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Understanding students' transition to high school: Demographic variation and the role of supportive relationships

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Abstract

The transition to high school is disruptive for many adolescents, yet little is known about the supportive relational processes that might attenuate the challenges students face as they move from middle to high school, particularly for students from more diverse backgrounds. Identifying potential buffers that protect youth across this critical educational transition is important for informing more effective support services for youth. In this study, we investigated how personal characteristics (gender, nativity, parent education level) and changes in support from family, friends, and school influenced changes in socioemotional adjustment and academic outcomes across the transition from middle to high school. The data were drawn from 252 students (50% females, 85% Latina/o). The results revealed declines in students' grades and increases in depressive symptoms and feelings of loneliness across the high school transition, with key variation by student nativity and gender. Additionally, stable/increasing friend support and school belonging were both linked to less socioemotional disruptions as students moved from middle to high school as compared to experiencing decreases in these sources of support. Increasing/stable school belonging was also linked to increases in school engagement across the high school transition. These findings suggest that when high school transitions disrupt supportive relationships with important others in adolescents' lives, adolescents' socioemotional well-being and, to a lesser extent, their academic engagement are also compromised. Thus, in designing transition support activities, particularly for schools serving more low-income and race/ethnic minority youth, such efforts should strive to acclimate new high school students by providing inclusive, caring environments and positive connections with educators and peers.

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Authors' Contributions

ADB conceived of and oversaw the design of the study, supervised the data analyses and interpretation of the data, and drafted the manuscript. AEB and FB performed the statistical analyses, participated in the interpretation of the data, and drafted the manuscript. All authors read and approved the final manuscript.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflicts of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This original data collection was approved by the Institutional Review Board of the University of Texas at Austin, and the current study was performed in accordance with the ethical standards at the University of Texas at Austin.

Informed Consent Informed consent was obtained from all study participants and their parents.

Keywords

Social support; School transitions; Socioemotional well-being; Academic performance; School belonging

Introduction

Transitions are a normative yet challenging aspect of growth and development. Across adolescence, young people must negotiate a variety of transitions, from puberty to initiation of dating to moving across schools, and each transition has the potential to be a turning point for the life course, possibly deflecting well-being and subsequently altering life course trajectories (Elder, 1998). As such, attention to adolescents' transition experiences is of critical importance. In the current study, we focus our attention on a key school transition—the move from middle to high school—a normative experience for many students in the US K-12 educational system. A synthesis of prior research on the high school transition suggests that moving to high school is not without its challenges, and these disruptions occur across developmental domains (Benner, 2011). In the current study, we document potential difficulties students experience as they transition from middle to high school and key variation in these experiences, but the central focus of the study is on the supportive relationships that may mitigate transition disruptions.

According to life course theory (Elder, 1998), the life course is a tapestry of intertwined developmental trajectories structured by transitions and turning points. In the US educational system, students typically make normative transitions from elementary to middle school and then again from middle to high school. Although these school transitions are predictable in nature, there is consistent evidence that students tend to struggle as they learn to navigate their new educational contexts. Although much of the extant research has focused on the transition from elementary to middle school, there is evidence that as students move from middle to high school, their grades often decline (Benner & Graham, 2009), engagement and motivation tend to be lower (Barber & Olsen, 2004), and feelings of loneliness, depression, anxiety, and stress tend to rise (Benner & Graham, 2009; Newman, Newman, Griffen, O'Connor, & Spas, 2007). Understanding the unique challenges that students experience as they move from middle to high school is important, as it is in high school that academic performance becomes both more visible and more high stakes; thus academic and socioemotional challenges during the transition to high school can have reverberating consequences across the life course (Crosnoe & Benner, 2015).

The existing evidence of high school transition disruptions across developmental domains is consistent with life course theory's assertion that individuals' social, emotional, cognitive, and physical development are interconnected. As development progresses, life course theory suggests that disruptions in one developmental domain will have ripple effects that ultimately influence other aspects of development (Elder, 1998). For example, if a student suddenly begins struggling academically, this may, in turn, lead to feelings of anxiety or despair, which only reinforce or magnify the academic challenges. As such, life course theory suggests attention to multiple facets of young people's development and well-being is

necessary. In the current study, we attend to changes in both academics and socioemotional well-being as adolescents move from middle to high school.

The developmental life course unfolds in larger sociocultural contexts, and at a structural level, these contexts are typically stratified such that certain groups are preferenced or have greater prestige than others, which impacts developmental well-being and developmental trajectories (Elder, 1994). In the current study, three key potential demographic stratifiers—gender, nativity, and socioeconomic status (SES)—are considered. According to life course theory, those not in positions of favor or power typically are more vulnerable to transition disruptions, as they are less likely to have access to the social capital that can ease transition experiences (Elder, 1998). Empirical evidence, however, suggests that stratifiers may act in more complex ways. For example, in the past decade, studies have documented a female advantage in the academic domain, with girls typically earning higher grades in school, displaying greater levels of engagement and involvement in academic and extracurricular activities, and exhibiting higher levels of academic motivation and value of school (Duckworth & Seligman, 2006; Wang & Eccles, 2012). In contrast, when considering social and emotional health, adolescence is seemingly a time of challenge for girls, with girls experiencing greater levels of depression and anxiety than boys (Nolen-Hoeksema, 2001; Storch, Brassard, & Msia-Warner, 2003).

Similarly, although immigrant families face extensive life stressors, including language barriers, greater poverty, and a sometimes unwelcoming or discriminatory context of reception, immigrant youth tend to display better developmental outcomes than their US-born peers (Marks, Ejesi, Garcia Coll, 2014). Termed the immigrant paradox, a number of studies have documented this immigrant advantage in terms of academic performance and progress and social and emotional health and well-being during adolescence (Alegría et al., 2008; Crosnoe & Turley, 2011).

Contrary to the advantage for immigrant youth, there is an extensive literature documenting the educational challenges faced by low-SES youth, more consistent with the expectations of life course theory. Youth from lower-income families and those whose parents have lower levels of educational attainment perform more poorly on a host of academic indicators, and these effects are consistent even after taking into account numerous other factors associated with achievement (Davis-Kean, 2005; Duncan, Morris, & Rodrigues, 2011). Similar detriments for low-SES youth are observed for socioemotional well-being, including depression, anxiety, and other internalizing behaviors (Grant et al., 2003; Najman et al., 2010). Taken as a whole, this body of research suggests that markers of social stratification exert an influence on the well-being of adolescents, albeit in complicated ways, and thus in the current study, we examine whether changes in adolescents' academics and socioemotional well-being across the high school transition vary by young people's sociodemographic characteristics.

Finally, another key facet of life course theory is its attention to social convoys and linked lives, wherein human development is driven, in part, by the interactions individuals have with the important others in their lives (Elder, 1998). For adolescents, relationships with same-age peers take on added significance in their lives, although parents continue to play a

major role in their growth and development (Brown & Larson, 2009; Steinberg & Morris, 2001). Adolescents also spend a substantial part of their waking hours in schools, and thus the relationships formed within school walls with both educators and other students matter for development (Crosnoe & Benner, 2015).

