parents about how to pay for college, and discussion with parents about careers and work were all positively related to educational aspirations of rural youth. When the family process social capital variables were taken into account (Model 2), there was no

⁸We acknowledge that the average number of siblings for our rural sample (i.e., 2.89) is larger than that reported by other research on rural students. For example, using data from the Educational Longitudinal Study (ELS), Irvin, Byun, and Hutchins (2011) found that the average number of siblings for the rural subsample was 2.23. However, the data used for the present study may not be directly comparable with data from other national studies such as ELS, given that the way our rural students were sampled differed from that used for ELS. In fact, the ELS data are representative of all U.S. sophomore students in 2002 but they may not be nationally representative of the rural students. This may be also true for our study. Accordingly, our results should be interpreted with caution.

significant relationship between family structure and educational aspirations of rural youth. In addition, the extent to which the number of siblings dropping out of school was related to educational aspirations was substantially reduced, even though the relationship remained significant.

In Model 3, we additionally introduced the school structural social capital variables. Results suggested that attending a school with higher proportions of minority students as well as a larger school was associated with higher educational aspirations. However, the proportion of students on free lunch was insignificantly related to rural youth's educational aspirations. In Model 3, the relations between family social capital and educational aspirations largely remained the same as seen in the Model 2.

In Model 4, we added the school process social capital variables. Results suggested that teacher's educational expectations for the student was positively associated with educational aspirations of rural youth. However, parental and community involvement in school were insignificantly related. When the school process social capital variables were taken into account (Model 4), the relationship between the number of siblings dropping out of school and educational aspirations became insignificant, whereas the relationship between the number of siblings and educational aspirations became significant. Discussion with parents about career and work also became an insignificant predictor, whereas parental educational expectations and talking with parents about how to pay for college remained significant predictors. The proportion of minority students and school size also remained significant predictors of educational aspirations of rural youth.

In Model 5, we added controls for sociodemographic background, grade level, college proximity, and locales to examine whether the relationship between social capital indicators and educational aspirations of rural youth held even after controlling for these variables. Results showed that parental educational expectations, talking with parents about how to pay for college, school size, and teacher's educational expectations were significantly related to educational aspirations of rural youth even after controlling for the other variables. However, the number of siblings and the proportion of minority students were no longer significantly related when the other variables were taken into account. Among the control variables, only parental education, gender, multiracial origins, and grade level were significantly related to educational aspirations of rural youth. Specifically, higher levels of parental education were associated with higher educational aspirations of rural youth. Female and multiracial students showed higher educational aspirations than did male and White students, respectively. On the other hand, 11th and 12th graders showed lower educational aspirations than did ninth graders. Family economic hardship, college proximity, and locales were insignificant predictors.

Finally, we additionally included a set of interaction terms to examine how the relationship between social capital indicators and educational aspirations varied by the background controls (Model 6). As noted above, although we assessed all combinations of the social capital and background variables, we present only the interaction terms that were statistically significant. Results suggested that rural youth from two-parent families had higher educational aspirations especially when their parents had higher levels of education. Results also suggested that rural boys, when compared to their female counterparts, had higher educational aspirations, especially when their teachers had higher educational expectations for them.

Discussion

In this study, drawing on recent national survey data for rural high school students, we investigated how social capital was related to rural youth's educational aspirations. Our results showed that students who perceived that their parents expect them to attend college and who had more-frequent discussions with their parents about college had significantly higher educational aspirations, even after controlling for the sociodemographic variables. In addition, our results showed that teacher's educational expectations for students were positively related to educational aspirations of rural youth, even after controlling for the background variables. These findings were consistent with previous literature on social capital (Coleman 1988; Israel et al. 2001; Parcel and Dufur 2001, 2009; Parcel et al. 2010; Smith et al. 1995; Sun 1999), suggesting that the process features of family and school social capital play an important role in shaping educational aspirations of rural youth beyond socioeconomic and demographic background.

