Perceived Socioeconomic Status: A New Type of Identity which Influences Adolescents' Self Rated Health

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Abstract

Purpose—The cognitive, social, and biological transitions of adolescence suggest that subjective perceptions of social position based on the socioeconomic hierarchy may undergo important changes during this period, yet how such perceptions develop is poorly understood and no studies assess if changes in such perceptions influence adolescents' health. This study describes adolescents' subjective perceptions of familial socioeconomic status (SSS), how SSS changes over time, and how age, race, and objective socioeconomic status (SES) indicators influence SSS. In addition, the study determines if SSS independently influences adolescents' self-rated health, an important predictor of morbidity and health service utilization.

Methods—1179 non-Hispanic black and white baseline 7–12th graders from a Midwestern public school district completed a validated, teen-specific measure of SSS annually for 4 consecutive years. A parent provided information on SES. Markov modeling assessed transitions in SSS over time.

Results—SSS declined with age (p=.001) and stabilized among older teens. In addition to age, SES and race, but not gender, were significant correlates of SSS, but the relationships between these factors were complex. In cross-sectional and longitudinal analyses, black teens from families with low parent education had higher SSS than white teens from similarly educated families, while white teens from highly educated families had higher SSS than black teens from highly educated families. Lower SSS and changes in SSS predicted poor self rated health even when adjusting for race and objective SES measures.

Conclusion—Subjective evaluations of socioeconomic status predict adolescents' global health ratings even when adjusting for the sociodemographic factors which shape them.

Keywords

socioeconomic status; self-rated health; health disparities

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Introduction

Lower socioeconomic status (SES) is a powerful predictor of poor health. The inverse association between SES and worse health outcomes has been documented throughout the developed world and across every age group. However, how lower SES gets "under the skin" to affect physical and mental health remains largely unexplained. Although compelling structural and behavioral explanations have been proffered, none fully explain why health disparities remain so prevalent today. The persistence of these disparities suggests that, in addition to behavioral and structural factors, psychological and physiological processes are also active in the development and maintenance of social inequalities in health [1–3].

In animal models used to study socioeconomic inequalities in health, rank within the social hierarchy is considered analogous to SES. Animal studies suggest that lower rank and the stress related to social subordination affect the immune, adrenocortical, cardiovascular, and reproductive systems, leading to increased morbidity and mortality in lower status animals [1]. These studies, which have been used to support models for how SES creates health disparities among humans,[4] show both intra- and interspecies variation in the relationships between rank, the experience of stress, and the physiological alterations which such experiences engender [1]. Traditional measures of SES such as income, education, and occupation do not account for such variation in personal experience of rank. Studies among humans, therefore, assume that the personal experience of SES is equivalent for each member of a group defined by similar socioeconomic background.

Equality in the personal experience of objective socioeconomic status is assumed, in part, because how human beings experience and understand their socioeconomic position is not well understood. Prior work in this area tended to focus on social class identification[5,6], rather than perceived socioeconomic status because the idea that subjective perceptions of socioeconomic status influence human health is relatively new and measures to assess perceived socioeconomic status have only been developed in the past few years [7,8].

To date, studies which use these measures indicate that perceived socioeconomic status among adults is related to a variety of health-related outcomes and that the relationships between perceived socioeconomic status and health persists even after adjustment for objective SES measures [1,9–13]. The relationship between perceived socioeconomic status and health appears to be less consistent among adolescents than in adults [8,14,15]. This inconsistency suggests that there may be developmental differences in subjective evaluations of socioeconomic status that influence health. However, because this field is a nascent one, little is known about how perceptions of SES develop or what shapes them. To date, no longitudinal study exists which could provide insight into the development of adolescents' perceived socioeconomic status and how development of such perceptions relates to health.

