

Early Adolescent Peer Ecologies in Rural Communities: Bullying in Schools That Do and Do not Have a Transition During the Middle Grades

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Abstract The transition to middle school is considered to be a heightened period for involvement in bullying because the lack of a defined dominance hierarchy is thought to promote jockeying for social positions among students. Accordingly, this study examined bullying in peer ecologies at the beginning of the middle grade years in rural schools that did and did not have a transition to middle school. Thirty-six schools (20 with transitions, 16 without transitions) participated in this research with a sample of 1,800 participants (52% female) who were in sixth grade during the second year of data collection. Overall, 67% were White, 19% African American, 7% Latino, 2% Native American, and 5% other (multi-racial, Asian, unknown). Compared to schools without a transition, schools with a transition had fewer bullies following the move from fifth to sixth grade and the social dynamics in schools with a transition appeared to be less supportive of bullying. Further, students in schools with a transition reported being bullied less frequently in sixth grade and they perceived the sixth grade peer ecology as being more protective against bullying than did students in schools without a transition. In addition, proportionally more youth had controversial sociometric status in schools without a transition during sixth grade than in schools with a transition. Collectively, these findings suggest that risk for involvement in bullying may be elevated in schools that do not have a transition to middle school. They also bring into question the conventional view of the small K-8 or K-12 rural school as a peaceful and supportive peer community.

Keywords Bullying · Early adolescence · Rural · Middle school

Introduction

Across the United States, teachers and educational support professionals perceive that bullying is a daily problem experienced by many students in the school ecology (Gulemetova et al. 2011). Bullying is often considered to be a phenomenon of large schools that are impersonal and socially disorganized (Bradshaw et al. 2009; Stewart 2003). However, recent studies suggest that the rate of bullying offenses is lower in larger schools (Klein and Cornell 2010) and that students in small schools may be more likely to be bullies (Ma 2001). Further, in a national study of peer victimization in middle and high school settings, students in rural areas were more likely to report being a bully as compared to youth in urban and suburban schools (Nansel et al. 2001). One factor that is believed to contribute to bullying during adolescence is the shuffling of peer relationships that occur when students make a transition from elementary to middle school. However, there is considerable variability in the configurations of rural schools and some rural youth transition to a middle school and others do not. While it is possible that the middle school transition may impact rural students' involvement in bullying, few studies have focused on peer victimization in rural schools. An examination of differences in students' involvement in bullying in rural schools that do and do not have a transition to middle school may provide new insights into the school adjustment of rural youth and may also yield new perspectives on the contribution of the transition to middle school to peer victimization during the early adolescent years.

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The findings that rural youth may be more likely to bully peers than metropolitan youth and that the rate of bullying is greater in small schools than large schools seems counter to the common view that small rural schools are peaceful, friendly, and supportive communities that foster students' adjustment and adaptation (see Herzog and Pittman 1995; Theobald and Nachtigal 1995). Nonetheless, these results are consistent with research demonstrating that bullying is perceived to be a problem by rural students (Iserhagen and Harris 2004) and school personnel (Thomlison et al. 2004), and that bullying is associated with social prominence in rural schools (Estell et al. 2007; Farmer et al. 2003; Farmer et al. 2009). Therefore, the goal of this study is to examine bullying in rural schools that do and do not have a transition to middle school.

Bullying in Early Adolescence

While bullying is common in both elementary and high school, peer victimization appears to be particularly troubling during the middle grade years (Nansel et al. 2003). In early adolescence, social dynamics become increasingly important as youth begin to establish autonomy from adult perspectives and look to peers to construct and negotiate their individual identities (Adler and Adler 1998; Eder and Kinney 1995). As part of this process, youth tend to establish hierarchical social structures that are comprised of distinct peer groups that are typically distinguished by shared behavioral and social characteristics such as academic achievement, level of aggression, and perceived social prominence (Farmer et al. 2010a, b). Within this developmental context, protecting one's social position and the boundaries of the peer group can become a priority for early adolescents (Evans and Eder 1993; Merten 2005). In some cases, youth may engage in and support bullying, social aggression, and other forms of problematic behavior in pursuit of higher status and social dominance (de Bruyn and Cillessen 2006; Sijtsema et al. 2009; Vaillancourt and Hymel 2006).