On the other hand, we found little evidence suggesting that the number of siblings and the proportions of students eligible for free lunch and of minority students are related to educational aspirations of rural youth, after controlling for the other variables. These findings are inconsistent with prior research suggesting that students from large family settings tend to have lower educational aspirations than do students from small family ones (Coleman 1988; Israel et al. 2001), and that students attending a poor school and with a high proportion of minority students tend to have lower educational aspirations than students attending an affluent school and with a low proportion of minority students (Israel et al. 2001; Sun 1999).⁹ Although more research is needed to understand these findings, the absence of the significant relation of these structural features of family social capital and school social capital to rural youth's educational aspirations may be attributable to some unique features of rural settings. In many cases, rural young adults, especially those who are talented, need to leave their families and home communities to seek educational and employment opportunities (Carr and Kefalas 2009; Corbett 2007; Crockett, Shanahan, and Jackson-Newsom 2000; Gibbs 1998). As a result, rural youth are more likely than nonrural youth to experience conflicting goals (Corbett 2009; Elder et al. 1996; Hektner 1995; Johnson et al. 2005). Specifically, rural youth often desire to live near their parents but also believe their educational and economic futures are in metropolitan areas (Donaldson 1986; Schafft, Petrin, and Meece, under review). In this situation, rural youth who grow up in families with strong parental support or attend a school with strong school support may prefer staying in their communities and lower their educational aspirations to match educational and occupational opportunities in their communities (Howley 2006). In contrast, rural youth who have weak family ties may report higher educational aspirations because they desire to leave for better educational and employment opportunities elsewhere (Bjarnason and Thorlindsson 2006; Elder et al. 1996; Johnson et al. 2005). Though the ethnographic work by Carr and Kefalas (2009) found that few talented rural youth who planned on leaving intended to return, recent research with a large diverse sample of rural youth provided some compelling findings. Specifically, high-achieving rural youth did not want to leave their community more than other rural youth. However, high-achieving rural youth planned to leave their community to gain important skills, but they planned to return and utilize those skills to better their community (Schafft et al. under review). Taken together, our findings suggest that geographic context (e.g. rural residence) may play an important role of social capital in shaping youth's education aspirations (Crockett et al. 2000).

⁹The lack of the significant relationship between school structure social capital indicators and educational aspirations of rural youth may be due to truncated distributions relative to those in other studies which were comprised of national samples with urban, suburban, and rural students. We thank an anonymous reviewer for suggesting this insight.

However, our findings of the absence of the significant relation of many structural features of family social capital and school social capital to rural youth's educational aspirations should not be regarded as evidence suggesting that these influences are unimportant. For one thing, our results showed that youth from two-parent families had higher educational aspirations than did youth from single-parent or other nontraditional families before controlling for the family process social capital variables (Model 1), even though there was no significant differences in educational aspirations of rural youth between students from two-parent families and students from nontraditional families after controlling for the family process social capital variables (Model 2). This finding may indicate that coming from two-parent families may indirectly influence educational aspirations of rural youth by determining the quantity and quality of family process social capital (e.g., discussion with parents about college). In fact, two-parent families typically have more resources to help children achieve their educational goals (McLanahan and Percheski 2008). For another, we found that school size was significantly related to educational aspirations of rural youth, which is consistent with some prior research indicating the benefits of attending a large school for educational achievement (Schneider et al. 2007; Sun 1999).

Finally, the results revealed some interactive effects involving social capital at home and school (Model 6). For example, students from two-parent families had higher educational aspirations especially when their parents had high levels of education. This finding suggests that two-parent families and parental education may combine to boost rural youth's educational aspirations when both are high. In contrast, rural youth may be especially handicapped when they grow up in a nontraditional family setting and their parental education is low. The finding may reflect increasing marital homogamy and suggest its potential inter-generational consequences. In addition, we found that teacher expectations were more strongly related to rural boys' than girls' educational aspirations. But the results also showed that rural girls had higher educational aspirations than did rural boys, which is consistent with recent studies revealing that adolescent girls are more likely than boys to report higher educational and occupational aspirations (Chenoweth and Galliher 2004; Elder and Conger 2000; Elder et al. 1996). These findings suggest "compensating effects," where both being female and having teachers with high expectations are assets but they trade off in their effects. In contrast, males can benefit from having teachers with high expectations in terms of higher educational aspirations. Together, the findings suggest that the "advantage" of some family and school social capital variables (e.g., a two-parent family and teachers' educational expectations) may be moderated by sociodemographic background (e.g., level of education and gender).

