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Perceived Community Cohesion and the Stress Process in Youth

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ABSTRACT Using survey data from two youth samples, one rural and one urban, we examine the role and significance of perceived community cohesion in the stress process. In particular, we assess the extent to which community attachment and detachment are related to depressed mood, problem substance use, and delinquency net of social statuses, stress exposure, and personal attributes. In addition, we explore the degree to which those dimensions of community cohesion explain or condition the links between the above stress-process components (e.g., social statuses, stress exposure, and personal attributes) and well-being. We find remarkably similar results across samples: community attachment is related to lower odds of problem substance use and delinquency; community detachment is related to higher levels of depressed mood, problem substance use, and delinquency; and community attachment buffers the link between stress and problem substance use. With respect to depressed mood, however, the rural youth show greater vulnerability to stress than the urban youth and unique benefits from community attachment compared to the latter. Our findings highlight the roles of community attachment and detachment in the stress process and underscore the importance of each for youth well-being in rural and urban settings.

Introduction

Classic sociological perspectives speak to the importance of social cohesion for the maintenance and well-being of human societies (e.g., Durkheim 1951), and contemporary work continues to locate meaningful

sources of well-being in community solidarity, integration, and supports (e.g., Thoits 1995). Rooted also in communities are sources of stress and strain, which can erode the social and psychological well-being of inhabitants (Pearlin 1989, 1999, 2010). Such strains may be particularly salient for adolescents, who tend to attune to others' critiques and to perceive objectively neutral social stimuli in subjectively noxious ways (Agnew 1997). Moreover, different types of communities (e.g., rural vs. urban) may produce conditions with unique implications for youth well-being (Fabiansson 2006; Van Gundy 2006). Arguably, then, perceived social constraints and freedoms may vary by community type and contribute importantly to the emotional and behavioral expressions of adolescents. Although recent studies consider the effects of social and community contexts on youth well-being (e.g., Falci and McNeely 2009; Wright, Botticello, and Aneshensel 2006), such work does not examine specifically the role of individual-level community cohesion in the stress process among youth.

Here we use primary data from two youth surveys to examine the role and significance of two dimensions of perceived community cohesion in the stress process: community attachment and community detachment. In particular, we assess the extent to which those dimensions are related to depressed mood, problem substance use, and delinquency net of social statuses, stress exposure, and psychosocial resources. In addition, we explore whether dimensions of community cohesion explain or condition the links between the above stress-process components and outcomes. Our study builds on prior work by integrating into the stress-process framework a potentially important psychosocial resource, community cohesion, and examining its relation to multiple youth outcomes in two residentially distinct areas: rural and urban New Hampshire.

New Hampshire is among the most rural U.S. states (Van Gundy 2006), and the rural youth on whom we focus here attend public schools in Coös County, New Hampshire's northernmost and most rural county (U.S. Census Bureau 2009a). Like many rural U.S. areas, Coös County is undergoing increasing economic decline and job loss (Colocousis 2008; Osterman 1999)—conditions that predate the recent economic crisis in the United States. Between 1997 and 2003, 1.5 million workers were displaced from jobs in rural America. The loss of rural jobs was particularly large in the manufacturing sector, with the rate of loss higher in the rural northeast than in the rest of rural America (Glasmeyer and Salant 2006). These economic changes are occurring against a backdrop of already high poverty rates. Child-poverty rates are higher for rural children than for urban children of every racial and ethnic group, and the highest poverty rates are in the most rural places (O'Hare and Johnson

2004). Arguably, such circumstances contribute meaningfully to youths' sense of community cohesion and well-being.

The urban youth on whom we focus attend public schools in southern New Hampshire counties, in which nearly one-third of the state's population resides (Johnson and Macieski 2009). Our definition of this area as "urban" derives from the U.S. Census Bureau definition of the included counties as "metro area counties" based on the Office of Management and Budget designations from the 2000 census (U.S. Census Bureau 2009a). According to this definition, "A metro area included one or more counties containing a core urban area of 50,000 or more people, together with any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core" (U.S. Census Bureau 2009a). Youth in both samples attend schools in the same U.S. state, but they inhabit areas with distinctive social and economic resources and prospects (Churilla 2009; Colocousis 2008; Johnson and Macieski 2009; Shattuck 2009). Thus, while our samples and the estimates they yield may not generalize to rural and urban contexts nationwide, this study offers a unique opportunity to examine the stress process among youths in the same region but with relatively different community environments.

The Stress-Process Framework

Derived from classic social-structural perspectives on stress and health (Cassell 1976; Cobb 1976), the "stress process" framework (Pearlin 1989, 1999, 2010) provides the context for numerous studies in the sociological study of well-being. Simply stated, the model purports that well-being is socially patterned and shaped by interrelationships among social statuses, environmental stressors, and important psychosocial or coping resources. Social statuses include hierarchically organized social categories like socioeconomic status (SES), gender, age, or culture (Pearlin 1999). Such statuses denote a common group experience that has important implications for stress exposure, the availability and effectiveness of psychosocial resources, and the outcomes that befall those facing adversity. For example, persons occupying lower SES positions may experience greater financial strain (stress exposure), a lower sense of control over their situation (a psychosocial resource), and more symptoms of psychological distress (an indication of degree of well-being) than those in higher socioeconomic positions. Thus social statuses are fundamental in shaping life contexts, experiences, and well-being.

Stress exposure, as conceived by stress-process researchers, refers to one's contact with noxious environmental strains that can, in turn, affect

well-being. As stated above, stress experiences are structured by social statuses, such that some groups (e.g., the unemployed) are more likely than others (e.g., the employed) to experience hardship and adversity. Exposure to stress is often conceptualized and assessed as “life events.” Derived from classic psychological stress research (e.g., Holmes and Rahe 1967), life-events measures typically document exposure to a range of specific occurrences of adverse incidents (e.g., a serious accident or parents’ divorce) within a given period, such as the previous 12 months. A wealth of research provides evidence for the utility of measures of stressful life events; that is, exposure to stressful life events is related to various types of emotional and behavioral outcomes (Aneshensel 1999; Eitle, Gunkel, and Van Gundy 2004; Van Gundy 2002; but see Turner and Avison 2003).¹

Psychosocial resources are personal and social characteristics “having the capacity to hinder, prevent, or cushion the development of the stress process and its outcomes” (Pearlin 1999:405). Generally speaking, personal characteristics are aspects of self-concept like self-esteem and a sense of mastery, while social characteristics involve external resources like family and community supports. As we noted, social statuses structure one’s access to psychosocial resources in the stress process. For instance, variations in a sense of personal mastery may derive from the different life contexts of those in high or low economic positions; in turn, we see socioeconomic variations in well-being. Stated differently, impoverished conditions can contribute to one’s sense of helplessness, which in turn, erodes one’s well-being more broadly. Psychosocial resources therefore represent crucial components of the stress process (Thoits 1995; Turner and Roszell 1994; Turner, Taylor, and Van Gundy 2004).