The transition to middle school has been viewed as a potential risk period for peer victimization as moving to a new school building typically involves blending students from multiple elementary schools, reshuffling existing peer groups, and establishing a new social structure. On this score, Pellegrini and colleagues have linked bullying processes to the pursuit of social dominance and the establishment of new peer social structures during the transition to middle school (Pellegrini and Bartini 2000; Pellegrini and Long 2002). In this context, bullying may be perceived by youth as a way to protect their social positions and as an effective approach to consolidate their standing in the social hierarchy (Evans and Eder 1993; Juvonen and Ho

2008; Merten 1997). Therefore, although youth who bully may not be liked by some peers and have rejected or controversial sociometric status (de Bruyn et al. 2010; Farmer et al. 2003), bullying may enhance early adolescents' overall prestige and influence in the peer system, especially if it is associated with peers who are perceived as being popular (Dijkstra et al. 2008; Kulig et al. 2008; Oliver et al. 1994).

The Current Study

Building from research on the social dynamics of early adolescent bullying (e.g., Evans and Eder 1993; Pellegrini and Bartini 2000), it is reasonable to expect that rural youth may be particularly vulnerable to bullying involvement during the transition to middle school because this transition involves moving from well-established social structures in elementary school to a new and larger middle school context where students may vie for social status with new, and perhaps unfamiliar, schoolmates. Yet, this perspective seems to be counter to the view that youth are more likely to be bullies in small schools and that small rural schools have rigid social systems that are not very accommodating of students who are troubled or who are noticeably different from the majority of peers (Bloom and Habel 1998; Kulig et al. 2008; Newman 2004). Thus, on one hand, it is plausible that bullying may increase among rural early adolescents as they transition from elementary to middle school because they are in a context that may promote jockeying for social position. On the other hand, it is equally feasible to expect that bullying may be particularly easy in schools where there is no transition to break up dominance structures and to challenge the social roles of influential youth during a developmental period when social power within the peer system becomes increasingly attractive to many youth.

To explore these diverging views of risk for bullying in rural early adolescents, the goal of this study was to examine the peer ecologies of bullying in rural schools that do and do not have a transition during the middle grade years. This research was guided by four specific aims. The first research aim was to examine whether rural students in different school configurations (i.e., schools with a transition, schools without a transition) differed in bullying involvement prior to and after the transition from fifth to sixth grade. The second aim was to investigate whether schools with a transition and schools without a transition differed in the relationship between social prominence and aggression. Building from the research on perceived popularity and bullying, it was expected that the school configuration that had higher levels of bullying would also demonstrate a stronger direct relationship between

aggression and social prominence. The third research aim was to determine whether schools with a transition and schools without a transition differed in the proportion of students in distinct sociometric status classifications prior to and after the transition from fifth to sixth grade. Consistent with research suggesting that increased levels of bullying and aggression are related to lower levels of social preference, it was expected that the school configuration that had higher levels of bullying and a stronger relationship between aggression and social prominence would also have a higher percentage of students with lower levels of social preference (i.e., rejected or controversial status). The fourth research aim was to examine whether schools with a transition and schools without a transition differed in terms of students' perceptions of bullying in the peer ecology following the transition from fifth to sixth grade. It was expected that students in the configuration with higher levels of bullying (research aim 1) and bullying process indicators (research aims 2 and 3) would report higher levels of being bullied by peers and lower levels of peer protection against bullying.

Methods

Data for this study are drawn from a larger, longitudinal study focused on the behavioral, academic, and social adjustment of rural youth as they transition into adolescence. Participating schools were part of a research intervention project that followed a randomized control trials design, in which matched pairs of schools within diverse geographic regions of the United States were randomly assigned to intervention or control condition. Intervention condition schools received a professional development program for teachers; matched control schools were offered the program following completion of the research study (see Farmer et al. 2010a, 2010b; Hamm et al. 2010). Intervention as a school-level variable is included in the analyses reported for the current study; significant effects are reported where appropriate but are not the focus of the current study.

Sample

Participating Schools

The current sample included 36 schools from 10 states in the Pacific Northwestern ($n = 4$), Far Western ($n = 4$), Midwestern ($n = 4$), Northern Plain ($n = 4$), Southwestern ($n = 4$), Southeastern ($n = 4$), Appalachian ($n = 8$), and Deep Southern ($n = 4$) regions of the United States. The National Center for Education Statistics was the source for school demographic data. Most schools (67%) were located in NCES locale codes 42 (rural, distant) and 43 (rural,

remote). The remaining schools were in locale codes 41 (rural, fringe), 32 (town, distant), and 33 (town, remote). Twenty schools were middle schools; 16 had configurations that did not include a middle school transition (K-8 or K-12). School enrollment ranged from 72–622 students ($M = 306.97$, $SD = 179.49$). Minority composition ranged from 0–100%, with an average of 32.27% ($SD = 38.00$). On average, 61% of students were at or above proficiency for reading and math and 59.37% of students qualified for free or reduced lunch. Across the 36 sites, the within-school consent rate averaged 65.12% ($SD = 13.00$).