The present study has several limitations that need to be addressed. First, data on which the current study drew were obtained from the cross-sectional survey and they do not contain prior educational aspirations. Accordingly, with the current data set, it is difficult to establish the causal relationships between social capital and educational aspirations. In addition, although this study revealed that a considerable portion of rural youth aspired to a college degree, it remains to be seen the extent to which rural youth will eventually achieve their educational goals. A longitudinal study investigating the relationships among rural youth's educational aspirations, social capital, and eventual educational attainment will contribute to an understanding of the role of social capital in rural youth's educational aspirations and attainment.

Second, the current study focused on the role of family and school social capital. An important goal was to examine the predictive influence of both structural and process attributes in shaping youth's educational aspirations. Yet the study revealed significant grade level differences in rural youth's educational aspirations that need further examination.¹⁰ The study also revealed significant ethnic differences in educational aspirations, even when

differences in family and school capital were controlled. Because adolescence is important time for exploring ethnic identity (Phinney 1989), we were not surprised that 12% of the youth indicated more than one ethnic category. These youth were represented in the multiracial category in the analyses, and this category was a significant positive predictor of educational aspirations, after family and school social capital were controlled. Currently, research on ethnically diverse youth within rural communities is very sparse, even though the ethnic diversity of rural communities is growing (Johnson and Lichter 2010). Thus, an important objective for future rural research is to examine the social processes by which ethnicity shapes rural youth's future.

Last but not least, this study considered only limited measures of social capital. Previous research suggests that rural youth's educational aspirations also are shaped by a number of other social resources, including relationships with friends, other adults, and teachers (Cairns et al. 1988; Farmer et al. 2006; Trusty 1998; Wilson and Wilson 1992). For example, a recent study showed that rural students had a higher level of community social resources (e.g., parental-parental interaction, student church attendance) compared to nonrural students and in turn benefited from these community social resources in terms of college degree attainment (Author et al. 2011). As such, examining the influence of other forms of school and community social capital on rural youth's educational aspirations is particularly important due to the possible role of school and community social capital in mediating the adverse effect of economic hardship on rural youth's educational aspirations. Future studies investigating the role of other forms of school and community social capital thus may offer important insights to policymakers to better design school and community programs in rural areas. More research is also needed to understand the complexity of social capital in educational aspirations of rural youth, as the impact of “pull” and “push” forces may differ in a rural setting, depending on sociodemographic background (Blackwell and McLaughlin 1999; Crockett et al. 2000; Wilson, Peterson, and Wilson 1993).

References

- Adedokun, Omolola A.; Balschweid, Mark A. Community Social Interactive Processes and Rural Adolescents' Educational Outcomes: What We Know and What We Need to Know. *The Online Journal of Rural Research and Policy*. 2008; 2:1–19.
- Arnold, Michael L.; Biscoe, Belinda; Farmer, Thomas W.; Robertson, Dylan L.; Shapley, Kathy L. How the Government Defines Rural Has Implications for Education Policies and Practices (Issues & Answers Report, REL 2007-No 010). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest; 2007. Retrieved March 24, 2010 from http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL_2007010.pdf
- Bajema, Duane H.; Miller, W Wade; Williams, David L. Aspirations of Rural Youth. *Journal of Agricultural Education*. 2002; 43(3):61–71.
- Bjarnason T, Thorlindsson T. Should I Stay or Should I Go? Migration Expectations among Youth in Icelandic Fishing and Farming Communities. *Journal of Rural Studies*. 2006; 22:290–300.
- Blackwell, Debra L.; McLaughlin, Diane K. Do Rural Youth Attain Their Educational Goals? *Rural Development Perspectives*. 1999; 13(3):37–44.
- Bourdieu, Pierre. The Forms of Capital. In: Richardson, JG., editor. *Handbook of Theory and Research for the Sociology of Education*. Westport, CT: Greenwood Press; 1986. p. 241-58.
- Cairns, B Robert; Cairns, Beverley D.; Neckerman, Holly J.; Gest, Scott D.; Gariépy, Jean Louis. Social Networks and Aggressive Behavior: Peer Support or Peer Rejection? *Developmental Psychology*. 1988; 24:815–23.