Finally, as Pearlin asserts, “To observe the range and specificity of outcomes that the stress process might create . . . it is necessary that our studies be designed to gather information about multiple possible outcomes” (1999:411). Indeed, recent work among stress researchers highlights the importance of assessing multiple *outcomes* in the stress process (Aneshensel 1999; Rosenfield, Vertifiulle, and McAlpine 2000; Van Gundy 2002). In fact, some “resources” provide benefits only for particular outcome types. Interpersonal autonomy (Hirschfield et al. 1977), for instance, appears to reduce risk for depressive mood (Turner et al. 2004); yet it may inflate risk for externalizing behaviors among some

¹ There is some evidence that more comprehensive stress measures that include a wider range of various stress types (e.g., chronic strain, recent life events, major and traumatic events, and discrimination stress) better estimate group differences in exposure to stress than do life-event checklists (Turner and Avison 2003; Turner, Wheaton, and Lloyd 1995).

subpopulations, such as young adult men (Van Gundy 2002). Building on such work, we consider the links between dimensions of community cohesion and three youth outcomes in the stress process: depressed mood, substance-use problems, and delinquency.

Community Cohesion as a Psychosocial Resource

We conceive of community cohesion as an individual-level sense of belonging, safety, and acceptance within one's neighborhood or community. Here we emphasize two dimensions of cohesion: community attachment and community detachment. Community attachment involves a sense that one resides among neighbors who share similar values and can be relied on for support. According to Albanesi, Cicognani, and Zani (2007), a sense of community attachment is a key predictor of adolescent social well-being (see also Pretty et al. 1996). They suggest that group belonging provides opportunities for teens to explore different identities and social roles, and may increase community connectedness and prosocial behavior. Similarly, Fabiansson (2006:50) observes that community affiliation is a central dimension of young people's everyday lives, as well as "a prerequisite for social inclusion and well-being." Taken together, then, these findings suggest that a sense of community attachment can benefit youth well-being generally.

On the other hand, there is some evidence that suggests that being too connected, too embedded, too integrated, or too tied to one's social groups can erode well-being. For instance, solidarity among some groups (e.g., immigrant groups and ethnic enclaves) may limit connections and opportunities outside of those close networks (see, e.g., Pfeffer and Parra 2009; Portes 1998). As Waldinger (1995:555) observes, "the other side of embeddedness" is a salient and potentially damaging aspect of community cohesion. He asserts that community integration may hinder highly entrenched group members by limiting their exposure to people and opportunities outside their immediate communities. Thus, extremely high levels of social connectedness may be detrimental to youth. Arguably, then, the effect of community attachment on youth outcomes may be u-shaped, such that very low or very high levels most threaten their emotional and behavioral well-being.

An additional source of potential harm associated with social cohesion, community detachment, involves the sense among some community members that they do not belong. As Portes (1998) observes, the same strong ties that present benefits for some may exclude others, demand conformity, and thwart positive social and

personal development. Detached youth feel that community members are unfairly judgmental and rejecting, and such feelings may hold particular relevance in small and geographically isolated areas. As a study of rural youth found, a substantial minority of youth who were not involved in community activities or social networks had negative perceptions about their communities, including a sense of mistrust and the absence of help or support from community members (Fabiansson 2006). By contrast, less isolated areas likely supply more varied sources for youth acceptance, support, and trust. Community detachment, then, may be less detrimental for well-being among urban youth than among rural youth.

The Study's Aims

Drawing on work that has explored the role and significance of personal attributes in the stress process (Turner et al. 2004; Van Gundy 2002), this study seeks to evaluate the degree to which there are unique and independent links between individual-level community attachment or detachment and youth outcomes, net of more often studied stress-process components like stressful life events, self-esteem, personal mastery, and interpersonal autonomy. We have four research questions. First, is community cohesion associated with youth outcomes? Here we test whether community attachment or detachment is related to depressed mood, substance-use problems, or delinquency, either linearly or curvilinearly, holding constant social statuses, stress exposure, and psychosocial resources. Second, do community-integration dimensions explain the linkages between other stress-process components and outcomes? Here we test if associations between social statuses, stress, or psychosocial resources and outcomes remain after adjusting for community attachment or detachment. Third, do community-integration dimensions condition the effects of other stress-process components on outcomes? Here we test whether community attachment or detachment moderates links between social statuses, stress exposure, or psychosocial resources and youth outcomes. Finally, do the results vary by sample? Here we test the extent to which the patterns of the above effects are consistent across two youth samples—one rural and one urban.

Due to their prominence in youth health and deviance literatures, we consider three youth outcomes: depressed mood, problem substance use, and delinquency. Because our data are largely cross-sectional, however, we are unable to tease out the timing and sequence of our independent and dependent variables; thus, observed associations between community cohesion and emotional and behavioral outcomes

may reflect the effect on community cohesion of those outcomes, rather than the reverse. Yet we submit that this study takes a crucial first step toward better understanding the unique role of community cohesion in the stress process among a relatively understudied population of largely “mill town” rural youth and of urban youth who reside also in northern New England (Colocousis 2008; Johnson and Macieski 2009).

