

A Mixed Methods Study of How Socioeconomic Status is Associated with Adolescents' Sense of Control

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Abstract (*Word Count: 150*). People who believe life events are a product of their own effort, rather than fate, experience better outcomes in multiple domains. Previous research has established that students who have low SES feel less control over their lives but the aspects of SES that matter most and the mechanisms underlying these associations are not as clear. This mixed-methods study utilizes data from focus groups with Austin, TX high school students and nationally representative data from NELS to explore the social mechanisms that underlie the association between SES and locus of control. We find that race isn't significantly associated with adolescents' sense of control net of other SES components, and that family income and the status of parent(s)' occupations are most closely associated with adolescents' sense of control. Each SES component impacts adolescents' sense of control through differences in parental influences, but only parental occupation impacts control through differences in peer influences.

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The positive contributions of a more internal locus of control to educational and occupational pursuits, as well as mental and physical health outcomes, are well documented (Adesoji and Ifamuyiwa 2007; Banks and Woolfson 2008; Hall, Smith and Chia 2008; Hand and Payne 2008; Mirowsky and Ross 1990; Mirowsky and Ross 1998; Sciarra and Whitson 2007). The students who would potentially benefit most from a sense of control, those who have low socioeconomic status (SES), are at higher risk of feeling less control over their own lives (Cappella and Weinstein 2001; Lee et al. 2008; Mirowsky, Ross and Van Willigen 1996). While the association between having low SES and feeling less control is well established, it is less clear which components of SES are most closely associated with locus of control and what structural and social mechanisms underlie this association. This mixed methods study uses a large nationally representative dataset, the National Educational Longitudinal Study (NELS), and qualitative data from focus groups conducted with high school students in Austin, Texas to explore what aspects of SES (parental education, family income, parent occupation, race) are most closely associated with feeling control, and how differences in parental and peer influences by SES mediate the association between SES and feeling control.

Theoretical Focus

Sociologists have long attempted to understand how social status is reproduced across generations (Sewell, Haller and Ohlendorf 1970; Sewell, Haller and Portes 1969). Some lines of research have focused on the contributions of social institutions (Bowles and Gintis 1976), while others have focused on culture and language (Bernstein 1977; Bourdieu 1973). Social psychological factors have been more recently emphasized (Fordham and Ogbu 1986; Sewell and Hauser 1980; Willis 1981). In America, feeling that our lives are ours to control is perceived to be an integral aspect of educational and occupational attainment. Adolescents with low SES parents who do not feel control over their own lives are at risk of inheriting this sensibility, and neglecting to engage in the behaviors that could enable their upward social mobility. This study attempts to better understand how and why this happens.

Locus of control, a scale that varies along a continuum from external to internal, captures the idea that people locate their sense of control over their lives within themselves to varying degrees (Rotter 1954). People with an external locus of control, or a lesser sense of instrumentalism (Ross, Mirowsky and Cockerham 1983), are more likely to attribute their life outcomes to fate or destiny, while people with an internal locus of control are more likely to take responsibility for their own successes and failures (Adesoji and Ifamuyiwa 2007; Banks and Woolfson 2008; Bursik and Martin 2006). Students who have an internal locus of control have higher educational expectations, more academic motivation and effort, better grades, higher test scores, and are even more likely to complete college (Adesoji and

Ifamuyiwa 2007; Banks and Woolfson 2008; Cappella and Weinstein 2001; Flowers, Milner and Moore III 2003; Hall, Smith and Chia 2008; Knisley 1993). This body of research makes evident the importance of understanding sources for variation in this socio-psychological resource. The studies that have documented the association between SES and locus of control have operationalized SES in a variety of ways. Some studies have only used measures of race/ethnicity, while others have used a composite measure of SES or only a few components of SES. Moreover, it is unclear how differences in SES produce variation in adolescents' sense of control. This study focuses on the differences in parental and peer influences by SES that may underlie the association between SES and locus of control.

Students who have low SES are more likely to not live with both of their biological parents, and single or step parents may increase the adolescent's sense that their life is not within their control. Lower SES households may have less of the resources (books, internet, material possessions) that may build adolescents' sense of control. Studies have also shown that parental interactions with their children, as well as their involvement in school matters, varies depending on SES (Lareau 2003; Massey et al. 2003). Students who have low SES also attend different schools than students who have higher SES (higher poverty, more minorities). Some studies have found differences in peer environments across schools, and thus the pool of potential friends (Farkas, Lleras and Maczuga 2002; Ogbu 2004; Willis 1981). These differences in parental and peer influences are likely to be more or less closely associated with certain SES components, and to be differentially associated with adolescents' sense of control. By better understanding the parental and peer influences whereby SES impacts locus of control, we have a clearer target for intervention aimed at building youth's sense that their lives are within their own control.