Life course theory suggests that positive relationships with social convoys should promote well-being, and indeed evidence indicates that this is the case. For example, supportive relationships with parents, friends, and school are positively linked with adolescents' academic success and their socioemotional well-being (Rueger, Malecki, & Demaray, 2010; Stewart & Suldo, 2011; Wang & Eccles, 2012). Although each of these studies examined social support across the important linked lives of adolescents (i.e., relationships within the school, family, and peer group), none placed specific attention on the effects of social support as students transitioned from middle to high school. The high school transition involves physically moving to a new school building where students encounter different teachers and frequently new peers as well, given that multiple middle schools typically feed into a given high school (Benner, 2011). As such, relationships with existing social convoys can be disrupted, and new linked lives are often formed. Similarly, although school transitions do not physically change adolescents' families, parents must balance facilitating their adolescents' move from middle to high school with their adolescents' drive for greater autonomy.

Despite the fact that school transitions may initiate upheaval in adolescents' linked lives, to date only two studies to our knowledge have examined how changes in support from social convoys are linked to disruptions as students move from middle to high school. Newman and colleagues (2007) examined how support and changes in support from social convoys influenced affluent White students' depression from 8th to 9th grade. Although the study did not examine how changes in support were related to changes in depression across the high school transition, they did observe that greater improvements in parent and peer support were linked to fewer depressive symptoms in 9th grade (Newman et al., 2007). Parallel to these findings, Barber and Olsen (2004) observed that declines in teacher support across the high school transition were linked to increases in depression from 8th to 9th grades with their predominantly White, middle-income sample.

Most other research on the potentially buffering role that social convoys play during the transition to high school have predominantly focused on relational elements peripheral to the provision of support, and these were typically examined either before *or* after students moved from middle to high school. For example, in qualitative studies, when high school students were asked to reflect back on their high school transition experiences, those who were most academically resilient highlighted the academic support and monitoring they received from family and friends and more positive general relationships with their teachers (Newman, Myers, Newman, Lohman, & Smith, 2000; Roderick, 2003). Other work has shown that adolescents who were more socially integrated with their middle school peers performed better academically following the high school transition (Langenkamp, 2010; Estell et al., 2007), and those with fewer peer stressors reported better socioemotional well-being after transitioning to high school (Little & Garber, 2004).

Informed by life course theory and building from this prior high school transition research, our central focus is on the extent to which positive relationships with parents, peers, and school generally mitigate potential challenges to well-being that students may experience as they transition from middle to high school. Using a predominantly low-income, minority adolescent sample, our study is the first to comprehensively document how changes in support from key social convoys in adolescents' lives influence multiple aspects of academic and socioemotional well-being across the transition to high school. Our focus on the high school transition is purposeful, as how successfully individuals navigate this transition has lasting impacts for their life course trajectories. For example, how students perform academically in 9th grade, following the transition to high school, is substantially related to their ultimate decisions to drop out of school, above and beyond academic performance earlier in the life course (Neild, Stoner-Eby, & Furstenberg, 2008). Thus, identifying which social convoys benefit students most as they move from middle to high school has important implications for efforts to promote the ultimate educational attainment of US students.

The Current Study

This study used short-term longitudinal data to examine changes in young people's well-being from middle to high school and the extent to which these changes differed based on personal demographic characteristics and support processes. Specifically, the current study sought to address three primary research questions. First, how do adolescents' socioemotional adjustment (i.e., depressive symptoms, feelings of loneliness) and academic outcomes (i.e., school engagement, grades, attendance) change as they move from middle to high school? Consistent with prior research (see Benner, 2011 for review), we hypothesized declines in students' academic success and engagement across the transition to high school and increases in their depressive symptoms and feelings of loneliness. With this initial research question, our goal was to replicate prior findings and build upon those with our subsequent research questions.

Second, to what extent are these changes in socioemotional and academic outcomes influenced by students' sociodemographic characteristics? Much of the extant research on variations in students' high school transition experiences has centered on racial/ethnic differences, but less is known about other stratifiers, such as those tied to gender, nativity status, and SES, that might similarly impact students' ability to navigate school transitions. Based on the literature suggesting a female advantage for general academics (Crosnoe & Benner, 2015) but a disadvantage in relation to socioemotional distress (Ge, Conger & Elder; 2001; Nolen-Hoeksema, 2001), we expected that girls would experience more attenuated transition disruptions in relation to their academics compared to boys but more disruptions in their socioemotional well-being. In relation to nativity, although life course theory suggests immigrant youth would be at a particular disadvantage given societal stratification (Elder, 1998), empirical evidence on the immigrant paradox suggest particular advantages of newcomer immigrant youth (Garcia Coll & Marks, 2012). Given the disparate nature of theory versus empirical research, we offered no hypotheses related to variation in transition difficulties by immigrant status. Finally, young people from low-SES homes tend to struggle more academically, typically advancing less far in school than their more affluent peers (Kena et al., 2016), and those whose parents have less education typically have higher

incidences of numerous mental health disorders (Merikangas et al., 2010). Given the vulnerabilities of low-SES youth and the marginalized status tied to SES within US society (Elder, 1998), we hypothesize that youth whose parents have less education (a proxy for SES) will experience greater academic and socioemotional challenges across the high school transition than their higher-SES peers.

Our third and final research question examines the extent to which supportive relationships with important others (i.e., parents, friends, school) serve as a protective factor for youths' well-being and academic performance across the transition to high school. Although prior research suggests that relationships with close others may be compromised across the high school transition (particularly teachers, see Barber & Olsen, 2004), positive relationships with family, friends, and educators often serve a protective process, buffering against the negative effects of, for example, poverty (Chen, Miller, Kobor, & Cole, 2011), difficult temperament (Rudasill, Reio, Stipanovic, & Taylor, 2010), and biological predispositions for risk-taking (Telzer, Fuligni, Lieberman, Miernicki, & Galván, 2015). Moreover, given that life course theory posits that linked lives influence the success with which individuals navigate transitions, we expected that students with high levels of support and those with support that was stable or increasing across the high school transition would experience fewer transition difficulties.

Methods

Participants

Data for the current study were drawn from the Schools, Peers, and Adolescent Development Project (Project SPAD), a larger study designed to explore the influence of social context on adolescent development. Project SPAD was a short-term longitudinal study conducted with students from two ethnic minority-concentrated middle schools (i.e., schools with a student population that were predominantly Latino and or African American) in a metropolitan area in the South (*author 1, citation removed*). All student participants in Project SPAD were included in the current study ($N = 252$).

The current sample was 50% female and predominantly racial/ethnic minorities (85% Latina/o, 11% African American, 2% biracial, 2% White). The average age of students was 14.38 (0.46) years old at Wave 1 and 15.58 (0.51) years old at Wave 2. Most students were born in the U.S. (68%) and were children of immigrants (79%). At Wave 1, the majority of participants (61%) did not live in a household with both biological parents. More than half of the parents (58%) did not graduate from high school. More detailed demographic information is shown in Table 1.

Procedures

Eighth grade students were recruited from two middle schools with predominantly racial/ethnic minority student bodies. Upon gaining approval from the University Institutional Review Board, the local school district, and school administrators, the research team distributed parent consent forms to all 8^{th} grade students. Parental consent was received for approximately two-thirds of all 8^{th} grade students in the two middle schools.