Methods

“Rural Youth Survey” Sample

Our first sample, the “Rural Youth Survey” (RYS), includes self-reported cross-sectional survey data collected in February 2008 from the population of 7th and 11th grade students in Coös County, New Hampshire (see Stracuzzi 2009). School-district recruitment began in fall 2007. Once we received approval from the University of New Hampshire’s Internal Review Board and a Certificate of Confidentiality from the National Institutes of Health, we recruited students from all 16 schools in all five public school districts in the county. School-district participation was approved either by superintendents or local school boards. We distributed consent forms and letters describing the study goals to students to submit to their parents. Parents who did not want their child to participate completed the forms, and students returned them to their teachers. Unless returned letters withdrew parent consent, students were eligible to participate.

We collected data during designated class times for all participating students in their schools. To protect students’ identities, we administered confidential surveys. When possible, students were seated with at least one empty seat separating them from other students in the room. We asked students to sign an assent form and instructed them not to put their names anywhere on their survey instruments. We also asked them to remain quiet and to raise their hands if they had any questions during survey administration. During that time, at least one member of the research staff roved the room to answer questions. Typically, questionnaires were completed in 30 to 40 minutes. Upon completion, students turned in their questionnaires to a member of the research staff, who wrote the students’ preassigned identification numbers on their surveys, and gave each participant a \$10 gift card to a local store.

Our total sample size was 656, divided evenly by grade and sex. Our response rate of 78 percent is considered excellent for a school-based study (Henry, Smith, and Hopkins 2002). Unless otherwise specified below, our analyses include only cases for which data are available for all measures. The resulting sample ($N = 585$) includes 267 7th graders and

Table 1. Means and Proportions of the Study Variables by Sample.

	“Rural Youth Survey” (<i>n</i> = 585)	“New Hampshire Youth Survey” (<i>n</i> = 725)	Pooled Sample (<i>N</i> = 1,310)
Depressed mood (logged)	2.21**	2.28	2.25
Substance-use problems = 1	0.20**	0.14	0.17
Delinquent behavior = 1	0.38	0.35	0.37
Rural = 1	—	—	0.44
Female = 1	0.51**	0.59	0.56
Age	14.72***	13.73	14.17
SES ^a	-0.20***	0.16	0.00
Nonwhite = 1	0.07***	0.20	0.14
Grades in school	6.80***	7.43	7.15
Lives with both parents = 1	0.59**	0.68	0.64
Community attachment ^a	0.09**	-0.05	0.01
Community detachment ^a	0.35***	-0.26	0.01
Stressful events ^a	0.10***	-0.12	-0.02
Self-esteem ^a	0.10***	-0.09	-0.00
Mastery ^a	0.62***	-0.47	0.01
Autonomy ^a	0.06*	-0.05	0.00

^a Standardized scores (z-scores).

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed).

318 11th graders. Table 1 shows the characteristics of both samples, as well as a sample that pools the two.

“New Hampshire Youth Survey” Sample

The data for our second sample, the “New Hampshire Youth Survey” (NHYS), are from a panel study of 6th and 9th grade students attending seven middle schools and five high schools in southern New Hampshire in spring 2007 (see Cohn et al. 2010). Compared to Coös County, southern New Hampshire counties are more urban and ethnically diverse (U.S. Census Bureau 2009b). Since our initial data collection wave, follow-up data have been collected at six-month intervals over three years. Once we obtained permission to conduct our study from superintendents, we made data-collection arrangements with middle and high school principals, vice principals, heads of guidance, or heads of freshman academies. We submitted parental letters and consent forms with return due dates to each school. In some schools, we were able to recruit students directly; in other schools, teachers sent the forms home. School officials permitted participation *only* by students who returned letters with parental consent. In an effort to address the possible biases introduced by this sampling strategy, our multivariate analyses adjust statistically for relevant sociodemographic variables like

sex, age, race or ethnicity, socioeconomic status, school grades, and family structure (see below).

We attempted to collect data from all schools and students agreeing to participate, collecting in libraries, classrooms, cafeterias, and auditoriums depending on the school. Each participant received an informed-assent form to read before beginning the study. All students who agreed to participate were given a questionnaire booklet which took approximately 30 to 40 minutes to complete. When students completed the questionnaire, we gave them a \$10 gift certificate to Barnes and Noble bookstores.

Of the 1,040 students who agreed to participate, 935 students completed surveys during the first data collection in spring 2007 (phase 1), and 939 students completed surveys six months later (phase 2). With the exception of our stress and personal-resource measures, which we assessed only at phase 1, we used phase 2 data for all analyses here. Using this process, we collected the bulk of the NHYS data less than six months before the RYS data. At phase 2, youth were in 7th and 10th grades. Unless otherwise specified below, our analyses include only cases for which data are available for all measures. The resulting sample ($N = 725$) includes 350 7th graders and 375 10th graders.

Measures

Youth outcomes. We assessed depressed mood by a shortened and modified version of the CES-D scale (Radloff 1977). We asked respondents to indicate how often in the past six months each of seven feelings or experiences reflecting depressed mood had occurred (see the Appendix for all outcome-measure items). Each item is scored as follows: 0 equals “not at all,” 1 “occasionally,” 2 “sometimes,” 3 “almost all the time.” Items are summed such that higher scores reflect higher depressive symptoms. Because of the characteristically skewed distribution of the CES-D and other indexes of pathology (Mirowsky 1999), we transformed this measure by taking its natural log in order to reduce heteroscedasticity; such a procedure serves to improve the efficiency of regression estimates with depressed mood as the dependent variable (Hamilton 1992). Resulting minimum and maximum pooled sample scores are 1.43 and 3.40, respectively; Cronbach’s (1951) alpha is 0.87. We assess substance-use problems by a dummy-coded measure scored 1 for those who indicated that in the past six months they had experienced at least 1 of 15 substance-related events, and 0 for those who did not. Items are similar to DSM-IV symptoms of substance abuse or dependence (American Psychiatric Association 1994). We assess delinquent behavior by a dummy-coded measure scored 1 for respondents who

indicated that in the past sixth months they had engaged in at least one of six delinquent behaviors, and 0 for those who did not.

Community cohesion. We assess two community-cohesion dimensions—attachment and detachment—based on respondents' level of agreement with seven items about their communities. Item responses range from 0, "strongly disagree," to 3, "strongly agree." To create our measure, we summed and standardized mean scores across items for each measure. For respondents missing data on less than one-third of the items for each scale, mean scores across the available items are imputed. We exclude from our analyses cases missing data on more than one-third of the items for each scale. Higher scores reflect higher levels of each dimension.