Participating Students and Teachers

The sample consisted of 1,800 participating students (52% female). All were in the sixth grade during the second year of data collection. Overall, 66.6% were White, 19.2% African American, 7.4% Latino, 2.1% Native American, 0.4% Asian, and 4.2% other (multi-racial, unknown).

The total number of teacher participants was 152 (76% female). Teacher self-reported ethnicity was: 75.7% White, 16.8% African American, 5.6% Latino, and 1.9% Native American. Most teachers (64.5%) reported having more than 10 years teaching experience. At the time of the study, 19.6% of teachers had completed a bachelors' degree, 30.8% had some graduate-level training and 49.5% had an advanced degree.

Data Collection Procedures

Students in the study schools were recruited during their fifth grade school year. Consent was obtained through a signed permission form sent home to parents and returned to the school. In the spring of the fifth grade year (approximately 6 weeks before the end of the school year), project staff visited each site for data collection. Consented students were gathered in the school cafeteria or similar area; students were first assured of their confidentiality and reminded that their participation was voluntary and could be withdrawn at any time. Adhering to established protocol (e.g., Cairns et al. 1988; Estell et al. 2009), a trained staff member guided a group administration as students individually responded to a series of items about themselves and their experiences in school, including questions about their peers and peer relationships. Additional project staff monitored students and were available to answer questions as needed. Students were given school supply items for their participation. This procedure was repeated at similar time points during the fall of the sixth grade year (approximately 6 weeks into the semester) and again in the spring of the sixth grade year.

All classroom teachers of participating students were invited to participate. Participating teachers completed packets of surveys about their teaching experiences and

responded to questions about participating students in their classrooms, including perceived peer groupings and individual assessments of interpersonal and academic competence. Data were collected from teachers on a schedule aligned with student data collection. Teachers were compensated financially for their study participation.

School-Level Measures

Two school-level indicators were included in models. The grade configuration for the school was coded as 1 for schools with a transition (middle schools serving grades 6–8, with a building change at sixth grade) and 0 for schools without a transition (K-8/K-12 schools, with no building change prior to eighth grade). School *Intervention* status was coded as 1 for schools in which teachers received the professional development program and 0 for schools in which teachers did not receive professional development as part of the larger research program.

Student-Level Measures

Bullying Classifications

A combination of peer and teacher assessments was used to quantify and categorize student bullying experience. Peer-assessed bullying experiences were taken from a larger peer behavioral assessment, for which students were asked to nominate up to three peers from their class (fifth grade) or grade (sixth grade) who best fit each of 18 behavioral characteristics (i.e. cooperative, athletic, starts fights, leader, cool, disruptive, good student, gets in trouble, shy, seeks help, popular, sad, friendly, bully, picked on, starts rumors, trend setter, and gets their way) that are similar or identical to those used in prior studies (e.g., Cantrell and Prinz 1985; Coie et al. 1982; Masten et al. 1985; Farmer et al. 1999). Students were told they could nominate the same person for more than one characteristic as well as nominate themselves. Each characteristic was accompanied by a descriptor (e.g. Bully: “This person bullies others. This person is always hurting and picking on others.”). The number of nominations for each characteristic was tallied for each participant. Following established procedure (see Estell et al. 2007), a proportion score for each student was calculated by dividing the raw number of nominations for each descriptor by the number of potential nominators. The score was then multiplied by 1,000 to clarify differences. Student scores for the individual items *bully* and *picked on* were used to determine bullying classifications, in conjunction with teacher ratings.

Teacher ratings of students’ experiences with bullying were taken from the Teacher Assessment (TASS) instrument completed for each participating student. The TASS is an eight-item Likert-type scale designed to assess facets of

student social adaptation including attention/hyperactivity, participation in extracurricular activities, and various aspects of peer relationships such as leadership and bullying. Items are presented on a seven-point scale with three anchors; anchors are at each extreme and at the midpoint (e.g. “Frequently bullied by peers” and “Never bullied by peers” at points 1 and 7 and “Sometimes” at point 4). Specific TASS items used were *bullied by peers* and *bullies peers*.