Students with parental consent and student assent completed a pencil-and-paper survey during an advisory period. Students were compensated a nominal amount of money ($15) for survey completion. All study materials (consent and assent forms, surveys) were available in English and Spanish. To ensure comparability, study materials were translated into Spanish and then back-translated into English; inconsistencies were resolved by two bilingual research team members, with careful consideration of items' culturally appropriate meaning. The majority of the students (87%) completed the surveys in English. In addition to the surveys, school records for 8th and 9th grade were obtained for all study participants.

Wave 1 student participants with parental consent who indicated they wanted to participate in future waves of the study were invited to complete Wave 2 surveys the following academic year, approximately one year after the Wave 1 survey. Participants transferred from two middle schools into seven local high schools. The majority of the participants took the Wave 2 survey online through Qualtrics. Researchers mailed pencil-and-paper surveys to those participants who were unreachable online. Students were compensated a nominal amount of money ($15) for Wave 2 survey completion.

Measures

All central constructs of interest were measured at both Wave 1 (8th grade, before the transition to high school) and Wave 2 (9th grade, following the transition to high school). Our central constructs included relational support (i.e., parent and friend support, school belonging) as well as socioemotional well-being (i.e., depressive symptoms, loneliness) and academics (i.e., engagement, grades, attendance). Covariates were assessed at Wave 1. Descriptive statistics and bivariate correlations appear in Table 2.

Depressive symptoms—We assessed depressive symptoms using the 10-item Children's Depressive Inventory (Kovacs, 1992). Participants were asked to report on their depressed feelings over the past 2 weeks (e.g., "I am sad"). Each item had three rating options (scale range: 0 – 3), and higher scores on our composite (mean) variable represented greater levels of depressive symptoms (α = 0.80 and 0.77 for Waves 1 and 2, respectively).

Feelings of loneliness—Students reported their feelings of loneliness using six items from the original 14-item Loneliness scale (Asher & Wheeler, 1985). The leading statement for the measure stated: "How do you feel at school?" Example items include, "I feel lonely" and "I feel left out of things." Response options ranged from 1 (*not true at all*) to 5 (*true all the time*). We averaged the six items to create a composite variable, with higher mean scores indicating greater feelings of loneliness (α = 0.81 and = 0.87 at Waves 1 and 2, respectively).

School engagement—Students self-reported their school engagement using the Perceived Social Norms for Schoolwork and Achievement during Adolescence (PSNSA; Witkow, 2006). The four items (e.g., "I pay attention in class") were rated from 1 (*not true at all*) to 5 (*true all the time*). A composite score was created based on the mean of the four items, with higher scores representing greater levels of school engagement (α = 0.78 and 0.69 at Waves 1 and 2, respectively).

Grades—Students' grades were drawn from school records and were calculated as the mean of all grades for core content and elective courses taken at each wave. Individual course grades were coded on scale ranging from 0 to 100, with scores from 90–100 representing As, 80–89 representing Bs, 70,79 representing Cs, 60–69 representing Ds, and below 60 representing Fs.

Attendance—Students' attendance rate was drawn from school records and represented the percentage of school days attended by the participant in their 8^{th} grade and 9^{th} grade years.

Parental support—Parental support was assessed using the 6-item parental trust subscale from the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987). Students rated how much they agreed with items such as, "My parents accept me as I am." Items were rated on a 5-point scale (1 = *never,* 5 = *always*) and averaged to create a composite mean parent support variable. Higher mean scores represent greater levels of parental support (Cronbach's $\alpha = 0.92$ and 0.90 for Waves 1 and 2, respectively).

Friend support—For the friend support measure, students were first primed to write down the names of their five closest friends. They then rated the quality of their relationships with those friends using the 5-item friend trust subscale from the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987). The items (e.g., "my friends respect my feelings") were rated on a 5-point scale (1 = *never*, 5 = *always*) and averaged. Higher mean scores indicated higher levels of friend support ($\alpha = 0.88$ and $\alpha = 0.90$ at Waves 1 and 2, respectively).

School belonging—Finally, we assessed school belonging using Gottfredson's (1984) school belonging measure. Students indicated the extent to which they agreed with five statements about school belonging using a 5-item scale ranging from 1 (*no way*) to 5 (*for sure yes*). A sample item is "there is an adult at this school who I can go to when I need information about school." The five items were averaged, with higher scores on the composite belonging measure indicating greater school belonging ($\alpha = 0.79$ and $\alpha = 0.88$ at Waves 1 and 2, respectively).

Covariates—Data analyses controlled for adolescent, family, and school-level factors. Students' reported their gender (0 = *male,* 1 = *female*) and nativity (0 = *foreign-born*, 1 = *US-born*). Student participants' race/ethnicity was obtained from school districts records and was then dichotomized (0 = *non-Latina/o*, 1 = *Latina/o*), as the majority of students in the current study (84.5%) were Latina/o. Family structure was also recoded into a dichotomous variable to differentiate two-biological-parent families (1) from other family structures (0), and parent education level was used as a proxy for family socioeconomic status (0 = *neither parent graduated high school, 1 = at least one parent graduated high school or higher education level).* Analyses also controlled for the language version of the survey at each wave (0 = *English*, 1= *Spanish*). In the current study, students are nested in both middle and high schools—to address dual nesting, we created a variable to capture all possible feeder patterns. There were 11 feeder patterns in total (i.e., 11 unique combinations of middle and high schools attended). Most students were in one of four feeder patterns, with 63 students

in the largest feeder pattern and seven feeder patterns having only a few students. Feeder patterns that had less than 10 students in them were combined to create an 'other' feeder pattern category. Analyses for the current study used five feeder patterns, four unique patterns and the 'other' feeder pattern, with the largest feeder pattern serving as the excluded reference group. We used feeder pattern as a control variable to address possible violations to independence assumptions; the feeder pattern with the largest *n* was selected as the reference group.

Analysis Plan

To answer the first research question querying changes in adolescents' socioemotional adjustment and academic success across the transition to high school, we conducted a set of repeated measures analyses of variance (ANOVAs) using SPSS 24.0 (IBM, 2016). To examine potential variation in these changes by students' sociodemographic characteristics (research question two), we then conducted a series of 2 × 2 × 2 × 2 (time × gender × nativity × parent education level) repeated measures analyses of covariance (ANCOVAs). For these models, within-subjects effects documented participants' individual change in the five outcome variables from Time 1 (8^{th} grade) to Time 2 (9^{th} grade), while between-subjects effects detailed how these changes differed by sociodemographic characteristics (i.e., gender, nativity, parent education level). Models for research questions one and two were run individually by outcome.

For our final research question examining the role of social support in students' transition experiences, we used path analyses in a structural equation modeling framework. These analyses included the main effect of support from parents, friends, and schools in 8^{th} grade, the change in these three supportive relationships across the transition, and the effects of our covariates. To determine changes in support, we first computed difference scores for each of the three support mechanisms (i.e., parent and friend support, school belonging) by subtracting Wave 1 scores from Wave 2 scores. Using the support difference scores, we then created dichotomous variables capturing the directionality of change in each support predictor across the transition.