Our community-attachment measure consists of four items reflecting a positive sense of community. These items are similar to items used in the 2003 "National Survey on Drug Use and Health" to examine social and neighborhood environments (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies 2004). Respective minimum and maximum (pooled) scores are -2.68 and 1.95 . Alpha is 0.72 . We assess our community-detachment measure similarly using three items reflecting a sense of social detachment from one's community, adapting these items from measures of the undesirable aspects of living in rural communities (e.g., Fabiansson 2006). Minimum and maximum (pooled) scores are -2.27 and 1.59 , respectively. Alpha is 0.74 . Table 2 presents factor analyses of the community-cohesion items by sample. As shown, all items load on the two community-cohesion constructs, and the results are similar across the two samples.

Stress and personal resources. We use a modified measure of stressful events based on studies of teens and young adults (e.g., Eitle et al. 2004; Turner et al. 2004; Van Gundy 2002). Respondents were asked whether or not 17 events, such as a parental "divorce or separation" or "a serious accident or injury," had happened to them in the past 12 months. We code the measure as follows: 0 equals "no events," 1 "one event," 2 "two events," 3 "three events," 4 "four events," 5 "five events," and 6 "six or more events." The measure is standardized (converted to z-scores); minimum and maximum pooled scores are -1.28 and 1.58 , respectively. For personal-resource measures, we asked respondents to indicate how much they agreed with items reflecting self-esteem, a sense of mastery, and the assertion of autonomy. Responses range from 0, "strongly disagree," to 3, "strongly agree." Our measures sum and standardize mean scores across items for each scale. We excluded respondents missing data on more than one-third of the items for each scale from our analyses.

Table 2. Factor Analyses of Community-Cohesion Items by Sample.

	"Rural Youth Survey" (<i>n</i> = 530)		"New Hampshire Youth Survey" (<i>n</i> = 628)	
	Community Attachment	Community Detachment	Community Attachment	Community Detachment
My community is safe.	0.67	-0.12	0.77	-0.14
I live in a close-knit community. ^a	0.77	0.09	0.64	0.18
People (around) here are willing to help their neighbors.	0.77	0.03	0.76	0.07
People in my community generally get along with each other. ^b	0.53	-0.32	0.78	-0.13
People in this/my community like to gossip.	-0.02	0.80	-0.01	0.82
People in this/my community know too much about other people's business.	-0.02	0.80	-0.11	0.84
Once you get a bad reputation around here, it's hard to get rid of it. ^c	0.03	0.73	0.13	0.60
(Cronbach's alpha)	(0.67)	(0.74)	(0.75)	(0.69)

Note. The table presents orthogonal varimax rotated principal-component factor loadings of the community-cohesion items. Sample sizes are reduced slightly due to missing values on single items. Items in bold load on the construct indicated at the top of each column (community attachment or community detachment). Factor analyses here included items for depressed mood, self-esteem, mastery, and autonomy (analyses not shown). Such analyses confirmed the discriminant validity of each construct.

^a In the RYS, this item read, "This is a close-knit community."

^b In the RYS, this item, which read, "People in the community do *not* get along with each other," was reverse coded.

^c In the RYS, this item read, "Once you get a bad reputation in this community, it is hard to get rid of it."

Imputed values are mean scores based on the items available. Higher scores reflect higher levels of each resource.

We assess self-esteem by a six-item subset from Rosenberg's (1979) measure. Sample items include "I feel I have a number of good qualities" and "I take a positive attitude toward myself." Minimum and maximum pooled sample scores are -3.39 and 1.23, respectively. Alpha is 0.81. We assess mastery by Pearlin and Schooler's (1978) seven-item scale. Sample items include "I have little control over the things that happen to me" and "I can do just about anything I really set my mind to." Minimum and maximum scores are -2.99 and 2.26, respectively. Alpha is 0.51. We assess autonomy using three items from Hirschfeld et al.'s (1977) interpersonal-dependency measure. Sample items include "What people think does not affect how I feel" and "What people say does not bother me." Minimum

and maximum scores are -2.02 and 1.71 , respectively. Alpha is 0.76 . Factor analyses of all personal resource, community cohesion, and depressed mood items confirm their discriminant validity (analyses available upon request).²

Social statuses and statistical controls. Rural residency is a dummy-coded measure scored 0 for the NHYS participants and 1 for the RYS participants. Female is a dummy-coded measure coded 0 for male and 1 for female youth. Age is measured in years. SES is a composite measure of parents' educational attainment (1, "less than high school," to 6, "graduate or professional degree") and respondents' responses to an item asking them to rate their family's financial situation from 1, "very little money available," to 5, "lots of money available" (Conger and Elder 1994). We standardize the items, sum them together, and then restandardize them to form a composite SES measure. Nonwhite is a dummy-coded measure scored 0 for respondents identifying as Caucasian or white and 1 for those identifying as any other racial or ethnic group. We assess grades in school by an item that asked youth to indicate which of the following best described their grades on their last report card: 1 equals "All A's," 2 "Mostly A's and B's," 3 "All B's," 4 "Mostly B's and C's," 5 "All C's," 6 "Mostly C's and D's," 7 "All D's," 8 "Mostly D's and F's," and 9 "All F's." The item is reverse coded such that higher scores reflect higher grades. Living with both parents is coded 0 for respondents who do not live with both parents and 1 for those who do.