The purpose of the current study was to address this gap. The study has three aims. The first was to describe perceived socioeconomic status in a racially and socioeconomically diverse cohort of youth and assess transitions in perceived socioeconomic status over three successive one year periods. We hypothesized that prior perceptions of family socioeconomic status would be a major determinant of current perceptions. The second aim was to explore the intersection of race and objective SES vis-à-vis the development of perceived socioeconomic status. Because it is associated with discrimination and disadvantage, we hypothesized that minority race/ethnicity would be associated with lower perceived socioeconomic status independent of objective SES measures and prior perceived socioeconomic status. Further, we hypothesized that those who were disadvantaged along multiple dimensions (i.e. minority race/ethnicity, poor, and poorly educated parents) would have significantly lower perceived socioeconomic status than would be expected given the effect of each domain in and of itself on perceived

socioeconomic status. This hypothesis is based on the double jeopardy hypothesis, which suggests that the total combined effect of being disadvantaged along two status dimensions is greater than disadvantage in either dimension alone[16] and the work of McLeod and Owens, who noted that social evaluations processes may be one of the mechanisms underlying the double jeopardy hypothesis [17]. Third, the study aimed to determine if and how perceived socioeconomic status and changes in these perceptions over time influenced adolescents' self rated health. Such global health ratings synthesize multiple domains of health, including physical, psychological and social wellbeing [18,19]. They are powerful predictors of mortality, future morbidity, and health service utilization [20–22]. Among adults, poorer self rated health has been associated with lower SES and lower perceived socioeconomic status [7,12,23–26]. Although poor self rated health has been associated with lower SES among adolescents [19,27,28], the relationship between SSS and self rated health in adolescents has not been evaluated. We hypothesized that lower perceived socioeconomic status would be associated with greater odds of having poor self rated health in both cross sectional and longitudinal analyses.

Methods

Study Sample and Procedures

This study uses data from the Princeton School District Study, a prospective study from a single Midwestern suburban public school system with one junior high school and one senior high school [14]. The Princeton City School District is a well-defined geographic area that includes six diverse, independent, incorporated communities plus unincorporated areas of Hamilton and Butler Counties (Ohio). Approval for the cohort study was received from the Institutional Review Boards at the participating University and local Children's Hospital. Seventh – twelfth grade students who were enrolled at the start of the 2001–2002 school year were eligible for participation, which included completion of a survey annually for four consecutive years. Surveys were completed privately in the school setting or through the mail if students had graduated and could not come to the school for a study appointment [29]. Because the school population was 47.3% non-Hispanic white and 47.2% non-Hispanic black, only non-Hispanic black and white students were included in these analyses. Of the 2116 eligible students, 1367 (64.6%) completed at least two consecutive yearly surveys assessing SSS. 86.2% of these students (n=1179) had a parent provide information on SES. These 1179 teens comprise the study cohort. The cohort included 267 black males (22.6%), 274 black females (23.2%), 321 white males (27.2%) and 317 white females (26.9%). Mean age at baseline was 15.1±1.6 years (range 12.2 – 19.3 years). One quarter (25.4%) had a sibling in the study, and 5.9% had two siblings in the cohort. There were no age or gender differences in participation. However, despite the fact that 46% of the study cohort was non-Hispanic black, these youth were under-represented relative to the target population, which was 50% non-Hispanic black (p<0.001). Mean length of follow up was 10.1 months between waves 1 and 2, 11.1 months between waves 2 and 3 and 11.6 months between waves 3 and 4. Most (78.1%) completed all 4 waves, 14.9% completed three of the four waves, and 7.0% completed only the initial two waves. There were no gender difference in number of waves completed, although slightly more whites completed all four waves (83%) than blacks (81%, p=.003). White students came from families with higher educated parents and greater household income (p<.0001). There were no gender or age differences in parent education.

Measures

SES—A parent provided information on parental education and total household income before taxes. Self and current spouse/partner education was reported in nine ordered categories ranging from never attended school to professional training beyond a 4-year college or university. For analyses, these categories were condensed into four—less than or equal to high

school (N=265, 22.5%%), some college or technical/vocational training beyond high school (N=337,28.6%), college graduate (N=322, 27.3%), professional training beyond college (N=255, 21.6%). The highest level of parental education was used in analyses as prior work has shown that mother's and father's education function similarly in regard to self rated health [28]. Total household income was reported in nine ordered categories ranging from less than $5000 to greater than or equal to $100,000.