For the dichotomous variables, students who experienced declining support (operationalized as differences scores less than 0) were coded as one. In total, 36% of students experienced declining parental support across the transition (range of declines: −0.17 to −3.17), 39% of students experienced declining friend support across the transition (range of declines: −0.20 to −2.00), and 48% of students experienced declining school belonging across the transition (range of declines: −0.20 to −2.80). Students who experienced stable or increasing support (operationalized as difference scores greater than or equal to 0) were coded as zero for our dichotomous variables. In total, 64% of students experienced stable/increasing parental support across the transition (range of increases: 0.00 to 3.17), 61% of students experienced stable/increasing friend support across the transition (range of increases: 0.00 to 3.60), and 52% of students experienced stable/increasing school belonging across the transition (range of increases: 0.00 to 3.20).

Analyses for research question three were conducted in Mplus Version 7.4 (Muthén & Muthén, 1998–2012). The full information maximum likelihood (FIML) method was

employed to address missing data, thus allowing data from all cases to be used for model estimations. The FIML method, a preferred strategy for handling missing data, is frequently utilized in longitudinal studies, as it uses all available data and allows for generalizing research findings to the sample population (Enders, 2010).

Results

Changes in Student Outcomes across the High School Transition

We first examined the extent to which students' socioemotional well-being and academic adjustment changed as they moved from 8th to 9th grade. As shown in Table 3, adolescents' course grades declined significantly across the transition to high school and their feelings of loneliness significantly increased across this time period. Adolescents' depressive symptoms, school engagement, and attendance did not change significantly across the transition into high school for the overall sample.

Variations in Transition Disruptions by Students' Sociodemographic Characteristics

We next examined whether the patterns of change and stability documented in research question one were consistent or varied across males versus females, native- versus foreign-born youth, and students whose parents had lower versus higher educational attainment (a proxy for SES). Time served as the repeated within-person factor (Time 1 = 8th grade, Time 2 = 9th grade), and the between-subjects factors were gender, student nativity, and parent education level. Given our interest in changes in adjustment across the transition, the focus of our analyses was on the main and interaction effects involving time, as opposed to exploring between-subjects factor effects independent of time.

The repeated measures ANCOVA revealed a significant two-way interaction involving changes in depressive symptoms by gender [$F(1, 119) = 4.82$, $p < .05$, partial $^2 = .04$]. Boys' depressive symptoms were lower than their female counterparts in 8th grade; however, they reported increasing levels of depressive symptoms across the high school transition. Conversely, girls reported higher depressive symptoms in 8th grade than their male peers but reported a decline in depression across the high school transition, resulting in converging levels of depressive symptoms in 9th grade for girls and boys.

Additionally, we observed two significant two-way interactions that highlighted the conditional effects of student nativity on youth's socioemotional and academic adjustment across the high school transition. First, a significant relation between changes in feelings of loneliness by adolescent nativity was observed. Although both foreign- and US-born students reported similar levels of feelings of loneliness in 8th grade, foreign-born students experienced declines in loneliness across the high school transition, while their US-born peers reported a slight increase in loneliness over the transition. An opposite pattern, however, emerged for school engagement by nativity. Whereas foreign-born students reported a decline in their school engagement across the high school transition, US-born students experienced increasing levels of school engagement over this same period. Two-way interactions involving parent education (a proxy for SES) failed to reach significance.

Variations in Transition Disruptions by Students' Social Support

To investigate the third research question, two separate primary path analysis models were run to determine the relations between levels of support and change in support from important others (i.e., parental and friend support, school belonging) and students' socioemotional adjustment and academic success across the transition to high school. As shown in the top panel of Table 4 (results with covariates appear in the Appendix), for the socioemotional well-being model, after taking into account the effects of the covariates, friend support and school belonging appear to buffer the disruptions in socioemotional well-being as students moved from middle to high school. Specifically, youth who experienced decreasing levels of friend support and school belonging across the high school transition experienced greater increases in both depressive symptoms and loneliness from 8th to 9th grade than their peers who experienced stable/increasing friend support and school belonging. Additionally, decreases in school belonging from 8th to 9th grade were significantly linked with decreases in school engagement as compared to peers who reported stable/increasing school belonging. Changes in parent support over the high school transition were unrelated to changes in socioemotional or academic outcomes from 8th to 9th grades, and friend support did not exert a significant effect on changes in academic adjustment across the transition.

Sensitivity Analyses

To further examine the robustness of our findings related to variations in transition disruptions by social support, we examined a different set of thresholds for our support variables to capture more substantial shifts in support across the high school transition. For these dichotomous indicators, we used 0.5 as our threshold, which represented approximately a 0.5 *SD* for each of our support variables. For parent support, 24% of the sample reported increasing support from middle to high school (range: 0.51 to 3.17), 17% reported decreasing parent support (range: −0.51 to −3.17), and 59% experienced relatively stable parent support (range: −.50 to .50). For friend support, 22% of the sample indicated increasing peer support across the high school transition (range: 0.51 to 3.60), 20% reported decreasing friend support (range: −0.51 to −2.00), and 58% experienced relatively stable friend support from middle to high school (range: −.50 to .50). Finally, for school belonging, 19% of the sample experienced increasing school belonging across the high school transition (range: 0.51 to 3.20), 28% experienced decreasing school belonging (range: −0.51 to −3.20), and 53% experienced relatively stable school belonging from middle to high school (range: −.50 to .50).

Changes in parent support over the high school transition were unrelated to changes in socioemotional adjustment in our primary analyses; however, we observed some significant findings in our sensitivity analysis (see lower panel of Table 4). Overall, higher levels of parent support appeared to promote student well-being across the transition. Students who reported stable levels of parent support experienced fewer disruptions in both depressive symptoms and loneliness across the high school transition than those reporting decreasing parent support. Similarly, students who reported increasing parent support across the transition reported fewer transition disruptions in both depressive symptoms and feelings of loneliness than those experiencing relatively stable parent support. We observed a different

pattern of effects in the academic domain. Unexpectedly, those students who reported increasing parent support across the transition had steeper declines in grades from middle to high school than students who reported relatively stable parent support. In addition, students experiencing decreasing parent support experienced fewer disruptions in grades across the high school transition than students who experienced relatively stable parent support.

For friend support, the sensitivity analyses confirmed the positive effects of friend support for students' socioemotional well-being documented in the primary analyses. As seen in the lower panel of Table 4, those with decreasing in this domain, friend support experienced the most disruptions in socioemotional well-being across the high school transition, those reporting increasing friend support experienced the fewest disruptions, and the stable group fell in between these two. No effects of changing friend support were observed for students' academics.

The findings for school belonging also paralleled the primary analyses, such that those reporting increasing levels of school belonging reported the fewest disruptions in socioemotional well-being and those with decreasing school belonging struggled more socioemotionally across the transition. In the academic domain, those reporting decreasing school belonging struggled more in terms of both school engagement and grades across the high school transition than those students reporting increasing school belonging, and this group experienced more disruptions in grades than those reporting relatively stable school belonging as well. Additionally, those reporting relatively stable school belonging from middle to high school experienced more disruptions in regard to grades than those who reported increasing school belonging.