¹⁰Our finding of the negative relationship between the grade level and educational aspirations is consistent with prior studies showing that younger adolescents tend to have more lofty educational goals, while older adolescents tend to be much more realistic about their likelihood of attending and completing college (Kao and Tienda 1998; Trusty 1999).

- Capizzano, Jeffrey; Fiorillo, Alexandra. Young Children and the Rural Information Gap: The Weaknesses of Major Data Sources for Examining the Well-being of Rural Children. Starkville, MS: National Center for Rural Early Childhood Learning Initiatives; 2004.
- Carr, Patrick J.; Kefalas, Maria J. Hollowing out the Middle: The Rural Brain Drain and What It Means for America. Boston, MA: Beacon Press; 2009.
- Chenoweth, Erica; Galliher, Renee V. Factors Influencing College Aspirations of Rural West Virginia High School Students. *Journal of Research in Rural Education*. 2004; 19(2) Retrieved January 25, 2011 from <http://www.umaine.edu/jrre/19-2.pdf>.
- Coleman, James S. Social Capital in the Creation of Human Capital. *American Journal of Sociology*. 1988; 94(Supplement):S95–S120.
- Conger, Rand D.; Elder, Glen H, Jr. Families in Troubled Times: Adapting to Change in Rural America. New York: Walter de Gruyter; 1994.
- Conger, Rand D.; Conger, Katherine Jewsbury; Matthews, Lisa S.; Elder, Glen H, Jr. Pathways of Economic Influence on Adolescent Adjustment. *American Journal of Community Psychology*. 1999; 27(4):519–41. [PubMed: 10573833]
- Corbett, Michael. Learning to Leave: The Irony of Schooling in a Coastal Community. Black Point, Nova Scotia: Fernwood Publishing Co., Ltd; 2007.
- Corbett, Michael. Rural Schooling in Mobile Modernity: Returning to the Places I've Been. *Journal of Research in Rural Education*. 2009; 24(7) Retrieved March 19, 2007 from <http://jrre.psu.edu/articles/24-7.pdf>.
- Crockett, Lisa J.; Shanahan, Michael J.; Jackson-Newsom, Julia. Rural Youth: Ecological and Life Course Perspectives. In: Montemayor, R.; Adams, GR.; Gullotta, TP., editors. Adolescent Diversity in Ethnic, Economic, and Cultural Contexts: Advances in Adolescent Development. Vol. 10. Thousand Oaks, CA: Sage Publications; 2000. p. 43-74.
- Crosnoe, Robert. Social Capital and the Interplay of Families and Schools. *Journal of Marriage and Family*. 2004; 66(2):267–80.
- Dika, Sandra L.; Kusum, Singh. Applications of Social Capital in Educational Literature: A Critical Synthesis. *Review of Educational Research*. 2002; 72(1):31–60.
- Donaldson, Gordon A, Jr. Do You Need to Leave Home to Grow Up? The Rural Adolescent's Dilemma. *Research in Rural Education*. 1986; 3(3):212–15.
- Dyk, Patricia Hyjer; Wilson, Stephan M. Family-Based Social Capital Considerations as Predictors of Attainments among Appalachian Youth. *Sociological Inquiry*. 1999; 69(3):477–503.
- Elder, Glen H., Jr; Conger, Rand D. Children of the Land: Adversity and Success in Rural America. Chicago: University of Chicago Press; 2000.
- Elder, Glen H., Jr; King, Valarie; Conger, Rand D. Attachment to Place Migration Prospects: A Developmental Perspective. *Journal of Research on Adolescence*. 1996; 6(4):397–425.
- Farmer, Thomas W.; Irvin, Matthew J.; Thompson, Jana H.; Hutchins, Bryan C.; Leung, Man Chi. School Adjustment and the Academic Success of Rural African American Early Adolescents in the Deep South. *Journal of Research in Rural Education*. 2006; 21(3) Retrieved January 25, 2011 from <http://jrre.psu.edu/articles/21-3.pdf>.
- Gibbs, Robert; Kusmin, Lorin; Cromartie, John. Economic Research Report 10. Washington, DC: U.S. Department of Agriculture, Economic Research Service; 2005. Low-skill Employment and the Changing Economy of Rural America. Retrieved March 4, 2010 from <http://www.ers.usda.gov/publications/err10/err10.pdf>
- Gibbs, Robert. College Completion and Return Migration among Rural Youth. In: Gibbs, RM.; Swaim, PL.; Teixeira, R., editors. Rural Education and Training in the New Economy: The Myth of the Rural Skills Gap. Ames, IA: Iowa State University Press; 1998. p. 61-80.
- Goyette, Kimberly; Yu, Xie. Educational Expectations of Asian American Youths: Determinants and Ethnic Differences. *Sociology of Education*. 1999; 72(1):22–36.
- Haller, Archibald O.; Alejandro, Portes. Status Attainment Processes. *Sociology of Education*. 1973; 46(1):51–91.
- Hektner, Joel M. When Moving Up Implies Moving Out: Rural Adolescent Conflict in the Transition to Adulthood. *Journal of Research in Rural Education*. 1995; 11(1):3–14.