Perceived Socioeconomic Status—The Subjective Social Status (SSS) Scale, a validated, youth-specific measure, taps subjective perceptions of the family's SES by using a 10-pt self anchoring scale [8]. The measure and its development have been described in detail elsewhere [8]. Basically, subjects are shown a drawing of a ladder which is said to represent American society. Parallel language anchors at the top and bottom refer to traditional SES measures of money, schooling, and occupational prestige. Adolescents' are asked to chose the ladder rung which best represents their family's place in American society. Higher scores indicate higher perceived family SES. Adolescents are asked to rank family SES rather than their own individual SES because socioeconomic status in childhood and adolescence is defined by that of the family.

Demographic covariates—Date of birth, used in age calculation, parent-identified race/ethnicity of the student, and gender were available from school demographic data.

Self-rated health—A single 5-pont Likert scaled item assessed global perceptions of health: "In general, how would you rate your health?" Response categories were dichotomized into fair-poor and good-excellent categories for analysis, as has been done in prior reports[28].

Analytic strategy

Bivariate analyses used nonparametric techniques because SSS was not normally distributed. Multivariable analyses were run using generalized estimating equations (SAS Proc GENMOD) to account for siblings in the cohort. Because 14.1% (n=166) were missing information on household income, multiple imputation was used to impute missing income values for the multivariable modeling. We performed multiple imputation based on the method developed by Rubin [30]. Reported results are based on the combined results of 5 separate imputations and SAS MIANALYZE software[31,32]. Data on other independent variables (age, gender, parent education, race/ethnicity) were complete for all subjects, and therefore did not require imputation. Testing for all 2-way and 3-way interactions and examination for non-linear effects were performed. Main effects were entered in testing for interactions and were retained in the final models. Results were considered significant if p≤.05.

Analyses of SSS—First, descriptive analyses of baseline SSS, including evaluation of the relationships of age, race, gender, and objective SES to SSS were performed. Second, longitudinal analyses assessed how these factors influence transitions in SSS over time. In analyses of changes in SSS over time, we also needed to account for the influence of prior SSS on future perceptions, as well as the possibility that the effect of certain factors on SSS may be different conditional on the earlier ranking. Failure to take into account the earlier ranking and its potential interactive effects could lead to incorrect interpretations of the factors that influence SSS. We used Markov transitional models, which are specifically designed to address these issues of prior perceptions, to account for the effect of the prior year's ranking. The Markov transitional model is described in the equation below, where Yi(t) is the current value of SSS at time t for subject i, and $Y_i(t-1)$ is the previous value of SSS at the earlier time point. The transition in SSS from one point in time to another may be different from individual to individual, and can be modeled by the factors $X_i(t)$ and their interaction with $Y_i(t)$. When the

interaction is significant, it suggests $X_i(t)$ may have different effect conditional on the previous SSS for this subject.

$$Y_i(t-1) \xrightarrow{\alpha\, X_i(t-1) + \beta\, Y_i(t-1)\, X_i(t-1)} Y_i(t)$$
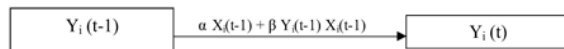
Because of the complexity of the multiple 2-way interactions in the linear Markov models, cumulative logit models using SAS Proc GENMOD were also run treating SSS as an ordinal variable. Results of these models were then used to derive a set of figures (Figure 1) to simplify interpretation by graphically representing the probability that an individual's SSS would move up, move down, or stay the same over time.

Analyses of self-rated health—Logistic regression models were run for analyses in which fair-poor self rated health was the dependent variable. The initial models assessed the relationship of baseline SSS and objective SES to baseline fair-poor self rated health status adjusting for age, gender, and race/ethnicity. A second model then assessed if changes in SSS between waves 1 and 4 influenced self-rated health at Wave 4. Because SSS and self rated health are both subjective evaluations, this second model, which accounts for baseline evaluations of both SSS and self rated health, provides a more stringent test of the relationship of SSS to self rated health.