Discussion

The current study examined students' socioemotional well-being and academic performance and engagement as they moved from middle to high school, variation in transition disruptions by key demographic stratifiers, and the potentially buffering role of supportive others in adolescents' lives. Although less investigated than the transition to middle school, the high school transition often disrupts students' well-being as they learn to navigate larger physical spaces that bring together new groups of teachers and peers (Benner, 2011). Much less is known, however, about the resources that can attenuate these disruptions, yet understanding key buffers of this transition is critical to designing intervention and prevention efforts that can best support students as they move from middle to high school and ensure students remain in school until graduation and beyond.

Overall, we observed particular transition disruptions for students' grades and loneliness, which is consistent with prior research (Benner & Graham, 2009). In examining potential variation by social stratifiers, contrary to our hypothesis, it appeared that boys seemed to be particularly vulnerable to increases in depressive symptoms across the high school transition. It may be that parents and schools are generally more attuned to the mental health challenges girls face during adolescence than boys, potentially ignoring larger socioemotional vulnerabilities that all adolescence face (Lindsey et al., 2006). For nativity, we observed an immigrant advantage for loneliness across the transition, but a native-born

advantage for changes in school engagement from middle to high school. Prior research on the immigrant paradox suggests stronger effects for social, emotional, and behavioral adjustment than for academics (Alegría et al., 2008; Garcia Coll & Marks, 2012), and our research is consistent with this extant research.

The primary focus of the current research centered on the power of supportive relationships to buffer the potential negative effects of school transitions. Overall, we did observe evidence for buffering effects, and these centered primarily on changes in students' socioemotional well-being across the high school transition, consistent with prior research (Barber & Olsen, 2004; Newman et al., 2007). In particular, increasing levels of friend support and school belonging across the high school transition were associated with better socioemotional functioning for students as they made the transition from middle to high school. School transitions necessitate changes in relationships with both teachers and peers as students make a physical move to a new school building. When students are able to forge positive relationships with new sets of teachers and peers (or maintain positive relationships with friends from middle school who transition with them to high school), it is not surprising that this would ease the socioemotional burden of negotiating this school transition. Moreover, adolescence is a time when peers play a particularly prominent role in the lives of young people (Brown & Larson, 2009), and thus when considering social and emotional health across an educational transition, our research suggests it is particularly important to consider relationships within the school walls.

It should also be noted that of all the support processes, school belonging appeared to play the most prominent buffering role, influencing positive transition experiences in relation to students' depressive symptoms, loneliness, and school engagement as well as grades in the sensitivity analyses. These results add to the corpus of research highlighting the importance of students' feelings of school belonging, specifically at this critical educational transition. Indeed, evidence suggests that school belonging is positively linked to students' school engagement and school conduct (Demanet & Van Houtte, 2012; Gillen-O'Neel & Fuligni, 2013), and higher levels of school belonging are also associated with greater psychological well-being (Anderman, 2002). Taken together with this research, the current study findings suggest that in designing intervention and prevention efforts targeting school transitions, schools should carefully consider ways to build students' feelings of school belonging by helping students quickly integrate and make connections with important others in their new school contexts.

In contrast to the consistent effects of social support on students' socioemotional well-being as they moved from middle to high school, we observed fewer effects of support on adolescents' academics across the transition. It may be that the general relational supports assessed with our current measures are not tapping into the support most relevant to these academic outcomes, especially in relation to school engagement and attendance. Academic support, such as parents assisting their children with projects and discussing the importance of education, students studying together with their friends, or teachers providing educational enrichment activities, are all positively related to better academic performance and engagement (Hill & Tyson, 2009; Martin & Downson, 2009; Ryan, 2001). Future work should examine whether these academic-focused support processes are more likely to

protect students from transition disruptions than more general emotional closeness with significant others.

Finally, we observed effects of parent support only in the sensitivity analyses. Although it appeared that increasing or stable parental support buffered transition disruptions in the socioemotional domain, the effects of parental support on grades were unexpected (i.e., those reporting stable parental support experience fewer transition disruptions in grades than those reporting increasing parental support but more transition disruptions than those reporting declining parental support). It is possible that when adolescents are struggling or excelling across the high school transition, parents adjust their support accordingly, ramping up support when they see their children's grades declining and pulling back when they see their children are doing well (e.g., Green, Walker, Hoover-Dempsey, & Sandler, 2007). As noted above, it is possible that parents' academic-based supports might actually do more to buffer against school transition disruptions. It may also be that more careful consideration of the support provider could yield more nuanced information about the relation between parental support and students' transition experiences. In the current study, parents were considered a monolithic entity, but prior research has found conflicting gender differences when examining support from mothers versus fathers to sons versus daughters (Alfaro, Umaña-Taylor, & Bámaca, 2006; Plunkett, Henry, Houltberg, Sands, & Abarca-Mortensen, 2008). Future research should investigate the impact of maternal versus paternal support more closely in relation to students' school transition disruptions.

Although the current study had many strengths, including its longitudinal design, multiple data sources, and its focus on multiple aspects of social support, some limitations should be acknowledged. First, the majority of the students in our sample were Latino/a and low-income, thus limiting the generalizability of our results to students of other races/ethnicities. This may be particularly important when considering potential variations by nativity, as prior research suggests that Mexican-origin immigrant youth seem to have both lower levels of school performance and report lower levels of relational engagement and support than students of other countries of origin (e.g., China, Dominican Republic, Haiti, and other Central American countries; Suarez-Orozco, Rhodes, & Milburn, 2009). Although our findings suggest that social convoys play an important role in mitigating disruptions associated with the transition to high school, at least for our low-income Latino sample, future research with greater sample diversity is needed to determine if such effects generalize to other student populations.

Second, supportive relationships are by their very nature dynamic transactional process between young people and their parents, friends, and school personnel. Students' characteristics, prior well-being, and their behavior and actions may elicit certain support strategies from the important others in their lives, but with the current data we are unable to disentangle these interactive links, as we have only student reports. Similarly, in the current study, power issues limited our ability to examine the potential interactive effects of support systems, wherein high or increasing levels of support from one support source might counteract low levels of support from another source. For example, prior research on educational expectations suggests that high levels of parental expectations can buffer the negative effects of low teacher support (Benner & Mistry, 2007). Future research with larger

samples could use advanced statistical analyses (e.g., latent transition analyses) to examine the interactive and dynamic nature of social support from important others as adolescents move from middle to high school.

Relatedly, because we were interested in students' experiences across the transition to high school, both the support processes and academic and well-being indicators were assessed simultaneously. As such, we must stress that these results are correlational in nature. Because life course theory suggests that social convoys can play an important role in individuals' lives when they are faced with life transitions (Elder, 1998), we postulate that support from important others in adolescents' lives is attenuating the potentially negative effects of the high school transition. This directionality, however, could be reversed, such that detriments in well-being might disrupt existing supportive relationships. Finally, we examined students' transition experiences over a one-year period (spring of 8th to spring of 9th grade). Prior research suggests that transition disruptions are more pronounced immediately following the transition to high school (Benner & Graham, 2009), and thus support from significant others may be even more relevant and necessary at that time. Future research should examine support processes more proximally to the transition to fully determine the nature of support effects across this important life course transition.