Analytic Strategy

As Table 1 shows, there are a number of statistically significant differences between the two samples prior to our application of statistical controls. Compared to the NHYS respondents, the RYS respondents show lower levels of depressed mood and higher substance-use problems, and their delinquency levels are comparable to the NHYS respon-

² Due to differences in the data-collection strategies of our samples, we assess all of the RYS measures at one time (cross-sectionally); in contrast, we assess the NHYS stress and personal-resource measures six months before the other study measures. That is, we collected the NHYS data on stress, self-esteem, mastery, and autonomy six months prior (at phase 1) to other study measures (collected at phase 2). Although we did not collect data for those four measures at phase 2, data from an earlier NHYS pilot study, administered six months before the phase 1 data collection, did contain the same measures. Thus, to assess the stability of the estimates across a six-month period, we conducted separate analyses (not shown) that examined bivariate correlations of stress, self-esteem, mastery, and autonomy measured six months apart. Data from the pilot wave and phase 1 of the NHYS showed significant ($p < 0.001$) correlations between stress ($r = 0.99$), self-esteem ($r = 0.41$), mastery ($r = 0.18$), and autonomy ($r = 0.31$) at six-month intervals; this implies stable estimates over time. Still, because the timing of these measures varies by sample, we advise cautious interpretations of differences between the RYS and NHYS samples with regard to stress or personal resources.

dents. The RYS respondents also show relatively higher levels of community attachment, community detachment, stressful events, self-esteem, mastery, autonomy, and age. In addition, the RYS participants are less likely than the NHYS participants to be female, to be nonwhite, or to live with both parents, and they show lower SES and school grades than do the NHYS respondents.

We expected sociodemographic differences between the two samples for several reasons. First, the RYS includes 7th and 11th grade students, while the NHYS includes 7th and 10th grade students; thus, the RYS youth are older. Second, Coös County's population is less ethnically diverse than southern New Hampshire (U.S. Census Bureau 2009b), so there are more nonwhite respondents in the NHYS than the RYS. Third, Coös County is less affluent than southern New Hampshire (U.S. Census Bureau 2009b); thus, we expected that the RYS youth would show lower SES and would be less likely to live with both parents, as both are associated with poverty. Finally, the sampling strategies for the two samples were different. Because the NHYS required active (rather than passive) consent, its participants tended to include females and higher-achieving students at a disproportionately higher rate than the RYS. Thus, multivariate analyses adjust statistically for such sociodemographic differences.

For purposes of our multivariate analyses, we pool the two samples. We employ ordinary least squares (OLS) regression estimates in analyses of depressed mood and logistic regression estimates in analyses of substance-use problems and delinquent behavior. As we indicated, we adjust statistically for sociodemographic variables. We also test for u-shaped patterned effects of the community-cohesion dimensions on each outcome. We conduct a series of analyses that regress on each dependent variable social statuses, stressful events and psychosocial resources, and community-cohesion dimensions. We then test for statistical interactions of each dimension of community cohesion by stressful events and by rural residency (e.g., stress \times attachment/detachment, rural \times attachment/detachment). For each outcome, we also test for statistical interactions of community-cohesion dimensions by social statuses and psychosocial resources. Finally, we test for statistical interactions of rural residency by all remaining sociodemographic, social status, and psychosocial resource variables.

Results

Equation 1 in Table 3 shows that depressed mood is lower among respondents living in rural areas and respondents who are male, are younger, are of higher SES, have higher school grades, and are living

Table 3. Effects of Community Cohesion on Depressed Mood, Problem Substance Use, and Delinquent Behavior (N = 1,310).

	Depressed Mood			Problem Substance Use			Delinquent Behavior		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Rural = 1	-0.10***	-0.02	-0.05	0.61**	0.62*	0.57*	0.79	0.92	0.87
Female = 1	0.21***	0.18***	0.16***	1.23	1.05	0.98	0.71**	0.63***	0.58***
Age	0.01*	0.02***	0.01*	1.82***	1.92***	1.88***	1.11**	1.15***	1.11**
SES	-0.04***	-0.02	-0.01	0.86	0.94	0.98	0.79***	0.85*	0.87
Nonwhite = 1	-0.00	-0.03	-0.03	1.02	0.93	0.88	1.27	1.20	1.14
Grades in school	-0.03***	-0.01	-0.00	0.76***	0.80***	0.83***	0.77***	0.82***	0.83***
Lives with both parents = 1	-0.06*	-0.01	-0.01	0.65*	0.79	0.77	0.81	1.01	1.00
Stressful events	—	0.11***	0.10***	—	2.01***	1.87***	—	1.69***	1.58***
Self-esteem	—	-0.06***	-0.07***	—	0.91	0.93	—	0.85*	0.87*
Mastery	—	-0.07***	-0.07***	—	0.97	0.98	—	0.82*	0.83*
Autonomy	—	0.00	0.00	—	1.01	1.00	—	1.18*	1.18*
Community attachment	—	—	-0.00	—	—	0.71**	—	—	0.77***
Community detachment	—	—	0.06***	—	—	1.36**	—	—	1.27**
Constant	2.23	1.92	2.07	—	—	—	—	—	—
Adjusted/pseudo R ²	0.10	0.23	0.25	0.18	0.24	0.26	0.07	0.12	0.14

Note: Equations are in parentheses in column headings. The table presents OLS regression coefficients predicting depressed mood in the past six months (Equations 1 to 3), odds ratios predicting the odds of problem substance use in the past six months (Equations 4 to 6), and odds ratios predicting the odds of delinquent behavior in the past six months (Equations 7 to 9).

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

with both parents. With statistical adjustments for stress and psychosocial resources in Equation 2, only sex (female) and age remain significantly related to depressed mood; that girls and older adolescents are more depressed is consistent with prior studies (Rosenfield et al. 2000; Van Gundy 2002). In addition, it appears that differences between the rural and urban samples are attributable to differences in stress-process components. That is, were it not for their higher levels of self-esteem and mastery, the rural youth would show depressed mood levels similar to their urban counterparts. Equation 3 shows that community attachment is unrelated to depressed mood, and community detachment is associated with higher levels of depressed mood.

In separate analyses (not shown), we examined the degree to which community-cohesion dimensions conditioned the effects of stress on depressed mood; we found no evidence that community attachment or detachment conditioned the effects of stress on depressed mood. In addition, we tested a series of interactions to determine whether variations by rural residency in the effects of stressful events, community attachment, and community detachment on depressed mood were present. We identified two significant effects: the relationship between stress and depressed mood was more strongly positive among the rural youth ($p < 0.05$); and a significant negative association between community attachment and depressed mood emerged among the rural youth ($p < 0.05$). Figures 1 and 2 illustrate the results of each of those interaction effects, respectively. Such results suggest that, relative to the urban youth, the rural youth may be more vulnerable to the effects of stress exposure, but also more protected by a strong sense of attachment to their communities.