Results

Description of SSS Across the 4 Waves of Data Collection

Mean SSS (SD) across the four waves was as follows; wave 1 $\mu=6.65$ (1.34); wave 2 $\mu=6.65$ (1.38); wave 3 $\mu=6.66$(1.36); wave 4 $\mu=6.60$(1.35). Although these mean values are nearly identical, there was substantial within-person variation in SSS ($F=3.78$, $p=0.01$) and a significant linear trend across the four waves (linear contrast $F=6.94$, $p=0.009$). Between waves 1 and 2, only 35.0% had identical SSS at both waves and the within-person change in SSS ranged from −7 to +8. While the within person variation was statistically significant, most commonly, adolescents moved either up one rank (21.9%) or down one rank (20.2%) if they changed their perceived familial socioeconomic position over the course of a year.

Correlates of SSS at each wave—Table 1 presents a description of the bivariate relationships between SSS, race, SES, and gender. At baseline, adolescent's SSS was correlated with both parent education and household income (Spearman's rho for SSS-education = .24, $p<.001$, Spearman's rho for SSS-income = .35, $p<.001$). However, the correlations between SSS and the objective SES measures was not as strong as the correlation between the objective SES measures themselves (Spearman's rho parent education-income = .60, $p<.001$). This indicates that disjuncture between SSS and SES exists for some. For example, 17% of students from families whose parents had high school or less education ranked their families in the upper quintile of the SSS scale. The high SSS rating was not due to high household income, as 48% of those teens came from households with incomes less than $25,000. Similarly, 6.7% of teens from highly educated families had a baseline SSS in the bottom half despite the fact that most (58%) came from families with household incomes of $50,000 or higher. The teens with high SSS and low objective SES were largely (82%) black, while those with low SSS and high SES were mostly white (65% white, 35% black). Overall, lower parent education, lower household income, and black race were associated with lower perceived social status. Gender was not associated with SSS at any wave.

Results of multivariable analyses to determine independent correlates of SSS are presented in Table 2. Older teens and those from households with lower income had lower SSS. In addition, although the main effects of education and race were not significant, there was a significant race by parent education interaction. This interaction was reflected in the raw baseline data; White teens with high school or less educated parents had lower SSS at baseline ($\mu=5.97$,

SD=1.34) than black teens with parents at the same level of education (μ=6.56, SD=1.62). However, as parent education increased, the reverse was found. Looking at families with at least one parent with a professional degree, black teens had lower baseline SSS (μ=7.00, SD=1.14) compared to white teens (μ=7.28, SD=1.28).

Longitudinal changes in SSS—Correlations between yearly SSS rankings increased over the three follow up periods from .48 (95%CI=.44, .53) for Waves 1 and 2 to .59 (95%CI .55, .63) for waves 2 and 3 and to .64 (95%CI=.50, .67) for waves 3 and 4 (trend analysis p<.001). Since there is no reason to suspect differences in changes in parent SES in one versus another time period, this trend, which reflects stabilization in SSS, provides evidence that developmental processes within an adolescent influence perceptions of familial socioeconomic position within American society.

Table 3 presents results of the multivariable Markov modeling. The prior year's SSS had the strongest influence on the next year's SSS both through direct effects and multiple interactive effects. Three two-way interactions were found. The interaction of prior SSS with age provides further evidence for developmental influences. When prior SSS was low, the effect of age remained negative, with younger teens transitioning to higher SSS than older teens. However, when prior SSS was high, the effect of age became positive with older teens tending to transition to higher SSS than younger teens. The interactions between race, parent education, and prior SSS were complex. The prior SSS by education and education by race interactions can together be interpreted to indicate that, for teens from families with low parent education, a black teen transitioned to higher SSS than a white teen regardless of prior SSS. This was not the case for teens from highly educated families. For these teens, when prior SSS was low, a black teen transitioned to higher SSS than a white teen. However, when prior SSS was high, the situation was reversed; black adolescents transitioned to lower SSS than white teens. A 3-way interaction between race, parent education, and prior SSS was not statistically significant.