Data and Research Methods

Quantitative Data: NELS. We employ the first and second waves of NELS, a large nationally representative dataset for which the National Center for Education Statistics (NCES) first surveyed students when they were 8th graders in 1988. In addition to being the most recent dataset of its cohort size to contain a scale measure of locus of control, NELS offers a wealth of socio-demographic and academic indicators from surveys of the student, a parent, teachers, as well as school-level measures from an administrator survey and other linked datasets. NCES surveyed approximately 26,000 students during the base year collection of data (8th grade); a subsample (with freshening to maintain national representativeness) of about 20,000 students was surveyed in the second wave of data collection (10th grade for most of the students in the sample). After excluding students who do not have a value on the dependent variable (about 2,000), or who do not have a 10th grade school identification number (about

700), we utilize an analytic sample of approximately 17,300¹ students in 1,507 high schools. We account for survey design by applying a student-level weight in all analyses.

NCES constructed the locus of control composite measure from six items on the 10th grade student survey to which students could respond 1 = Strongly Agree to 4 = Strongly Disagree: “I don’t have enough control over the direction my life is taking,” “In my life, good luck is more important than hard work for success,” “Every time I try to get ahead, something or somebody stops me,” “My plans hardly ever work out, so planning only makes me unhappy,” “When I make plans, I am almost certain I can make them work,” and “Chance and luck are very important for what happens in my life” [alpha=0.71 (Ingels et al. 1992)]. We refer to students who have a value on the lower end of this scale as exhibiting a ‘lower’ or ‘more external’ locus of control, while students with a value on the higher end of the scale are described as having a ‘higher’ or ‘more internal’ locus of control.

Qualitative Data: Focus Group Interviews. In conjunction with research collaborators from the Austin Independent School District (AISD), we led 17 focus group interviews of Austin high school students (N=78) using a semi-structured interview protocol. During the focus group interviews, we collected information on the students’ post-high-school goals, perceived barriers to these goals, involvement in extra-academic school or community organizations, and perceived quality of their high schools’ preparation for their transition into postsecondary education. We conducted the focus group interviews at 10 of the 13 high schools within AISD (multiple interviews were conducted at some high schools) in an attempt to encompass the diversity of student body compositions across schools within the district. Students were selected for the focus groups through convenience sampling of study hall periods.

Analytic Plan. This mixed methods study is conducted with a sequential exploratory approach (Creswell 2009), in that the qualitative data was collected and analyzed first, and then quantitative data was utilized to build upon the qualitative findings. We began our analysis of the qualitative data by listing the basic themes with which we had approached the broader project, and then utilized a grounded theory approach to code and group interview extracts. The motivation for this study was an emergent theme from this analysis: students’ un-elicited emphasis of the importance of feeling control over life. Interview extracts that are representative of the general themes from the focus groups are used to enhance the findings from the quantitative analyses. We do not have socio-demographic information on the students who participated in the focus group interviews, but we are able to couch students’ perceptions of their role in their own futures in the context of the school they attend. In

¹ NCES requires unweighted sample frequencies to be rounded to the nearest 50.

addition to utilizing the students' own words to understand their peer environments, friends, and family backgrounds, we incorporate data from the Texas Education Agency on each school's student body composition and overall achievement levels (Table 1 – not included in this extended abstract).

The quantitative analyses begin with descriptive statistics on the variables used in the study, as well as correlations between SES components and parental and peer influences (Table 2 – not included in this extended abstract). The correlations enhance understanding of the results from the regression modeling. Parental and peer influences that were not correlated with both SES and locus of control were not included in these analyses in the interest of parsimony. We use logistic regression models to predict 10th grade locus of control (Table 3). Significance values and F-ratios (comparing models each with one SES component removed to the model with all SES components) are used to determine which SES components are most closely associated with adolescents' sense of control (RQ 1). The first model contains each of the SES components, and then parental and peer influences are added in the second and third models, respectively. By comparing changes in the coefficients for each SES component across models, and examining the correlations from Table 2, we are able to determine the structural and social mechanisms whereby each SES component is associated with locus of control (RQs 2 and 3).