Conclusion

Many adolescents struggle academically and/or socioemotionally as they transition from middle to high school, and whether certain students are potentially more vulnerable to this transition has not been well-explored in the extant transition literature. The findings of the current study are a step toward identifying students who may be most susceptible to transition disruptions—namely boys, immigrant youth (in relation to academics), and native-born youth (in relation to socioemotional well-being). The buffering role of support from various significant others were also investigated, and the particular importance of friend support and school belonging to adolescents' socioemotional well-being (and to a lesser extent, their academic engagement and grades) was revealed. We hope this work will encourage further investigation of support in various contexts in relation to the well-being of diverse adolescents during the transition to high school.

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References

Alegría M, Canino G, Shrout PE, Woo M, Duan N, Vila D, … Meng XL. Prevalence of mental illness in immigrant and non-immigrant US Latino groups. American Journal of Psychiatry. 2008; 165(3): 359–369. DOI: 10.1176/appi.ajp.2007.07040704 [PubMed: 18245178]

Alfaro EC, Umaña-Taylor AJ, Bámaca MY. The influence of academic support on Latino adolescents' academic motivation. Family Relations. 2006; 55:279–291. DOI: 10.1111/j.1741-3729.2006.00402.x

Anderman EM. School effects on psychological outcomes during adolescence. Journal of Educational Psychology. 2002; 94:795–809. DOI: 10.1037/0022-0663.94.4.795

Armsden GC, Greenberg MT. The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. Journal of Youth and Adolescence. 1987; 16:427–454. DOI: 10.1007/bf02202939 [PubMed: 24277469]

Asher SR, Wheeler VA. Children's loneliness: A comparison of rejected and neglected peer status. Journal of Consulting and Clinical Psychology. 1985; 53:500–505. DOI: 10.1037/0022-006X.53.4.500 [PubMed: 4031205]

Barber BK, Olsen JA. Assessing the transitions to middle and high school. Journal of Adolescent Research. 2004; 19:3–30. DOI: 10.1177/0743558403258113

Benner AD. The transition to high school: Current knowledge, future directions. Educational Psychology Review. 2011; 23:299–328. DOI: 10.1007/s10648-011-9152-0 [PubMed: 21966178]

Benner AD, Graham S. The transition to high school as a developmental process among multiethnic urban youth. Child Development. 2009; 80:356–376. DOI: 10.1111/j.1467-8624.2009.01265.x [PubMed: 19466997]

Benner A, Mistry RS. Congruence of mother and teacher educational expectations and low-income youth's academic competence. Journal of Educational Psychology. 2007; 99:140–153. DOI: 10.1037/0022-0663.99.1.140

Brown, BB., Larson, J. Peer relationships in adolescence. In: Lerner, RM., Steinberg, L., editors. Handbook of adolescent psychology. 3. New York, NY: Wiley; 2009. p. 74-103.

Chen E, Miller GE, Kobor MS, Cole SW. Maternal warmth buffers the effects of low early-life socioeconomic status on pro-inflammatory signaling in adulthood. Molecular Psychiatry. 2011; 16:729–737. DOI: 10.1038/mp.2010.53 [PubMed: 20479762]

Crosnoe, R., Benner, AD. Children at school. In: Lerner, RM.Bornstein, MH., Leventhal, T., editors. Handbook of Child Psychology and Developmental Science, Volume 4: Ecological Settings and Processes. Hoboken, NJ: John Wiley and Sons; 2015. p. 268-204.

Crosnoe R, Turley RNL. K-12 educational outcomes of immigrant youth. The Future of Children. 2011; 21:129–152. DOI: 10.2307/41229014 [PubMed: 21465858]

Davis-Kean PE. The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. Journal of Family Psychology. 2005; 19:294–304. DOI: 10.1037/0893-3200.19.2.294 [PubMed: 15982107]

Demanet J, Van Houtte M. School belonging and school misconduct: The differing role of teacher and peer attachment. Journal of Youth and Adolescence. 2012; 41:499–514. DOI: 10.1007/s10964-011-9674-2 [PubMed: 21567214]

Duckworth AL, Seligman ME. Self-discipline gives girls the edge: Gender in self-discipline, grades, and achievement test scores. Journal of Educational Psychology. 2006; 98:198–208. DOI: 10.1037/0022-0663.98.1.198

Duncan GJ, Morris PA, Rodrigues C. Does money really matter? Estimating impacts of family income on young children's achievement with data from random-assignment experiments. Developmental Psychology. 2011; 47:1263–1279. DOI: 10.1037/a0023875 [PubMed: 21688900]

Elder GH Jr. Time, human agency, and social change: Perspectives on the life course. Social Psychology Quarterly. 1994; 57:4–15. DOI: 10.2307/2786971

Elder GH. The life course as developmental theory. Child Development. 1998; 69:1–12. DOI: 10.2307/1132065 [PubMed: 9499552]

Enders, CK. Applied missing data analysis. New York: Guilford Press; 2010.

Estell DB, Farmer TW, Irvin MJ, Thompson JH, Hutchins BC, McDonough EM. Patterns of middle school adjustment and ninth grade adaptation of rural African American youth: Grades and substance use. Journal of Youth and Adolescence. 2007; 36:477–487. DOI: 10.1007/s10964-007-9167-5

Garcia Coll, C., Marks, AK., editors. The immigrant paradox in children and adolescents: Is becoming American a developmental risk?. Washington, DC: American Psychological Association; 2012.

Ge X, Conger RD, Elder GH Jr. Pubertal transition, stressful life events, and the emergence of gender differences in adolescent depressive symptoms. Developmental Psychology. 2001; 37:404–417. DOI: 10.1037//0012-1649.37.3.404 [PubMed: 11370915]

Gillen-O'Neel C, Fuligni A. A longitudinal study of school belonging and academic motivation across high school. Child Development. 2013; 84:678–692. DOI: 10.1111/j.1467-8624.2012.01862.x [PubMed: 23002809]

Gottfredson, GD. The effective school battery. Odessa, FL: Psychological Assessment Resources Incorporated; 1984.

Grant KE, Compas BE, Stuhlmacher AF, Thurm AE, McMahon SD, Halpert JA. Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. Psychological Bulletin. 2003; 129:447–466. DOI: 10.1037/0033-2909.129.3.447 [PubMed: 12784938]

Green CL, Walker JMT, Hoover-Dempsey KV, Sandler H. Parents' motivations for involvement in children's education: An empirical test of a theoretical model of parental involvement. Journal of Educational Psychology. 2007; 99:532–544. DOI: 10.1037/0022-0663.99.3.532

Hill NE, Tyson DF. Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. Developmental Psychology. 2009; 45:740–763. DOI: 10.1037/a0015362 [PubMed: 19413429]

IBM Corporation. IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp; 2016.

Kena, G., Hussar, W., McFarland, J., de Brey, C., Musu-Gillette, L., Wang, X., … Dunlop Velez, E. The Condition of Education 2016 (NCES 2016-144). U.S. Department of Education, National Center for Education Statistics; Washington, DC: 2016.