Probability of Movement Up, Movement Down, or Staying the Same: Because of the complexity of the interactions present in the Markov models, we performed analyses to graphically represent (Figure 1) the probability that SSS would stay the same, move down, or move up given different levels of prior SSS for a 15 year old adolescent with annual household income in the moderate range (approximately $58,000). Looking across the 3 panels reveals that the vast majority of those with prior SSS of 4 or less would probably move up. As prior SSS becomes more moderate (5–7), the likelihood among the three possibilities is much more similar. At a high prior SSS, most teens would move down. While these patterns may reflect regression to the mean to some extent, the differences in the likelihood of change for teens from different backgrounds suggests that other factors influence SSS over time. For example, the significant parent education by prior SSS interaction is apparent in this figure. When prior SSS was low, those from high parent educated families were more likely to move down and less likely to move up than youth from low parent educated families. However, when prior SSS was high, the reverse was true: those from high parent educated families were less likely to move down and more likely to move up than youth from low parent educated families with similar prior SSS.

Relationship of SSS to Self Rated Health

Self rated health was correlated with both objective and subjective measures of socioeconomic position. However, the correlations were strongest for SSS (spearman's rho SSS = .23, rho education=.18, rho income = .14, p<.001 for all). Baseline prevalence of fair-poor self rated health was 7.1%. In bivariate analyses, lower SSS (p=.001), female gender (p=0.02), and lower parent education (p=.03) were associated with baseline fair-poor self rated health. Race, age, and income were not associated with baseline fair-poor self rated health in bivariate analyses.

Although the prevalence of fair–poor self rated health at follow up (6.7%) was nearly equal that at baseline, only one quarter (24.6%) of those with baseline fair-poor self rated health maintained that same level of perceived health status three years later.

Table 4 presents results of multivariable modeling to determine independent predictors of fair-poor perceived health status. At baseline, only gender and SSS were significant independent correlates of fair-poor self rated health. Female gender and lower SSS were associated with increased odds of fair-poor self rated health. Neither measure of objective socioeconomic status was significantly associated with fair-poor self rated health when SSS was accounted for. In longitudinal analyses, both lower baseline SSS and decrease in SSS were associated with subsequent poor self rated health, even after adjusting for baseline perceived health status and other covariates. Lower parent education was also associated with fair-poor health status at follow up, which suggests that the influence of parent education on health perceptions may strengthen with age.

Discussion

In this study, adolescents' perceptions of their family's socioeconomic status was shaped by multiple social factors, including age, race, and objective SES. As youth developed, a complex pattern of relationships emerged between these factors that influences how perceptions of family SES changed over time. These data suggest that internalized beliefs of family socioeconomic position could be understood as a type of identity akin to gender and racial/ethnic identity. The robust relationship between perceived SES and self rated health we demonstrate here further suggest that socioeconomic status identity, which is easily assessed, may be a more sensitive predictor of health status among adolescents than objective measures of SES. Data suggest that this is the case with adults, for whom perceived socioeconomic status has also been shown to be a better predictor of health status and change in status over time than objective SES measures [13]. However, further research assessing the performance of perceived SES in relation to specific health outcomes among adolescents still needs to be performed determine if this is the case.

While subjective perceptions of family SES were affected by objective SES measures, the influence of these external measure on these internalized perceptions was not identical for all youth, nor was there a simple linear relationship between SES and perceived SES. These findings call into question the assumption underlying many studies of social inequalities in health—that each person's evaluation of socioeconomic status mirrors the external measures of SES associated with that individual. This assumption needs to be re-examined and approached with more nuance for adolescents.

The idea that external markers of socioeconomic status would be internalized and create the subjective within person experience of socioeconomic position is part of a long tradition in research on self concept (the "looking glass self")[33]. Based on this tradition, we had hypothesized that characteristics associated with social disadvantage, such as minority race/ethnicity, would decrease SSS and even enhance the influence of external SES. As opposed to enhancing the influence of SES, our data suggest that race may be one factor which could create disjuncture between SES and SSS. Multiple strands of evidence support this idea. Those whose SSS exceeded their objective SES were mostly black, while those whose objective SES was higher than their perceived status were largely white. In addition, race by education interactions were present in all models. Possible explanations for these findings are that objective SES may be a less powerful a determinant of SSS for black youth or that the upper SES black youth are particularly sensitive to the effects of discrimination and marginalization they experience due to their minority status. Higher parental education may bring with it greater exposure to discrimination and/or awareness of racism among higher SSS black adolescents which did not

affect their white counterparts. Whatever the explanation, these findings highlight the need for careful theoretical and analytic treatment of race and socioeconomic status.[34] The intersections between these two factors which have social, political, historical, and psychological dimensions may be critical to understanding how society influences health and psychological well-being.