Expected Findings

Table 3: Coefficients from Linear Regression Models Predicting 10th Grade Locus of Control

	Model 1			Model 2			Model 3				
	B	(SE)	F-Ratio	B	(SE)		B	(SE)			
Intercept	-0.43	(0.08)	***	-1.35	(0.10)	***	-0.71	(0.12)	***		
Socioeconomic Status											
Parents' highest level of education:			7.56			***					
High school or less	-0.08	(0.04)	*	-0.02	(0.03)		-0.02	(0.03)			
Some college (ref)											
BA or higher	0.08	(0.04)	*	0.03	(0.04)		-0.01	(0.03)			
Family income	0.04	(0.01)	***	31.05	***	0.02	(0.01)	**	0.02	(0.01)	*
Parent(s) in a professional occupatio	0.14	(0.03)	***	25.50	***	0.09	(0.03)	**	0.07	(0.03)	*
Race:			1.24								
White (ref)											
Black	0.09	(0.06)		0.11	(0.06)	+	0.05	(0.06)			
Hispanic	0.04	(0.04)		0.07	(0.04)	+	0.00	(0.04)			
Asian/Pacific Islander	-0.07	(0.05)		-0.03	(0.05)		-0.11	(0.05)	*		
American Indian/Alaska Native	-0.01	(0.11)		0.06	(0.11)		0.06	(0.09)			
8th Grade Parental Influences											
No. of cognitive resources in household				0.02	(0.01)	*	0.02	(0.01)	*		
No. of material resources in household				0.00	(0.01)		0.00	(0.01)			
Bio father and mother in household				0.06	(0.03)	*	0.05	(0.02)	+		
Parent(s) expect me to at least finish college				0.07	(0.02)	***	0.05	(0.02)	**		
Discussions with parent about school				0.09	(0.01)	***	0.07	(0.01)	***		
Parental involvement at school				0.04	(0.01)	**	0.03	(0.01)	**		
Parents limit time watching TV				0.00	(0.01)		-0.01	(0.01)			
Parents trust me to do what they expect				0.24	(0.04)	***	0.14	(0.04)	***		
Usually know why I am to do as parents say				0.27	(0.03)	***	0.19	(0.03)	***		
10th Grade Peer and Friend Influences											
High-poverty school							-0.14	(0.06)	*		
Percent racial minority							0.00	(0.00)			
<i>Peers' Classroom Behavior</i>											
Students don't get along well with teachers							-0.13	(0.02)	***		
Other students often disrupt class							-0.04	(0.02)	*		
Other students disrupt my learning							-0.04	(0.02)	*		
<i>Peer and Friend Relations</i>											
I often feel "put down" by other students							-0.23	(0.02)	***		
I don't feel safe at this school							-0.20	(0.02)	***		
Someone offered to sell me drugs at school							-0.09	(0.02)	***		
I got into a physical fight at school							-0.12	(0.03)	***		
Degree that friends are academically oriented							0.05	(0.01)	***		
R2	0.03			0.10			0.21				

Note: Each model uses approximately 17,300 students in 1,507 schools. Coefficients for school type and urbanicity are excluded from this table in the interest of space, but are included in Model 3.

Note: +p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.

Sample of Interview Extracts

And also it's what you see your family do, because I think a lot of the Hispanics and African-Americans, and everybody whose family doesn't have a high paying job, they see their family, construction workers, and working hard in the sun all day, and that's what they think their only option is ... [Adolescent at Red River High (high-poverty)]

I realize there is a lot of smart people at this school, but they just dumb themselves down and hang out with their friends to fit in with the cool crowd. They don't realize that dumbing yourself down for your friends is not cool. It's stupid, actually, but they just think that they can't do it because their family didn't do it. [Adolescent at Red River High (high-poverty)]

RQ1: What aspects of SES (parental education, family income, parent occupation, race) are most closely associated with feeling control?

Family income is most closely associated with the degree to which adolescents feel that their lives are within their own control, followed by their parent(s) having a professional occupation and then the level of their parents' education. Net of these other components of SES, there is no significant association between race and locus of control.

RQ2: What differences in parents mediate associations between aspects of SES and feeling control?

The estimated effect of family income on the adolescent's locus of control is reduced through inclusion of the measures of parental influences. Having both biological parents in the home, more cognitive and material resources in the home, higher educational expectations, and more parental discussion and involvement were all correlated in the same direction with having a higher family income and the adolescent's sense of control.

The estimated effect of the adolescent's parent(s) having a professional occupation on the adolescent's locus of control is reduced through inclusion of the measures of parental influences. Every measure of parental influence was correlated in the same direction with the adolescent's parent(s) having a professional occupation and the adolescent's sense of control.

The estimated effect of parents' highest level of education on the adolescent's locus of control is entirely mechanized through parental influences. Every measure of parental influence (except parental trust) was correlated in the same direction with parents' educational level and the adolescent's sense of control.

RQ3: What differences in peers mediate associations between aspects of SES and feeling control?

The estimated effect of family income on the adolescent's locus of control is not mechanized through peer influences.

The estimated effect of having parent(s) in a professional occupation on the adolescent's locus of control is reduced through inclusion of the measures of peer influences. The measures describing peer's classroom behavior and peer and friend relations, as well as the type of school (private, public) and the rurality of the school are all correlated in the same direction with parent(s)' occupation and the adolescent's sense of control.

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