- Howley, Caitlin W. Remote Possibilities: Rural Children's Educational Aspirations. *Peabody Journal of Education*. 2006; 81(2):62–80.
- Irvin, J Matthew; Byun, Soo yong; Hutchins, Bryan C. Relation of Advanced Math Course-Taking to Rural Students' Math Achievement and College Enrollment; Paper presented at the annual meeting of the American Sociological Association; Las Vegas, Nebraska. 2011.
- Israel, Glenn D.; Beaulieu, Lionel J. Investing in Communities: Social Capital's Role in Keeping Youth in School. *Journal of the Community Development Society*. 2004; 34(2):35–57.
- Israel, Glenn D.; Beaulieu, Lionel J.; Hartless, Glen. The Influence of Family and Community Social Capital on Educational Achievement. *Rural Sociology*. 2001; 66(1):43–68.
- Johnson, Jerry; Strange, Marty. *Why Rural Matters 2009: The Realities of Rural Education Growth*. Arlington, VA: The Rural School and Community Trust; 2009.
- Johnson, Kenneth M.; Lichter, Daniel T. Growing Diversity among America's Children and Youth: Spatial and Temporal Dimensions. *Population and Development Review*. 2010; 36(1):151–76.
- Johnson, Monica Kirkpatrick; Elder, Glen H., Jr; Michael, Stern. Attachments to Family and Community and the Young Adult Transition of Rural Youth. *Journal of Research on Adolescence*. 2005; 15(1):99–125.
- Kao, Grace; Tienda, Marta. Educational Aspirations of Minority Youth. *American Journal of Education*. 1998; 160(3):349–84.
- Kim, Doo Hwan; Schneider, Barbara. Social Capital in Action: Alignment of Parental Support in Adolescents' Transition to Postsecondary Education. *Social Forces*. 2005; 84(2):1181–206.
- Lyson, Thomas A. What Does a School Mean to a Community? Assessing the Social and Economic Benefits of Schools to Rural Villages in New York. *Journal of Research in Rural Education*. 2002; 17(3) Retrieved March 19, 2012 from <http://www.jrre.psu.edu/articles/v17,n3,p131-137,Lyson.pdf>.
- Lichter, Daniel T.; McLaughlin, Diane K. Changing Economic Opportunities, Family Structure, and Poverty in Rural Areas. *Rural Sociology*. 1995; 60(4):688–706.
- Lichter, Daniel T.; Johnson, Kenneth M. The Changing Spatial Concentration of America's Rural Poor Population. *Rural Sociology*. 2007; 72(3):331–58.
- Lobao, Linda M.; Gregory, Hooks; Tickamyer, Ann R. *The Sociology of Spatial Inequality*. Albany, NY: State University of New York Press; 2007.
- McLanahan, Sara; Percheski, Christine. Family Structure and the Reproduction of Inequalities. *Annual Review of Sociology*. 2008; 34:257–76.
- McNeal, Ralph B, Jr. Parental Involvement as Social Capital: Differential Effectiveness on Science Achievement, Truancy, and Dropping Out. *Social Forces*. 1999; 78(1):117–44.
- Monk, David H. Recruiting and Retaining High-Quality Teachers in Rural Areas. *The Future of Children*. 2007; 17(1):155–74. [PubMed: 17407927]
- National Center for Educational Statistics. Identification of Rural Locales. 2011. Retrieved March 29, 2011 from http://nces.ed.gov/ccd/rural_locales.asp
- Parcel, Toby L.; Dufur, Mikaela J. Capital at Home and at School: Effects on Student Achievement. *Social Forces*. 2001; 79(3):881–911.
- Parcel, Toby L.; Dufur, Mikaela J. Family and School Capital Explaining Regional Variation in Math and Reading Achievement. *Research in Social Stratification and Mobility*. 2009; 27:157–76.
- Parcel, Toby L.; Dufur, Mikaela J.; Zito, Rena Cornell. Capital at Home and at School: A Review and Synthesis. *Journal of Marriage and Family*. 2010; 72:828–46.
- Phinney, Jean S. Stages of Ethnic Identity Development in Minority Group Adolescents. *Journal of Early Adolescence*. 1989; 9:34–49.
- Portes, Alejandro. Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*. 1998; 24:1–24.
- Provasnik, Stephen; KewalRamani, Angelina; Coleman, Mary McLaughlin; Gilbertson, Lauren; Herring, Will; Xie, Qingshu. *Status of Education in Rural America(NCES 2007-040)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics Institute of Education Sciences; 2007.