Kovacs, M. Children's depressive symptoms inventory manual. North Tonawanda, NY: Multi-Health Systems; 1992.

Langenkamp AG. Academic vulnerability and resilience during the transition to high school: The role of social relationships and district context. Sociology of Education. 2010; 83:1–19. DOI: 10.1177/0038040709356563

Lindsey MA, Korr WS, Broitman M, Bone L, Green A, Leaf PJ. Help-seeking behaviors and depression among African American adolescent boys. Social Work. 2006; 51:49–58. DOI: 10.1093/sw/51.1.49 [PubMed: 16512510]

Little SA, Garber J. Interpersonal and achievement orientations and specific stressors predict depressive and aggressive symptoms. Journal of Adolescent Research. 2004; 19:63–84. DOI: 10.1177/0743558403258121

Marks AK, Ejesi K, García Coll C. Understanding the U.S. immigrant paradox in childhood and adolescence. Child Development Perspectives. 2014; 8:59–64. DOI: 10.1111/cdep.12071

Martin AJ, Dowson M. Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. Review of Educational Research. 2009; 79:327–365. DOI: 10.3102/0034654308325583

Merikangas KR, He JP, Burstein M, Swanson SA, Avenevoli S, Cui L, … Swendsen J. Lifetime prevalence of mental disorders in US adolescents: Results from the national comorbidity survey replication–adolescent supplement (NCS-A). Journal of the American Academy of Child & Adolescent Psychiatry. 2010; 49:980–989. DOI: 10.1016/j.jaac.2010.05.017 [PubMed: 20855043]

Muthén, LK., Muthén, BO. Mplus user's guide. 7. Los Angeles, CA: Muthén & Muthén; 1998–2012.

Najman JM, Hayatbakhsh MR, Clavarino A, Bor W, O'Callaghan MJ, Williams GM. Family poverty over the early life course and recurrent adolescent and young adult anxiety and depression: A longitudinal study. American Journal of Public Health. 2010; 100:1719–1723. DOI: 10.2105/AJPH.2009.180943 [PubMed: 20634459]

Neild RC, Stoner-Eby S, Furstenberg F. Connecting entrance and departure: The transition to ninth grade and high school dropout. Education and Urban Society. 2008; 40:543–569. DOI: 10.1177/0013124508316438

Newman BM, Newman PR, Griffen S, O'Connor K, Spas J. The relationship of social support to depressive symptoms during the transition to high school. Adolescence. 2007; 42:441–459. [PubMed: 18047232]

Newman BM, Myers MC, Newman PR, Lohman BJ, Smith VL. The transition to high school for academically promising, urban, low-income African American youth. Adolescence. 2000; 35:45–66. [PubMed: 10841296]

Nolen-Hoeksema S. Gender differences in depression. Current Directions in Psychological Science. 2001; 10:173–176. DOI: 10.1111/1467-8721.00142

Plunkett SW, Henry CS, Houltberg BJ, Sands T, Abarca-Mortensen S. Academic Support by significant others and educational resilience in Mexican-origin ninth grade students from intact families. The Journal of Early Adolescence. 2008; 28:333–355. DOI: 10.1177/0272431608314660

Roderick M. What's happening to the boys? Early high school experiences and school outcomes among African American male adolescents in Chicago. Urban Education. 2003; 38:538–607. DOI: 10.1177/0042085903256221

Rudasill KM, Reio TG, Stipanovic N, Taylor JE. A longitudinal study of student–teacher relationship quality, difficult temperament, and risky behavior from childhood to early adolescence. Journal of School Psychology. 2010; 48:389–412. DOI: 10.1016/j.jsp.2010.05.001 [PubMed: 20728689]

Rueger SY, Malecki CK, Demaray MK. Relationship between multiple sources of perceived social support and psychological and academic adjustment in early adolescence: Comparisons across gender. Journal of Youth and Adolescence. 2010; 39:47–61. DOI: 10.1007/s10964-008-9368-6 [PubMed: 20091216]

Ryan AM. The peer group as a context for the development of young adolescent motivation and achievement. Child Development. 2001; 72:1135–1150. DOI: 10.1111/1467-8624.00338 [PubMed: 11480938]

Steinberg L, Morris AS. Adolescent development. Annual Review of Psychology. 2001; 52:83–110. DOI: 10.1146/annurev.psych.52.1.83

Stewart T, Suldo S. Relationships between social support sources and early adolescents' mental health: The moderating effect of student achievement level. Psychology in the Schools. 2011; 48:1016–1033. DOI: 10.1002/pits.20607

Storch EA, Brassard MR, Masia-Warner CL. The relationship of peer victimization to social anxiety and loneliness in adolescence. Child Study Journal. 2003; 33:1–19. DOI: 10.1016/j.adolescence.2004.03.003

Suarez-Orozco C, Rhodes J, Milburn M. Unraveling the immigrant paradox: Academic engagement and disengagement among recently arrived immigrant youth. Youth & Society. 2009; 41:151–185. DOI: 10.1177/0044118x09333647

Telzer EH, Fuligni AJ, Lieberman MD, Miernicki ME, Galván A. The quality of adolescents' peer relationships modulates neural sensitivity to risk taking. Social Cognitive and Affective Neuroscience. 2015; 10:389–398. DOI: 10.1093/scan/nsu064 [PubMed: 24795443]

Wang MT, Eccles JS. Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. Child Development. 2012; 83:877–895. DOI: 10.1111/j.1467-8624.2012.01745.x [PubMed: 22506836]

Witkow, MR. Perceived social norms for schoolwork and achievement during adolescence. Ypsilanti, MI: Eastern Michigan University; 2006.

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Appendix. Supportive relationships and control variable effects on socioemotional and academic outcomes

	Socioemotional Adjustment		Academic Outcomes		
	Δ Depressive Symptoms	Δ Feelings Loneliness	Δ School Engagement	Δ Grades	Δ Attendance
	β (SE)	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*
Parent Support (W1)	0.18 (.08)*	0.04 (.09)	−0.11 (.09)	−0.19 (.09)*	−0.04 (.09)
Friend Support (W1)	0.20 (.08)*	0.32 (.08)***	−0.08 (.08)	−0.20 (.08)*	−0.16 (.08)
School Belonging (W1)	−0.04 (.09)	−0.10 (.09)	−0.08 (.09)	0.15 (.09)	−0.04 (.09)
Female (W1)	−0.21 (.08)**	−0.13 (.08)	0.02 (.09)	−0.08 (.08)	0.02 (.08)
Latina/o (W1)	−0.10 (.08)	0.01 (.08)	−0.08 (.09)	−0.01 (.09)	0.07 (.08)
U.S born (W1)	0.01 (.08)	−0.11 (.09)	−0.17 (.09)	−0.04 (.08)	0.02 (.08)
Lives with two bio. parents (W1)	0.11 (.07)	0.01 (.08)	0.01 (.08)	−0.08 (.08)	0.04 (.07)
Highest parent education (W1)	−0.07 (.08)	−0.05 (.08)	0.09 (.08)	0.02 (.08)	0.17 (.08)*
Survey language Spanish (W1/W2)	0.04 (.08)	−0.10 (.08)	0.04 (.09)	0.03 (.10)	0.13 (.11)
MS to HS feeder pattern 1	0.19 (.09)*	0.20 (.09)*	0.24 (.09)**	−0.03 (.08)	−0.04 (.08)
MS to HS feeder pattern 2	0.17 (.08)*	0.07 (.09)	0.05 (.09)	−0.04 (.08)	0.00 (.08)
MS to HS feeder pattern 3	0.08 (.09)	0.09 (.09)	0.01 (.10)	−0.05 (.09)	−0.00 (.09)
MS to HS feeder pattern 4	0.09 (.08)	−0.01 (.08)	0.01 (.08)	−0.03 (.08)	0.05 (.08)