To determine bullying classification, peer nominations for *bully* and *picked on* and teacher ratings for *bullies peers* and *bullied by peers* were standardized by gender. Teacher ratings were then standardized by class (fifth grade) or grade (sixth grade). Two criteria were set: a Z-score greater than +.50 on either *bully* (peer rating) or *bullies peers* (teacher rating) was used to classify students as a bully, while a Z-score greater than +.50 on either *picked on* (peer rating) or *bullied by peers* (teacher rating) was used to classify students as being a victim. Participants who met the bully criterion but not the victim criterion were classified as *bullies*. Participants who met the victim criterion but not the bully criterion were classified as *victims*. Participants who met both criteria were classified as *bully-victims*. Participants who did not meet either criterion were considered *unidentified*.

Aggression and Social Prominence

Peer behavioral assessments were used to determine students’ aggression and social prominence. Students’ aggression and social prominence were calculated as factors representing multiple nomination categories. The aggression factor is the mean of proportion scores for the items: disruptive, starts fights, gets in trouble, starts rumors, and bully. Social prominence is a composite of the items: leader, athletic, cool, and popular. A prior factor analysis (see Farmer et al. 2003) supports the above factor structures for aggression ($\alpha = .85$) and social prominence ($\alpha = .88$). Across diverse student groups in the current sample, Cronbach’s alpha coefficient for the aggression and social prominence factors ranged from .86 to .91 and .88 to .92, respectively.

Perceptions of Bullying Ecology

Students’ experiences of two features of the bullying ecology of their schools were investigated. First, students’ *perceptions of being bullied* were measured by the question, “How often have you been bullied since school started?” Four response options were offered: (a) Never. I don’t get bullied; (b) One or more times a day; (c) One or more times a week; and (d) One or more times a month.

Second, students’ perceptions of *peer protection from bullying* were assessed using a subscale of the Protective Peer Ecology scale (Song 2005). This scale comprises eight items

that assess the extent to which students perceive that their classmates would intervene if they were the victim of bullying. Items prompt the participant to respond to potential bullying situations (e.g. “If I’m being bullied my peers would stick up for me”); response options range from 1 (“Never”) to 5 (“Always”). Responses are averaged to create a Peer Protection score. Cronbach’s alpha coefficient for this subscale ranged from .90 to .93 across diverse student groups.

Sociometric Status

Participants were asked to “Name three classmates you like most” and “three classmates you like least.” Sociometric status was determined following the procedures suggested by Coie et al. (1982). A social preference score was calculated for each participant by subtracting the standardized number of nominations received for being *least liked* from the standardized number of nominations received for being *liked most*. In addition, a social impact score for each participant was obtained by adding the standardized number of liked most nominations to the standardized number of liked least nominations. Those students with a standardized social preference score greater than 1.0, a standardized liked most score greater than zero, and a standardized least liked score less than zero were classified as *sociometrically popular*. Students with a standardized social preference score less than 1.0, a standardized liked most score less than zero, and a standardized least liked score greater than zero were classified as *sociometrically rejected*. Students with a standardized social impact score less than -1.0 were classified as *sociometrically neglected*. Participants with a standardized social impact score greater than 1.0 and standardized liked most and least liked scores greater than zero were classified as *sociometrically controversial*. All other participants were classified as *sociometrically average*.

Student Background Characteristics

Student gender (coded as 1 for female, 0 for male) and student ethnic group membership were taken from school record data. Students identified as African American, Latino, Native American, Asian, or Biracial were classified as Minority (1 = minority, 0 = not minority). Students for whom ethnicity was unknown (3.6%) were excluded from data analysis.

Results

Plan of Analyses

For constructs characterized by categorical data, chi-square analyses were used to test for differences in schools with a

transition versus schools without a transition. These analyses included examining distributions of bullying status by school configuration before and after the transition from fifth to sixth grade (research aim 1) and distributions of sociometric status by school configuration before and after the transition from fifth to sixth grade (research aim 3). Hierarchical generalized linear modeling (HGLM) was used to examine research questions that involved school configuration differences in the relationship between student behavior (aggression) and social status (social prominence) (research aim 2); hierarchical linear modeling (HLM) was used to examine school configuration differences in student perceptions of the bullying ecology at the end of sixth grade (research aim 4).

School Configuration and Bullying Classification

The first research aim focused on students’ involvement in bullying in schools that involved a building transition versus schools that did not. Chi-square analyses were used to examine the relationship between bullying category and school configuration at the end of fifth and sixth grades. Table 1 presents the results of these analyses. Results indicated that none of the bullying classifications (i.e., bully, victim, bully-victim, and unidentified) differed at the end of fifth grade for students who continued in the same school for sixth grade, versus for students who subsequently changed school and attended middle school for sixth grade. Significant differences were evident by school configuration at the end of sixth grade, however. Schools without a transition had a higher than expected number of *bullies* and a lower than expected number of students in the *unidentified* category. Schools with a transition showed the opposite pattern.