- Putnam, Robert D. The Prosperous Community: Social Capital and Public Life. *American Prospect*. 1993; 13:35–42.
- Qian, Zhenchao; Lee Blair, Sampson. Racial/Ethnic Differences in Educational Aspirations of High School Seniors. *Sociological Perspectives*. 1999; 42(4):605–25.
- Raudenbush, W Stephen; Bryk, Anthony S. *Hierarchical Linear Models: Applications and Data Analysis Methods*. 2nd. Thousand Oaks: Sage Publications; 2002.
- Rogers, William. Regression Standard Errors in Clustered Samples. *Stata Technical Bulletin*. 1993; 13:19–23.
- Rojewski, Jay W. Career-Related Predictors of Work-Bound and College-Bound Status of Adolescents in Rural and Nonrural Areas. *Journal of Research in Rural Education*. 1999; 15(3):141–56.
- Roscigno, Vincent J.; Crowley, Martha L. Rurality, Institutional Disadvantage, and Achievement/Attainment. *Rural Sociology*. 2001; 66(2):268–93.
- Roscigno, Vincent J.; Tomaskovic-Devey, Donald; Crowley, Martha L. Education and the Inequalities of Place. *Social Forces*. 2006; 84(4):2121–45.
- Royston, Patrick. Multiple Imputation of Missing Values. *Stata Journal*. 2004; 4(3):227–41.
- Rural Policy Research Institute. *Defining Rural: Definitions of Rural Areas in the U S*. Columbia, MO: Author; 2006.
- Save the Children. *America's Forgotten Children: Child Poverty in Rural America*. 2002. Retrieved December 9, 2010 from <http://www.savethechildren.org/usa/>
- Schafft, Kai A.; Petrin, Robert; Meece, Judith. Achievers Stayers Seekers, and Others: Brain Drain and the Potential Rural Return among Rural High School Students. Manuscript under review.
- Schafft, Kai A.; Alter, Theodore R.; Bridger, Jeffrey C. Bringing the Community Along: A Case Study of a School District's Information Technology Rural Development Initiative. *Journal of Research in Rural Education*. 2006; 21:8. Retrieved March 24, 2012 from <http://jrre.psu.edu/articles/21-8.pdf>.
- Schneider, Barbara; Wyse, Adam E.; Keesler, Venessa. Is Small Really Better? Testing Some Assumptions about High School Size. In: Loveless, T.; Hess, FM.; Keesler, Venessa, editors. *Brookings Papers on Education Policy*. Washington, DC: Brookings Institution Press; 2007. p. 15-47. Retrieved March 4, 2010 from http://muse.jhu.edu/journals/brookings_papers_on_education_policy/v2006/2006.1schneider.pdf
- Sewell, William H.; Haller, Archibald O.; Portes, and Alejandro. The Educational and Early Occupational Status Attainment Process. *American Sociological Review*. 1969; 34(1):82–92.
- Singh, Kusum; Dika, Sandra. The Educational Effects of Rural Adolescents' Social Networks. *Journal of Research in Rural Education*. 2003; 18(2):114–28.
- Smith, Mark H.; Beaulieu, Lionel J.; Seraphine, Anne. Social Capital, Place of Residence, and College Attendance. *Rural Sociology*. 1995; 60:363–80.
- Sun, Yongmin. The Contextual Effects of Community Social Capital on Academic Performance. *Social Science Research*. 1999; 28:403–26.
- Trusty, Jerry. Family Influences on Educational Expectations of Late Adolescents. *Journal of Educational Research*. 1998; 91(5):260–70.
- Turley, N Lopez Ruth. College Proximity: Mapping Access to Opportunity. *Sociology of Education*. 2009; 82(2):126–46.
- Wadsworth, Martha E.; Bruce, E Compas. Coping with Family Conflict and Economic Strain: The Adolescent Perspective. *Journal of Research on Adolescence*. 2002; 12(2):243–74.
- Wilson, Patricia M.; Jeffrey, R Wilson. Environmental Influences on Adolescent Educational Aspirations: A Logistic Transform Model. *Youth & Society*. 1992; 24(1):52–70.
- Wilson, Stephan M.; Peterson, Gary W.; Wilson, Patricia. The Process of Educational and Occupational Attainment of Adolescent Females from Low-Income, Rural Families. *Journal of Marriage and Family*. 1993; 55(1):158–75.