With regard to problem substance use, Equation 4 in Table 3 shows that the odds are lower among rural residents, younger respondents, respondents with higher grades, and those who live with both parents. Although Equation 5 shows that stressful events are associated with higher odds of substance-use problems, statistical controls for stress and psychosocial resources do not alter the associations observed in Equation 4. That is, differences in substance-use problems between the two samples are not attributable to stress exposure, nor are suppression effects apparent. Equation 6 shows that community attachment is associated with lower odds, and community detachment with higher odds, of substance-use problems (both $p < 0.01$). In addition, it appears that community attachment and community detachment each exert *independent* effects on substance use problems.

In addition, we examined whether dimensions of community cohesion moderated the effects of stress on problem substance use (analyses

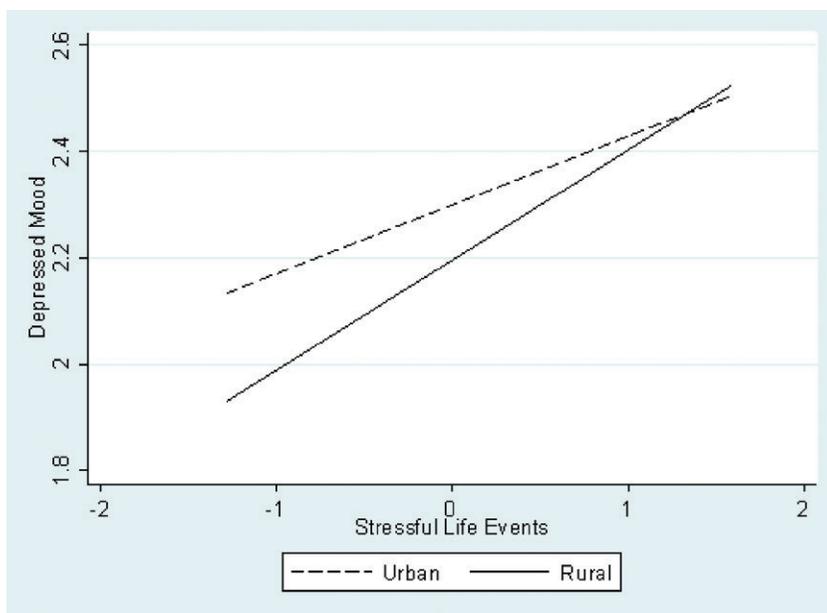


Figure 1. Effects of stress on depressed mood for rural and urban youth.

Note. $N=1,310$. Lines depict the effects of stressful events on depressed mood for rural and urban youth with statistical adjustments for sociodemographic, stress process, and community cohesion variables.

not shown). Although we found no evidence for moderating effects of community detachment, it appears that community attachment does moderate the link between stressful events and problem substance use ($p < 0.01$). As Figure 3 illustrates, the link between stress and substance-use problems is more strongly positive among youth with a lower sense of community attachment. This pattern did not appear to vary by rural residency. Similarly, community-cohesion effects on problem substance use did not appear to differ by rurality; that is, no rural \times attachment (or detachment) interactions were significant.

With regard to delinquent behavior, Equation 7 in Table 3 shows that the odds are lower among female respondents, younger respondents, respondents of higher SES, and respondents with higher grades. With statistical adjustments for stress and psychosocial resources in Equation 8, Equation 7 associations are not appreciably changed; yet this equation shows that stressful events and autonomy are associated with higher odds of delinquent behavior, while self-esteem and mastery are associated with lower odds of delinquency. Equation 9 shows that community attach-

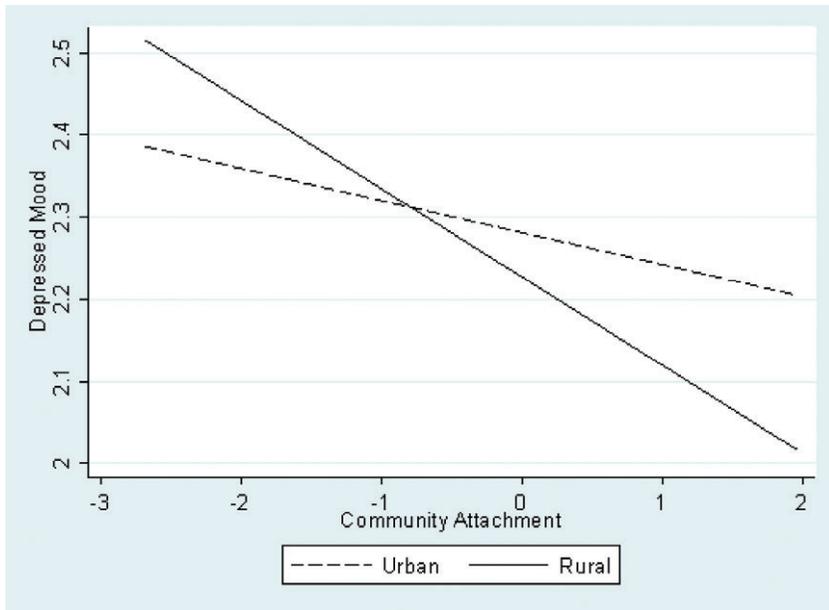


Figure 2. Effects of community attachment on depressed mood for rural and urban youth.

Note: $N = 1,310$. Lines depict the effects of community attachment on depressed mood for rural and urban youth with statistical adjustments for sociodemographic, stress process, and community detachment variables.

ment is related to lower odds, and community detachment is related to higher odds, of delinquent behavior. Moreover, community attachment and detachment appear to contribute to youth delinquency independently of one another. Separate analyses (not shown) revealed no conditional effects of community cohesion dimensions by stress or rural residency.

In addition, we examined the degree to which community attachment or detachment exert curvilinear (u-shaped) effects on outcomes, such that very high or very low levels are associated with the highest levels of depressed mood, substance-use problems, or delinquent behavior (analyses not shown).³ We found no such effects for any of the three outcomes. We also tested a series of interactions to examine whether community-cohesion dimensions condition the effects of social statuses

³ We tested curvilinear effects of community attachment by adding to Equations 3, 6, and 9 in Table 3 a squared community-attachment term. Similarly, we tested for curvilinear effects of community detachment by adding a squared community-detachment term to each of those equations. No u-shaped effects were observed.