Further analyses were conducted to determine school configuration differences in the stability and change between the end of fifth and the end of sixth grade, of the bullying classification of individual participants. A significant result was found for students classified as *unidentified* in fifth grade ($\chi^2(3, N = 688) 14.41, p < .01$). A higher than expected percentage of *unidentified* students in schools without a transition turned into *bullies* in sixth grade (18.1%), while the percentage of *unidentified* students in schools with a transition who turned into *bullies* in sixth grade was lower than expected (7.8%).

Aggression and Social Prominence in Transition and Non-Transition Schools

The second research aim addressed the relationship between aggression and social prominence in schools with a transition versus schools without a transition. The test of this aim involved a 2-level (students nested in schools) HGLM for Poisson distributions. Social prominence is a

Table 1 Bullying category by school configuration in sixth grade

School configuration	Bullying category			
	Bully	Victim	Bully-Victim	Unidentified
Transitional (<i>n</i> = 1,189)				
<i>n</i>	185–	206	151	647+
%	15.60%	17.30%	12.70%	54.40%
Non-transitional (<i>n</i> = 254)				
<i>n</i>	56+	47	33	118–
%	22.00%	18.50%	13.00%	46.50%
Total (<i>n</i> = 1,443)				
<i>n</i>	241	253	184	765
%	16.70%	17.50%	12.80%	53.00%

The overall relationship between bullying category and school configuration was $\chi^2(3, N = 1,443) = 7.96, p < .05$.

± Indicates more/fewer than expected by chance in single-cell contingency analysis ($p < .05$)

composite of the number of peer behavioral nominations (i.e., for cool, leader, popular, athletic) received, and is defined in terms of a probability (of assignment by *n* raters to the specified roles); thus, a log odds transformation of the outcome variable is used to improve estimation. We first estimated an unconditional model to separate the total variance into Level 1 (within school) and Level 2 (between school) components. For HGLM procedures, the Level 1 variance is assigned a value of $(\pi)^2/3$ (Snijders and Bosker 1999). We estimated a model that included student-level minority status and gender as dummy-coded variables, and peer-nominated aggression scores at Level 1; and the dummy-coded intervention condition variable and dummy-coded transition variable as school-level Level 2. Because the primary interest was in differences in the relationship between aggression and social prominence by configuration (transition vs. no transition), we included the configuration variable as a cross-level moderator of the relationship between aggression and social prominence. All

predictor variables were grand mean centered, with the exception of the school configuration variable which was uncentered. Results are summarized in Table 2, and indicate that conditioned on control variables, social prominence was significantly and positively associated with aggression. However, this relationship was qualified by a Transition × Aggression interaction, which indicated that the relationship between aggression and social prominence differed by school configuration. To facilitate interpretation of this effect we calculated a predicted social prominence nomination score for students who were a standard deviation below and a standard deviation above the mean in each type of configuration, and converted these scores to probabilities by undoing the log-odds transformation. Figure 1 shows graphically the Transition × Aggression interaction effect, using these adjusted probabilities. The figure demonstrates that the relationship between aggression and social prominence is weaker in schools that involve versus schools that do not involve a building transition for sixth grade. In other words, in sixth grade, aggression is more strongly rewarded with social prominence in schools without a building transition than it is for students who transition into a middle school.

Table 2 Results of final HGLM analyses for differences by school configuration for the relationship between aggression and social prominence (*N* = 1,443)

	Coefficient	SE
Level 1: Student		
Intercept	−4.30***	0.22
Minority	0.06	0.04
Female	0.02	0.03
Aggression	.008***	0
Level 2: Schools		
Intervention	0	0.24
School with a transition	0.05	0.25
Transition × Aggression	−.004***	0

*** $p < .001$

School Configuration and Sociometric Status

The relationship between school configuration and sociometric status was the third aim addressed in the study. Results of chi-square analyses indicated that distributions of students into sociometric categories did not differ significantly by school configuration during fifth grade, but did during sixth. As depicted in Table 3, schools without a transition had a higher than expected number of *controversial* students and a lower than expected number of *average* students. Schools with a transition showed the opposite pattern. Further analyses were conducted to