Table 1
Description of Variables and Summary Statistics (N = 5,663)

Variable	M	SE	% imputed
Dependent variable			
Educational aspirations	16.94	0.04	0.0
Independent variables			
<i>Family social capital</i>			
Structural attributes			
Two-parent family	0.57	0.01	0.0
Number of siblings	2.89	0.02	1.1
Number of siblings high school dropout	0.41	0.02	1.8
Process attributes			
Parents expect child to attend college	4.67	0.02	3.3
Talk with parents about how to pay for college	2.43	0.01	7.6
Discuss with parents about careers and work	3.00	0.01	6.0
<i>School social capital</i>			
Structural attributes			
Proportion of students on free lunch	0.39	0.00	10.4
Proportion of minority students	0.26	0.00	5.4
School size (logged)	6.76	0.01	0.0
Process attributes			
Teacher's educational expectations for the student	14.56	0.03	12.0
Percent of parents involved in school activities	45.60	0.36	13.4
Degree of community involvement in school	2.17	0.01	11.9
Controls			
Parental education	13.56	0.04	10.6
Family economic hardship	1.80	0.01	5.9
Female	0.53	0.01	0.0
Race/ethnicity			
White	0.67	0.01	0.0
Black	0.08	0.00	
Hispanic	0.09	0.00	
Native American	0.04	0.00	
Multiracial	0.12	0.00	
Grade			0.0
9th	0.28	0.01	
10th	0.28	0.01	
11th	0.25	0.01	
12th	0.19	0.01	
College proximity	42.44	0.41	0.0
Locales			
Rural, fringe	0.02	0.00	

Variable	M	SE	% imputed
Rural, distant	0.44	0.01	
Rural, remote	0.54	0.01	

Table 2
Unstandardized Coefficients from OLS Regression Predicting Rural Youth's Educational Aspirations

Variable	Model 1 (+ family structural social capital)		Model 2 (+ family process social capital)		Model 3 (+ school structural social capital)	
	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
Family social capital						
<i>Structural attributes</i>						
Two-parent family	0.311**	0.086	0.080	0.079	0.115	0.086
Number of siblings	0.031	0.024	0.040	0.021	0.035	0.022
Number of siblings high school dropout	-0.200***	0.033	-0.11**	0.033	-0.115**	0.035
<i>Process attributes</i>						
Parents expect child to attend college			0.601***	0.023	0.591***	0.024
Talk with parents about how to pay for college			0.363***	0.043	0.359***	0.043
Discuss with parents about careers and work			0.111*	0.044	0.124**	0.043
School social capital						
<i>Structural attributes</i>						
Proportion of students on free lunch					-0.384	0.375
Proportion of minority students					0.548*	0.209
School size					0.150**	0.056
<i>Process attributes</i>						
Teacher's educational expectations for the student						
Percent of parents involved in school activities						
Degree of community involvement in school						
Controls						
Parental education						
Family economic hardship						
Female						
Race/ethnicity (White omitted)						
Black						
Hispanic						
Native American						