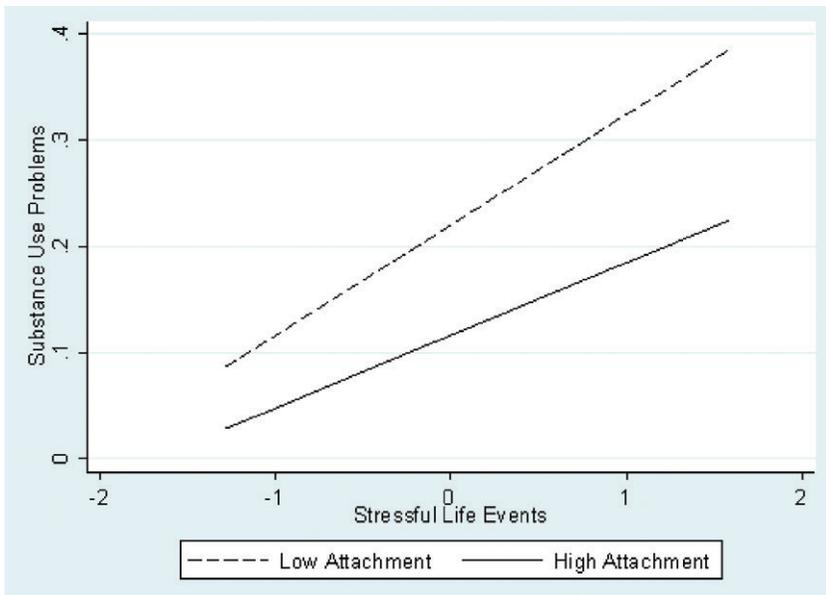


Figure 3. Effects of stress and community attachment on substance use problems.
Note. $N = 1,310$. Lines depict the effects of stressful events on substance-use problems by low (10th percentile) and high (90th percentile) community-attachment levels with statistical adjustments for sociodemographic, stress process, and community detachment variables.

and psychosocial resources on any of the three outcomes. Significant interactions emerged with respect to depressed mood only. Results suggest that community attachment reduces depressed mood more so among youth who are older ($p < 0.05$) and of higher SES ($p < 0.05$). The positive effect of community detachment on depressed mood is attenuated somewhat among youth reporting higher SES ($p = 0.05$). Finally, we tested for the moderating effects of rural residency on all remaining sociodemographic, social status, and psychosocial resource variables for the three outcomes. Only two effects varied by sample. With regard to depressed mood, living with both parents was protective among the urban youth only. Similarly, among urban youth only, school grades were associated with lower odds of delinquent behavior.

In sum, we find that in both samples community attachment is associated with lower levels of substance-use problems and delinquent behavior; community detachment is associated with higher levels of depression, substance-use problems, and delinquency; and community attachment buffers the effects of stress exposure on substance-use prob-

lems. Results show also that attachment and detachment each exert independent effects on outcomes. With regard to depressed mood, community attachment appears to be particularly protective among youth who are older or of higher SES, and detachment appears to be especially damaging among youth with lower SES levels. Finally, with regard to depressed mood, rural youth may be particularly susceptible to the damaging effects of stress exposure, but at the same time more shielded than their urban counterparts by a strong sense of attachment to their communities.⁴

Discussion

Building on classic and contemporary sociological work (Durkheim 1951; Pearlin 1989, 1999; Thoits 1995), our study evaluates the degree to which two dimensions of community cohesion—attachment and detachment—serve as psychosocial resources or detriments in “the stress process” among youth in two residentially distinct areas. As Fabiansson (2006:58) asserts, social inclusion and involvement “are of significance for young people, independently of the type of community” in which they reside. Likewise, we find support for the idea that community cohesion contributes meaningfully to the stress process among youth, and with few exceptions, its dimensions operate similarly for rural and urban youth. In particular, community attachment is associated with reduced substance-use problems and delinquency, and community detachment is related to elevated levels of depressed mood, problem substance use, and delinquent conduct. With respect to alcohol and drug use problems, moreover, community attachment *buffers* the effects of stress exposure among youth. Thus, a sense of community-level closeness, cohesion, and safety may serve as an especially protective psychosocial resource for youth facing adverse situations. That we find few rural-urban variations in the effects of stress and psychosocial resources is consistent with work showing largely uniform effects by race or ethnicity of stress exposure and personal resources on young adult depression (Turner et al. 2004). In many respects, then, the stress process would appear to operate reliably across various subpopulations.

We do, however, discover two potentially important sample-specific effects. First, the effects of stress on depressed mood appear to be more strongly positive among youth in the RYS than among the NHYS respon-

⁴ Given that our data are clustered within schools, we estimated multilevel models (not shown) that adjusted for school-level variance. Substantive results were similar to those we report here. Analyses are available upon request.

dents. Rural youth thus may be more vulnerable to the effects of stressful events on mood than are urban youth. Arguably, the same protections from “urban problems” afforded by rural life may hinder youth development of more nuanced coping repertoires to deal with varied forms of adversity and strife. Given limitations in our stress measures, however, we advise cautious interpretations here. Research has underscored the need for comprehensive stress measures, which incorporate a wide range of stress experiences, to assess adequately group variations in responses to stress and strain (Turner and Avison 2003; Turner et al. 1995; Van Gundy 2002). In this regard, future research on rural-urban differences should take care to include a wide array of possible stress types, including those more common to youth in rural areas.⁵

Our results suggest also that community attachment may be a crucial resource for the psychological well-being of rural youth. That is, among the RYS respondents, community attachment is associated with lower depressed mood levels; however, attachment is unassociated with depression in the NHYS sample. It seems plausible that the geographical isolation and interdependency associated with rural and small town communities (Fabiansson 2006; Van Gundy 2006) create a particularly critical need for youth inclusion, belonging, and acceptance. Unlike urban youth, who have opportunities for social attachment and supports beyond the boundaries of their neighborhoods, youth in rural areas assume a highly visible yet socially constrained presence among youth and adult members of their broader communities (Fabiansson 2006). Arguably, then, attachment to one’s immediate community represents a more salient psychosocial resource among rural youth, but further research should examine this more closely.