Findings related to the development of self esteem may provide a good model for how to think about the intersections of race and objective SES in the development of socioeconomic status identity among adolescents. In the research on development of self esteem, investigators have questioned the validity of the looking glass self concept because many studies showed that blacks have higher self esteem than whites, despite the fact that blacks are members of a disadvantaged and marginalized group [35]. Three potential mechanisms have been proffered to explain these apparently paradoxical findings: 1) attribution of negative feedback to prejudice toward one's social group, 2) selective devaluation of factors on which one's group fare poorly, and 3) use of more in-group versus out-group social comparisons (social identity theory). These ideas--particularly the last--are relevant and applicable to the current study [36]. Research on segregation has shown that black school children have higher self esteem if they attend a segregated school, probably because in-group comparisons are more likely than from those in desegregated schools who may compare themselves to whites [37]. Although the school district these teens were drawn from is an integrated district, the high proportion of black students is likely to create a large enough cohort for in-group comparisons among black students to occur in the district schools. While social comparisons and social identity theory [38] suggest explanations for our findings, further research will be required to test if these constructs account for the patterns we describe herein.

There are some important limitations to note. Because the study had slight overrepresentation of white students, the possibility that selection bias may have influenced the results cannot be ruled out. In addition, measures of various domains of social status and health status were based on single items. However, these single items have been widely used in studies throughout the developed world to assess determinants of health. Only parent-identified race/ethnicity was available, and perceived social status is a relatively new construct. However, the perceived SES measure was a validated, adolescent- specific instrument and the self rated health measure has been extensively used. In addition, objective SES was measured at baseline only, not yearly, as was SSS. While it is unlikely that parental education would change much in these 4 years, there may have been changes to household income which may have influenced changes in SSS. There were no major economic changes in the community during the period of data collection, so systematic change in either direction is unlikely. In addition, while there may have been changes at the individual household level, it is not clear how cognizant teens are of fluctuations in household income from year to year. As noted in the methods section, both the SSS and self rated health scales were self-report measures, which could increase the correlation due to report bias. However, the analyses, which found an association between SSS, changes in SSS and perceived health status controlled for baseline self-rated health, thereby factoring out the joint variance.

Implications and conclusions

These findings indicate that socioeconomic status identity, which can be thought of as the subjective assessment of one's socioeconomic position, is formed through a complex interweaving of factors related to social disadvantage and developmental changes. The data suggest that this identity reflects external markers of SES but may not be totally congruent with such measures. Some groups may rely more heavily on relative comparisons within group, rather than comparisons against a broader societal norm. In addition, these findings suggest that perceived socioeconomic status may be a more sensitive predictor of health and health

changes than the traditional objective measures of socioeconomic position. Whether differences in perceived status could explain why some teens are resilient to the well documented detrimental effects of lower SES on health remains to be determined.