Note. N = 252. Models for each set of outcomes (i.e., socioemotional adjustment, academic outcomes) were run simultaneously. Coefficients are from the primary analyses. Difference scores for each outcome (e.g., depression, school engagement) were measured as the difference between the students' outcome scores from W1 to W2. Highest parent education (0 = neither parent completed HS, 1 = at least one parent completed HS or higher education level) and survey language Spanish (0 = W1 and W2 survey completed in English, 1 = W1 and or W2 survey completed in Spanish) were both dichotomous variables. W1 = 8th grade, W2 = 9th grade.

* $p < .05$;

** $p < .01$;

*** $p < .001$.

Table 1

Demographic characteristics of sample

Variable	*N*	*Frequency (%)*	*M*	*SD*
Student gender				
Male	126	50.0		
Female	126	50.0		
Student race/ethnicity				
African American	27	10.7		
Asian American	1	0.4		
Latino	213	84.5		
White	6	2.4		
Biracial	5	2		
Student nativity				
U.S. born	172	68.3		
Foreign born	73	29.0		
Family immigrant status				
Immigrant family (at least one parent foreign born)	193	79.4		
Non-immigrant family (both parents U.S. born)	50	20.6		
Highest parent education			1.88	1.28
Less than HS diploma	140	57.9		
HS diploma or GED	48	19.8		
Some college, no degree	17	7.0		
Associate degree	18	7.4		
Bachelor’s degree or higher	19	7.9		
Family structure				
Lives with both biological parents	92	36.5		
Does not live with both biological parents	153	60.7		

Note. Total possible $N = 252$.

Table 2

Correlations, means, and standard deviations

Variable	1	2	3	4	5	6	7	8
1. Parent Support (W1)	-							
2. Friend Support (W1)	.11*	-						
3. School Belonging (W1)	.31***	.28***	-					
4. Δ Depressive symptoms	.29***	.18*	.12	-				
5. Δ Feelings of Loneliness	.04	.31***	−.01	.44***	-			
6. Δ School Engagement	−.20**	−.15*	−.25**	−.28***	−.13	-		
7. Δ Grades	−.12	−.16*	.02	−.07	.01	.06	-	
8. Δ Attendance	−.04	−.21**	−.04	−.06	−.07	−.08	−.41***	-
M	4.11	4.43	4.00	−0.04	0.14	0.04	−7.31	−0.01
SD	.95	.68	.73	.33	.87	.74	5.33	.07
N	247	247	247	142	142	142	179	202

Note. All variables reported by the student, with the exception of grades and attendance, which were gathered from school records. Δ = change in student outcomes variables (e.g., depressive symptoms, grades) was measured by subtracting students' outcomes scores at W1 from W2. W1 = 8th grade, W2 = 9th grade.

* p <.05,

** p <.01,

*** p <.001.

Table 3

Changes in students' socioemotional and academic outcomes as a function of time and sociodemographic characteristics

	Socioemotional Adjustment		Academic Outcomes		
	Depressive Symptoms	**Feelings of Loneliness**	**School Engagement**	**Grades**	**Attendance**
	F	***F***	***F***	***F***	***F***
Time	2.48	4.54*	0.18	17.54***	1.64
Time *Gender	4.82*	0.02	0.42	0.43	0.38
Time *Nativity	0.03	5.78*	4.05*	0.25	0.55
Time *Parent education	0.13	0.37	0.01	0.33	1.27
Time *Gender *Nativity	1.62	0.52	2.09	2.06	0.42
Time *Gender *Parent education	3.72	0.72	0.02	0.17	1.62
Time *Nativity *Parent education	0.09	1.23	2.38	2.08	0.80
Time *Gender *Nativity *Parent education	0.30	1.67	0.00	0.44	0.00

Note. Outcomes were run in separate models with covariates (i.e., lives with two biological parents, Latina/o, school feeder patterns)

*$p < .05$,

***$p < .001$.

Table 4

Influence of change in support variables and covariate effects on the change in students' socioemotional adjustment and academic outcomes over the transition to high school

	Socioemotional Adjustment		Academic Outcomes		
	Δ Depressive Symptoms	**Δ Loneliness**	**Δ Engagement**	**Δ Grades**	**Δ Attendance**
	β (SE)	***β (SE)***	***β (SE)***	***β (SE)***	***β (SE)***
Primary Analyses					
Decreasing parent support (vs. stable/inc.)	0.10 (.08)	0.09 (.08)	−0.05 (.09)	0.05 (.10)	−0.10 (.12)
Decreasing friend support (vs. stable/inc.)	0.22 (.08)**	0.25 (.08)**	−0.01 (.09)	0.01 (.11)	−0.21 (.12)
Decreasing school belonging (vs. stable/inc.)	0.25 (.08)**	0.16 (.08)*	−0.20 (.08)*	−0.13 (.10)	0.12 (.10)
Sensitivity Analyses					
Increasing parent support (vs. stable)	−0.45 (.12)***	−0.37 (.13)**	0.26 (.14)	−0.49 (.15)**	−0.25 (.21)
Decreasing parent support (vs. stable)	0.40 (.11)***	0.33 (.11)**	−0.25 (.13)	0.44 (.14)**	0.23 (.18)
Decreasing parent support (vs. increasing)	0.14 (.07)	0.04 (.07)	−0.14 (.08)	0.05 (.09)	−0.05 (.12)
Increasing friend support (vs. stable)	−0.27 (.11)*	−0.34 (.12)**	0.02 (.11)	0.07 (.14)	0.19 (.19)
Decreasing friend support (vs. stable)	0.26 (.11)*	0.33 (.11)**	−0.02 (.13)	−0.07 (.14)	−0.18 (.18)
Decreasing friend support (vs. increasing)	0.31 (.07)***	0.30 (.07)***	0.03 (.08)	−0.02 (.09)	−0.04 (.12)
Increasing school belonging (vs. stable)	−0.22 (.10)*	−0.22 (.10)*	0.21 (.11)	0.37 (.11)**	0.19 (.14)
Decreasing school belonging (vs. stable)	0.25 (.11)*	−0.26 (.11)	−0.24 (.12)	−0.42 (.13)**	−0.21 (.16)
Decreasing school belonging (vs. increasing)	0.14 (.08)	0.05 (.08)*	−0.21 (.09)*	−0.26 (.09)**	−0.15 (.11)

Note. Primary Analyses used Δ support ≥ 0 as the cut-point. Sensitivity Analyses used 0.5 SD for the cut points for creating the three groups (increasing, decreasing, relatively stable).