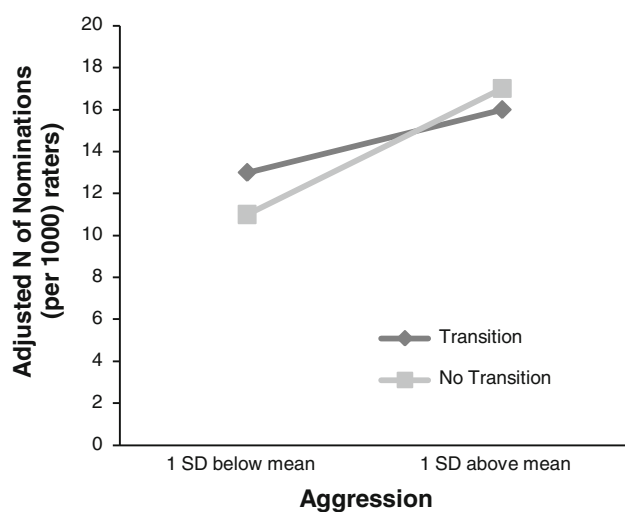


Fig. 1 Relationship between peer-rated aggression and social prominence by school configuration

examine the stability and change of sociometric status of individual participants. No significant difference between schools with a transition and schools without a transition was found in the relationship between students' sociometric classification between fifth and sixth grade.

Perceptions of Being Bullied and School Bullying Ecologies

The final aim of the study was to examine differences by school configuration in students' perceptions of the bullying contexts of their own schools. Students' perceptions of their own experiences and of the bullying contexts of their schools are embedded in their specific school ecologies. Given this nested data structure (students in schools), perception data were analyzed using two-level HLM

procedures. An unconditional model was first estimated for each dependent variable, to partition the variance in the dependent variable into within- versus between-school variance. Next, a model that tested for school configuration differences included control variables at the student level for fifth-grade perceptions of the outcome, and dummy coded variables for minority (1 = minority) and female (1 = female) status, and at the school level, a dummy-coded variable for Intervention status (1 = intervention school). School configuration was a school-level dummy-coded variable (1 = schools with a transition; 0 = schools without a transition). A subsequent model tested for differential effects of school configuration type by minority status and gender; no significant cross-level interactions were found and that model is not reported here. Results of the models estimated are summarized in Table 4.

Been Bullied

Results of the unconditional model indicated very small, but significant between-school variance in students' perceptions of the frequency with which they had been bullied by peers, $\chi^2(35) = 62.65, p = .003$, signifying that 1.13% of the variance in students' experience was associated with school differences. Minority students reported less frequent experiences of bullying and students' perceptions of being bullied in fifth grade were significantly and positively related to their perceptions of being bullied in sixth grade. There were no gender or intervention school differences in students' perceptions of being bullied. Students' perceptions of being bullied differed significantly by school configuration type, as students in schools with a transition reported being bullied less frequently than did students attending schools without a transition. Estimation of this model resulted in an elimination of between-school variance.

Table 3 Sociometric status by school configuration in sixth grade

School configuration	Sociometric status		Sociometric status		
	Popular	Rejected	Neglected	Controversial	Average
Transitional ($n = 1,189$)					
<i>N</i>	228	158	183	112–	508+
%	19.20%	13.30%	15.40%	9.40%	42.70%
Non-transitional ($n = 254$)					
<i>N</i>	52	42	39	42+	79–
%	20.50%	16.50%	15.40%	16.50%	31.10%
Total ($n = 1,443$)					
<i>N</i>	280	200	222	154	587
%	19.40%	13.90%	15.40%	10.70%	40.70%

The overall relationship between sociometric status and school configuration was $\chi^2(4, N = 1,443) = 18.65, p < .01$

± Indicates more/fewer than expected by chance in single-cell contingency analysis ($p < .05$)

Table 4 Results of HLM analyses for school configuration differences in students’ experiences of being bullied and perceptions of the school bullying ecology ($N = 1,443$)

	Been bullied		Protective school bullying ecology	
	Coefficient	SE	Coefficient	SE
Intercept	1.81***	0.06	3.41***	0.06
Level 1: Student				
Minority	-.12*	0.06	0	0.06
Female	-0.04	0.06	-.37***	0.05
5th grade score	.31***	0.02	.39***	0.03
Level 2: Schools				
Intervention	0.01	0.06	.16*	0.07
School with a transition	-.13*	0.06	.19**	0.07

* $p < .05$; ** $p < .01$; *** $p < .001$

Perception of Protective Bullying Ecology

Results of the unconditional model indicated that 4% of the variance in students’ perceptions of their schools’ bullying ecologies was associated with school differences, $\chi^2(35) = 103.80, p = .000$. Estimation of the model that tested for school configuration effects indicated that students’ perceptions of the bullying ecology of their school in sixth grade were significantly and positively associated with their perceptions of the ecology of their school in fifth grade. Male students reported that their schools offered more protection against bullying, and intervention schools were perceived by students to be more protective against bullying. Students in schools with a transition rated their schools as being more protective against bullying than did students in schools without a transition.