Acknowledgements

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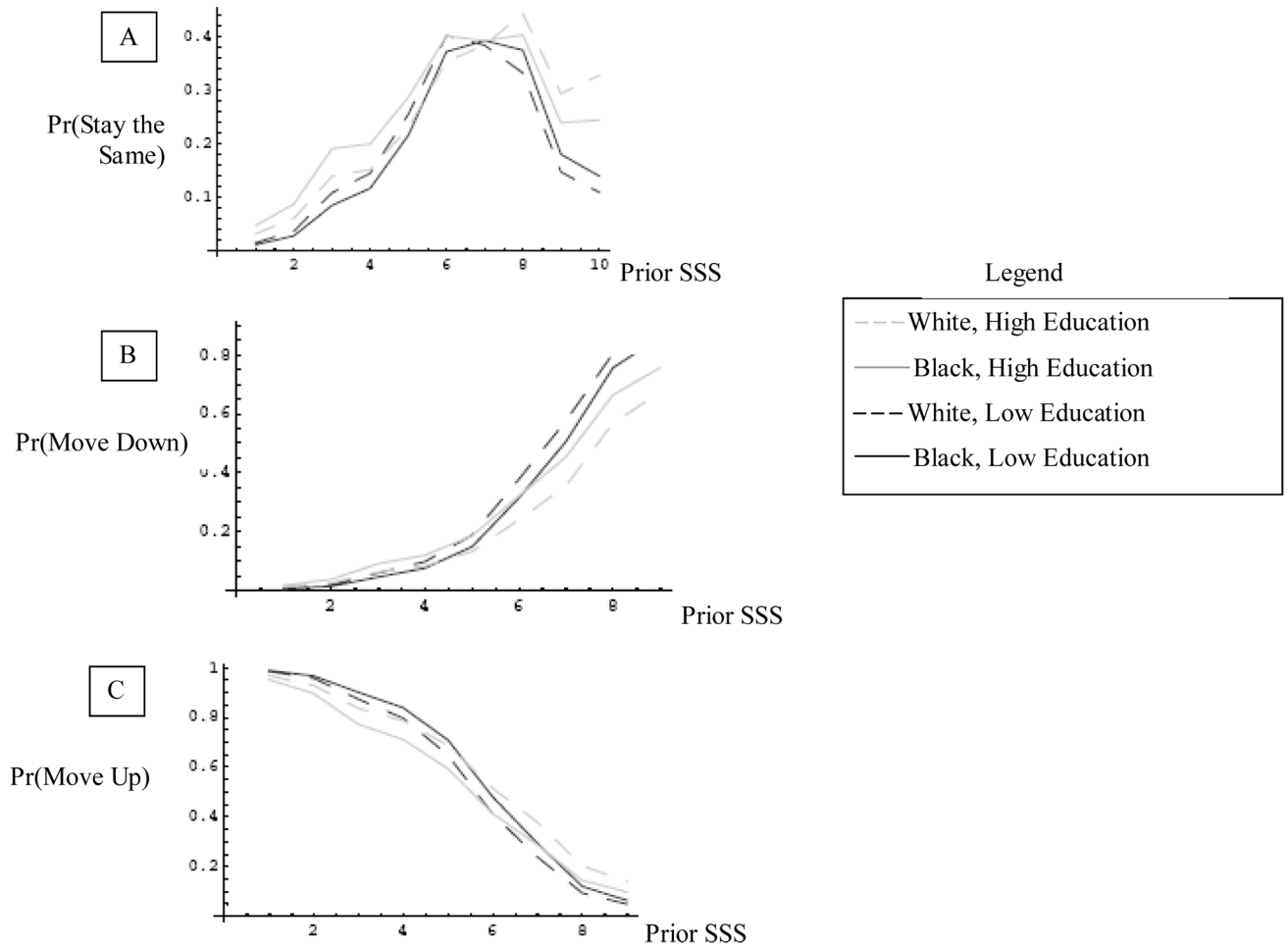
Figure 1.
The Influence of race, parent education and prior SSS on the probability that SSS of a 15 year old adolescent from household with moderate income will: A: Stay the same, B: Move Down, or C: Move up. Prior SSS is noted on the x-axis. The y-axis represents probability for the current year's SSS. Very light Grey= parent with a professional degree, black = high school or less parent education. Dashed = white, solid = black