Variable	Model 1 (+ family structural social capital)		Model 2 (+ family process social capital)		Model 3 (+ school structural social capital)	
	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
Multiracial						
Grade (9th grade omitted)						
10th						
11th						
12th						
College proximity						
Locales (rural, remote omitted)						
Rural, fringe						
Rural, distant						
Interaction						
Two-parent family × parental education						
Teacher's educational expectations × female						
Constant	16.757***	0.111	12.803***	0.170	11.812***	0.431
<i>R-squared</i> [#]		0.010		0.172		0.177
<i>R-squared Change</i> ^Δ		-		0.162***		0.005
Family social capital						
<i>Structural attributes</i>						
Two-parent family	-0.089	0.077	-0.081	0.074	-0.810*	0.329
Number of siblings	0.048*	0.022	0.042	0.022	0.038	0.022
Number of siblings high school dropout	-0.037	0.037	-0.041	0.037	-0.039	0.036
<i>Process attributes</i>						
Parents expect child to attend college	0.495***	0.022	0.468***	0.021	0.464***	0.021
Talk with parents about how to pay for college	0.286***	0.041	0.313***	0.041	0.312***	0.040
Discuss with parents about careers and work	0.075	0.042	0.059	0.043	0.062	0.042
School social capital						
<i>Structural attributes</i>						
Proportion of students on free lunch	-0.165	0.325	-0.256	0.341	-0.253	0.340

Variable	Model 1 (+ family structural social capital)		Model 2 (+ family process social capital)		Model 3 (+ school structural social capital)	
	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
Proportion of minority students	0.409 *	0.197	0.311	0.199	0.308	0.198
School size	0.191 **	0.063	0.137 *	0.063	0.140 *	0.063
<i>Process attributes</i>						
Teacher's educational expectations for the student	0.350 ***	0.021	0.344 ***	0.021	0.400 ***	0.027
Percent of parents involved in school activities	0.001	0.002	0.002	0.002	0.002	0.002
Degree of community involvement in school	-0.024	0.092	0.004	0.093	0.006	0.093
Controls						
Parental education			0.031 *	0.013	0.000	0.019
Family economic hardship			-0.033	0.035	-0.033	0.035
Female			0.521 ***	0.070	2.209 ***	0.415
Race/ethnicity (White omitted)						
Black			0.204	0.135	0.209	0.134
Hispanic			-0.010	0.188	0.005	0.186
Native American			-0.076	0.139	-0.067	0.139
Multiracial			0.293 **	0.107	0.294 **	0.107
Grade (9th grade omitted)						
10th			-0.170	0.125	-0.167	0.123
11th			-0.375 ***	0.083	-0.371 ***	0.082
12th			-0.558 ***	0.095	-0.555 ***	0.095
College proximity			-0.002	0.001	-0.002	0.001
Locales (rural, remote omitted)						
Rural, fringe			0.360	0.184	0.351	0.187
Rural, distant			0.044	0.102	0.040	0.101
Interaction						
Two-parent family × parental education					0.054 *	0.024
Teacher's educational expectations × female					-0.116 ***	0.029
Constant			7.205 ***	0.636	7.394 ***	0.663

Variable	Model 1 (+ family structural social capital)		Model 2 (+ family process social capital)		Model 3 (+ school structural social capital)	
	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
<i>R-squared</i> ^a		0.247		0.265		0.268
<i>R-squared Change</i> ^a		0.070 ***		0.018 ***		0.003 ***

^a R-squared and R-squared change based on one complete and imputed data set

* p<.001

** p<.01

*** p<.05 (two-tailed tests)