Discussion

Although the social environment following the transition to middle school has been shown to evoke bullying (Pellegri and Bartini 2000) and is often considered to be a poor developmental fit for early adolescents (Eccles 1999), the results of this study suggest that the peer ecologies in rural schools that do have a transition during the middle grades are less likely to promote bullying when contrasted with peer ecologies in schools that do not have a transition. These findings were consistent across all indices of the peer ecology examined in this study. As compared to schools without a transition, schools with a transition had significantly fewer bullies following the move from fifth to sixth grade. Further, significantly more sixth grade students in schools with a transition were identified as average socio-metric status, fewer were identified as controversial status, and the relationship between aggression and social

prominence was lower as compared to sixth grade students in non-transition schools. Finally, students in schools with a transition reported being bullied less frequently in sixth grade and they perceived the sixth grade peer ecology as being more protective against bullying than did their counterparts in schools without a transition.

While these findings may seem somewhat surprising, they are consistent with research indicating that a higher proportion of students are bullies in smaller schools (Klein and Cornell 2010; Ma 2001). In addition, these results may help to explain why more rural students report being bullies as compared to students in urban and suburban schools (see Nansel et al. 2001). Many rural schools are small and do not have a transition during the middle grades. This may result in a rather static social community in which everyone knows each other. In such a context, social roles and reputations may be more likely to consolidate and social dominance structures may become impenetrable. Therefore, bullying in small rural schools that do not have a middle grades transition may simply be a byproduct of efforts to maintain the existing pecking order.

In contrast, the transition to middle school may be a developmental opportunity that promotes the possibility for students to establish new friends, to shed prior social roles, and to develop new identities that correspond with their interests. Rather than jockeying for social power, students in schools with a transition may simply be more occupied with finding a comfortable place for themselves in the new social system. On this score, as indicated by students’ perceptions of their peer ecology in schools with a transition, the perceived social vulnerability associated with the middle school transition may result in a general climate in which students, and perhaps teachers, actively protect against peer victimization. Further, these results suggest that not only is there less bullying in rural schools that have a middle grades transition, they also provide evidence that

the social dynamics in such settings may be less supportive of bullying as compared to schools without a transition. The high rates of controversial status and the linkages between aggression and social prominence found in schools without a transition reflect the type of social dynamics and the quest for social power that promotes bullying and violence in schools (see Farmer et al. 2007; Vaillancourt et al. 2003). By breaking up existing social dominance structures, the transition to middle school may help to neutralize detrimental power dynamics that may develop in small rural schools.

School Configuration and the Adaptation of Rural Early Adolescents

Many rural education scholars argue that small schools that are composed of grades K-7 or K-12 may be better suited to serve the needs of their immediate community and in some ways are preferable to large consolidated middle and high schools that combine youth from multiple communities (Bard et al. 2006; Herzog and Pittman 1995; Strange and Malhoit 2005; Theobald and Nachtigal 1995). In support of this view, a study of rural school configuration and student adjustment in Louisiana found that middle grades youth in elementary (K-7) and unit (K-12) schools had better attendance, fewer suspensions, and higher standardized academic achievement scores than students in the same grades in middle school settings (Franklin and Glascock 1998). Thus, the results of our investigation should be considered in relationship to other factors pertaining to rural students' adjustment during the middle level years.

While our findings do not contradict the view that schools without transitions may have some advantages with regard to rural students' school adjustment, they do qualify it. The broader point is that early adolescence may be a time of developmental risk and adjustment problems for rural students regardless of the type of school configuration. In contrast to the view of the small, rural school without a transition as being a peaceful and supportive community, it appears from our study that bullying involvement is an adjustment risk for early adolescent students in such schools. Also, this does not mean that schools that have a transition during the middle grades do not have youth who are involved in bullying. Although no comparison was made with schools without a transition, a recent survey on bullying in two rural middle schools found that 50% of students reported being bullied by peers, 17% were bullied at least once a week, and nearly 20% indicated that they had considered staying at home because of bullying (Iserhagen and Harris 2004). As the findings by Nansel et al. (2001) and Ma (2001) indicate, bullying is clearly a problem for early adolescents in rural communities and there is a need for intervention programs that are

designed to address this issue within rural schools (Kulig et al. 2008; Oliver et al. 1994; Thomlison et al. 2004).