Table 1

Bivariate relationships between SSS, race, SES, and gender

| SSS | | Race White | Sig. | | Parent Education | | | | Income | | Sig. | | Gender | Sig. |
	Black			<=HS	>HS, <college	College	Prof degree	Sig.	< $50K	≥ $50K		Male	Female	
Wave 1														
μ	6.61	6.68	.10	6.32	6.45	6.70	7.21	<.001	6.24	6.95	<.001	6.70	6.60	.24
SD	1.42	1.28		1.53	1.26	1.37	1.19		1.38	1.33		1.37	1.32	
Wave 2														
μ	6.57	6.72	.03	6.35	6.42	6.70	7.22	<.001	6.28	6.96	<.001	6.70	6.61	.32
SD	1.47	1.29		1.49	1.36	1.41	1.25					1.41	1.34	
Wave 3														
μ	6.42	6.70	<.001	6.21	6.17	6.66	7.29	<.001	6.08	6.94	<.001	6.66	6.50	.02
SD	1.29	1.37		1.43	1.25	1.30	1.24		1.40	1.37		1.30	1.40	
Wave 4														
μ	6.37	6.79	<.001	6.19	6.28	6.60	7.32	<.001	6.11	6.22	<.001	6.61	6.60	.94
SD	1.34	1.32		1.41	1.39	1.28	1.22		1.34	1.36		1.28	1.41	

Note: μ=mean, SD=standard deviation

Table 2

Correlates of baseline SSS in 1179 students from the PSD Study

	parameter estimate	SE	P Value
AGE (years)	−.07	.02	.004
BLACK	−.05	.18	.80
FEMALE	−.11	.07	.13
PARENT EDUCATION			
<=HS	.08	.20	.68
>HS, <COLLEGE	−.18	.19	.33
COLLEGE	−.11	.19	.56
RACE* EDUCATION			
BLACK*<=HS	.83	.24	.006
BLACK*>HS,<COLLEGE	.16	.23	.50
BLACK* COLLEGE	.25	.23	.28
INCOME	.0086	.0011	<.0001

Note: Race: 0=non-Hispanic black, 1= non-Hispanic white. Gender: 0=female, 1=males. Income range is from 1 – 9. Professional degree beyond college = reference category for parent education. SSS= subjective socioeconomic status. HS= High School. SE=standard error

Table 3

Linear Markov Model of SSS of Transitions in SSS over Waves 2 through 4 in 1179 students from the PSD Study

	parameter estimate	SE	P
PRIOR SSS	.32	.15	.03
AGE (years)	−.11	.06	.050
PRIOR SSS*AGE	.02	.008	.054
FEMALE	−.05	.04	.22
BLACK	−.26	.10	.008
EDUCATION			
<=HS	1.06	.32	0.001
>HS,<COLLEGE	.85	.31	.007
COLLEGE	.53	.33	.102
PRIOR SSS*EDUCATION			
PRIOR SSS*<=HS	−.15	.04	<.001
PRIOR SSS*>HS,<COLLEGE	−.13	.04	.005
PRIOR SSS* COLLEGE	−.07	.05	.108
BLACK*EDUC			
BLACK*<=HS	.40	.13	.002
BLACK*>HS,<COLLEGE	.39	.12	0.002
BLACK* COLLEGE	.23	.12	.06
INCOME	.004	.0006	<.001

Note: Professional degree beyond college = reference category for parent education. SSS= subjective socioeconomic status. HS= High School. SE=standard error.

Table 4

The relationship of demographic characteristics, objective socioeconomic status, and SSS to self rated health in cross sectional and longitudinal analyses over three years in the PSD Study

	Baseline (Wave 1) Fair-Poor SRH			Follow up (Wave 4) Fair-Poor SRH		
	parameter estimate	SE	P Value	parameter estimate	SE	P Value
BASELINE AGE (years)	.114	.086	.16	−.063	.093	.473
BLACK	−.106	.300	.72	.36	−.29	.22
FEMALE	.890	.392	<.001	.649	.288	.024
PARENT EDUCATION						
<=HS	.771	.544	.15	1.919	.708	.007
>HS, <COLLEGE	.232	.509	.65	1.604	.679	.018
COLLEGE	.484	.447	.28	1.157	.668	.083
INCOME	.001	.005	.88	.003	.004	.488
BASELINE SSS	−.238	.113	.036	−.34	.12	.007
CHANGE IN SSS				−.26	.11	.024
BASELINE FAIR-POOR SRH				1.507	.357	<.001
TIME TO FOLLOW UP (months)				.032	.064	<.001

Note: Income range is from 1 – 9. Professional degree beyond college = reference category for parent education. SSS= subjective socioeconomic status. HS= High School. SRH=self rated health. SE=standard error.