In spite of the sample-specific effects we describe, we reiterate that the bulk of our evidence suggests that stress and psychosocial resources, like perceived community cohesion, operate similarly for youth in rural and urban areas. That we find consistent effects in two youth samples, employing different data collection (passive versus active consent among participants) and design (cross-sectional versus longitudinal) strategies, further supports our contention that the stress process provides a useful framework for exploring the mechanisms underlying youth emotional and behavioral well-being. We do,

⁵ Additionally, our observed sample-specific stress effects may derive from differences in the operationalization of stressful events in the two samples. Stressful events were assessed six months earlier in the NHYS than the RYS data; thus, if recent stress exposure more strongly affects depressed mood than earlier stress exposure, then the RYS youths’ apparent vulnerability to stressful events may be due to the *timing* of those events, and not stress exposure per se. Future work should address these issues more closely.

however, acknowledge several limitations of this work and highlight fruitful avenues for future research on the stress process.

First, our methodological constraints require comment. Given differences in the data collection strategies for the RYS and NHYS, interpretations of between-sample variations should be considered carefully. While the RYS sample is certainly representative of the population from which it was drawn, the representativeness of the NHYS is unknown. Research that uses *passive* consent strategies could largely eliminate such sample biases in future work. More generally, the extent to which our results generalize to other rural and urban contexts is uncertain; therefore, future work should attempt to replicate and extend our findings in various sociocultural contexts. Moreover, our analyses here are cross-sectional and thus cannot estimate temporal ordering among the stress-process components studied. Future studies should therefore employ longitudinal research designs to better elucidate the timing and sequence of the stress process at various stages of the life course (George 1999). In fact, further clarity concerning the extent to which community cohesion acts as either a cause or consequence of various aspects of well-being will be crucial for future practice and policy.

As we observed, a better application of the stress-process framework also would consider a more complete range of stress experiences in order to avoid misspecification biases in the estimation of stress effects by group. As Turner and his colleagues have observed (1995:106), “[R]esearch is required that indexes social stress in a more comprehensive way than typical life event inventories have allowed.” Similarly, a consideration of a broader range of psychosocial resources (e.g., family support, school belonging, youth aspirations) may provide important information about the life trajectories of rural and urban youth (Stracuzzi 2009; Tucker 2009). In addition, ecological approaches that consider the significance of contextual-level effects, such as community- and network-level features and (dis)advantages (Falci and McNeely 2009; Wright et al. 2006), may help clarify how social cohesion impinges on youth well-being more broadly. To better comprehend the stress process and its consequences, moreover, a focus on *positive* affective and behavioral outcomes may be useful. For example, future work might explore the degree to which community cohesion promotes family, educational, and work-related success.

Future research also should examine more closely variations in the opportunities and constraints that derive from social-status positions (e.g., gender, SES, residency) and influence well-being and success. We find that youth occupying lower economic strata may be more harmed

psychologically by community detachment, and enjoy fewer mental health benefits from community attachment, than do their higher SES counterparts. Moreover, prior work (Fabiansson 2006) has suggested that gendered economies of work and play in some rural communities may contribute to young men's and women's immediate and long-term health and well-being in unique ways. Future studies should examine the degree to which such social-structural effects extend to later life struggles and triumphs among various populations in rural and urban areas.

Finally, we recommend that social policymakers and health practitioners consider seriously the importance of community attachment and detachment for the well-being of youths and adults. Such a consideration may be especially relevant in areas where services are lacking. That is, while rural communities may face disproportionately high levels of poverty and unmet need for youth services, they tend also to foster greater cohesion and informal social supports (Van Gundy 2006). The most successful support programs are likely to be those that draw on the existing strengths of communities and tailor them "to the specific cultural milieu" of those communities (Scaramella and Keyes 2001:248). Moreover, if *detachment* from one's community shapes well-being above and beyond one's community *attachment*, as our results suggest, it may be crucial to integrate into social programs elements that target the needs of "disconnected" community members (Brown and Emig 1999). As Fabiansson observes (2006:50), "In rural as well as urban areas, community residents need to be a part of social activities to feel respected, valued and accepted." In fact, their social and psychological well-being may depend on it.

Appendix: Items for Outcome Measures

Depressed Mood

Respondents are asked how often in the past six months they have had each feeling or experience below.

1. I felt sad.
2. I couldn't get going.
3. I did not feel like eating.
4. My sleep was restless.
5. I felt depressed.
6. I felt fearful.
7. I felt lonely.

Substance-Use Problems

Respondents are asked to indicate how often each has happened to them in the past six months.

1. I was under the influence of alcohol or drugs at school or work.
2. I missed school or work because of my alcohol or drug use.
3. My alcohol or drug use caused problems with my friends.
4. My alcohol or drug use caused problems with my family.
5. I used more alcohol or drugs than I meant to use.
6. I wanted to quit or cut down on my alcohol or drug use.
7. I was under the influence of alcohol or drugs when I could have gotten hurt physically (like while swimming, climbing, using a knife, crossing the street, driving, etc.).
8. I accidentally hurt myself while using alcohol or drugs.
9. I stopped or cut down on important things (like sports, hobbies, work, or seeing friends and family) because of my alcohol or drug use.
10. I was suspended from school because of my alcohol or drug use.
11. I had problems with the law because of my alcohol or drug use.
12. My alcohol or drug use caused problems with my emotions or nerves.
13. My alcohol or drug use caused problems with my physical health.
14. I spent a lot of time getting over the effects of alcohol or drugs.
15. I did not perform well on important tasks (like schoolwork, chores, sports, or work) because of my alcohol or drug use.

Delinquent Behavior

Respondents are asked how many times they have participated in each behavior in the last six months.

1. Taken something (worth less/more than \$50) from a store without paying for it?
2. Other than from a store, taken something not belonging to you?
3. Intentionally damaged or destroyed someone's property that did not belong to you?
4. Gotten into a (physical) fight at school?
5. Seriously hit someone (not a family member)?
6. Committed assault on anyone (a violent physical attack)?

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