Implications for Bullying Research

The findings of this study provide a new perspective on school social dynamics and bullying processes during the middle grade years. Instead of confirming that the increase in students' bullying involvement during this period is a result of the middle school transition, the current results suggest that the lack of a transition increases bullying while the transition to a new school appears to be associated with decreased levels of bullying and peer victimization. It is possible that the increase in bullying during early adolescence is a developmental phenomenon that emerges as youth begin to establish autonomy from adult rules and have more influence on their own social worlds. Rather than contradicting the assumption that the transition to middle school is a time when students are vulnerable to bullying involvement, we interpret our findings as suggesting that there is a need to complement bullying research on the transition to middle school with investigations that examine whether static peer ecologies in schools without transitions help to produce stable social structures and corresponding peer dynamics that promote and strengthen bullying during early adolescence.

Accordingly, there is a need to investigate bullying processes in schools that do and do not have transitions in suburban and urban ecologies, as well as in rural communities. There may be distinct aspects of rural communities and schools that result in social dynamics processes that are unique from social dynamics in metropolitan settings. Yet, rather than being a result that is distinctive to rural peer ecologies, the current findings may be due to sustained social roles that emerge during early adolescence with the elevated levels of interpersonal familiarity among students in schools without transitions. When everyone knows everyone else and the collective has a shared history and knowledge of one another's social characteristics and prior relationships, such knowledge may facilitate the emergence of social dominance hierarchies that promote bullying. A closer examination of the factors that contribute to increases in bullying in schools without transitions is needed along with more in-depth analysis of decreases in bullying across the transition to middle school in various community settings. It is also possible that increases and decreases in bullying during early adolescence are not directly related to the school transition but instead are attributable to other factors that contribute to the social dynamics of peer victimization. Research to clarify these factors may yield new information and theoretical conceptualizations that can be used to refine social dynamics management strategies that

are effective at reducing early adolescent bullying in a variety of school contexts.

Limitations and Future Research Needs

Although the findings of this study suggest that the transition to middle school may not increase the risk for bullying involvement in early adolescence, there are three limitations of the current study that qualify this finding and should be addressed in future research. First, this study is limited to rural settings. As discussed above, it is possible that the generally small size and level of familiarity in rural settings may impact peer dynamics differently than what is found in metropolitan and urban schools. Further, while schools with a transition tended to be larger than the schools without a transition in the current study, they are likely to be significantly smaller than middle schools in urban settings. It is possible that the schools with a transition in the current study are within an optimal size range that promotes teacher monitoring and support that combines with a sense of social vulnerability during the transition period that actually tempers bullying and problematic peer dynamics. Additional studies are needed to clarify whether these findings are unique to rural settings, school size, or other variables. Second, while the current results provide a consistent picture in terms of multiple variables indicating sustained or increased bullying in schools with versus schools without a transition, the actual differences across these two types of schools are not great in magnitude. Thus, it is important to recognize that bullying is likely to be an issue for at least some students in both types of schools. Future research should examine whether there are difference across such schools in terms of the characteristics of students who are at risk for bullying involvement. Third, the current study focused on general teacher ratings and peer nominations of bullying involvement. While these measures provide an adequate index of whether a student is involved in bullying either as a perpetrator or victim, they do not distinguish between social and physical forms of bullying and aggression. It is possible that more fine-grained analyses of these constructs would have yielded different findings. Additional work should examine different forms of aggression and bullying in relationship to whether or not students are involved in a transition during early adolescence.

In conclusion, involvement in bullying is a developmental risk for rural early adolescents. This problem is present both in schools that do and do not have a transition to middle school. However, it appears from the current data that the transition to middle school in rural areas is associated with a decrease in bullying and an increase in students' perceptions of peer support to protect against bullying. In contrast, bullying involvement and

corresponding social dynamics that support peer victimization appear to be sustained and strengthened from fifth to sixth grade in schools that do not have a middle school transition. A closer examination of peer dynamics in both settings is needed to clarify bullying processes in relationship to school organization and to facilitate the development of prevention programs that are responsive to different school contexts. On this front, bullying research in rural schools may yield critical insights into early adolescent social dynamics that may prove critical to the establishment of prevention programs that can be generalized to schools in urban and suburban communities.

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