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The Neighborhood Context of Adolescent Mental Health*

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Mental health disorders in adolescence are pervasive, often carry into adulthood, and appear to be inversely associated with social status. We examine how structural aspects of neighborhood context, specifically, socioeconomic stratification and racial/ethnic segregation, affect adolescent emotional well-being by shaping subjective perceptions of their neighborhoods. Using a community-based sample of 877 adolescents in Los Angeles County, we find that youth in low socioeconomic status (SES) neighborhoods perceive greater ambient hazards such as crime, violence, drug use, and graffiti than those in high SES neighborhoods. The perception of the neighborhood as dangerous, in turn, influences the mental health of adolescents: the more threatening the neighborhood, the more common the symptoms of depression, anxiety, oppositional defiant disorder, and conduct disorder. Social stability and, to a lesser extent, social cohesion, also emerge as contributors to adolescent disorder. This investigation demonstrates that research into the mental health of young people should consider the socioeconomic and demographic environments in which they live.

Mental and emotional disorders are not uniformly distributed throughout social systems but are more densely concentrated in some social strata than others. The most consistently documented pattern pertains to socioeconomic status (SES), which is inversely associated with the prevalence of mental and emotional impairment (e.g., Bruce, Takeuchi, and Leaf 1991; Dohrenwend and Dohrenwend 1969; Frerichs, Aneshensel, and Clark 1981; Kessler, Price, and Wortman 1985; Kessler et al. 1994; Mechanic 1972; Pearlin and Lieberman 1979), although the strength of this association may differ by race (Kessler and Neighbors 1986). Past research demonstrates that impairment may produce downward social mobility, but most of this association can be attributed to the influence of SES on mental and emotional functioning (e.g., Eaton 1986; Fox 1990; Liem and Liem 1978; Mechanic 1972; Wheaton 1978). These conclusions come almost entirely from research with the adult population. However, recent research demonstrates that disorder often first appears prior to adulthood, and that pre-adult onset is a major risk factor for subsequent adult disorder (Fleming and Offord 1990; Petersen et al. 1993). Childhood and adolescence, therefore, may be critical times with regard to the formation of the differential distributions observed among adults.

Moreover, emergent research demonstrates that psychological distress is pervasive among adolescents (e.g., Bird et al. 1988; Dornbusch et al. 1991; Emslie et al. 1990; Fleming and Offord 1990; Garrison et al. 1989; Gore, Aseltine, and Colton 1992; Kandel and Davies 1982; Kaplan, Hong, and Weinhold

1984; Lewinsohn et al. 1993; Manson et al. 1990; Roberts and Sobhan 1992; Rutter et al. 1976; Schoenbach et al. 1983; Siegel et al. 1996). The social distribution of disorder during adolescence appears to parallel the adult distribution (Garrison et al. 1989; Gore et al. 1992; Nolen-Hoeksema and Girgus 1994; Petersen, Sarigiani, and Kennedy 1991; Petersen et al. 1993; Roberts and Sobhan 1992; Siegel et al. 1996), although not all studies are consistent in this regard (Fleming and Offord 1990; Monck et al. 1994).

Our research seeks to elaborate these structural connections by examining the joint contribution of family SES and neighborhood. Parental SES is seen as influencing adolescent exposure to stress and access to resources, which, in turn, affect adolescent mental health. This relationship exists in part, we submit, because family SES physically places adolescents within neighborhoods that vary with regard to the presence of social stressors and resources. Thus, both family SES and neighborhood are seen as affecting adolescent emotional well-being by regulating exposure to stressors and access to resources.

Structural perspectives, including an emphasis upon neighborhood context, have been articulated for other aspects of adolescent health, linking neighborhood poverty with early childbearing and high school attrition. According to Wilson (1987), concentrated poverty leads to social isolation, which generates socialization practices and family lifestyles that lead to psychological attributes that contribute to school failure and out-of-wedlock childbearing. Massey and Denton (1993) identify segregation as the key structural factor in the creation of urban ghettos. They contend that social isolation and closed opportunity structures have created a "culture of segregation," comprising behaviors, attitudes, and values that are sharply at variance with those common in mainstream American society. In socially isolated neighborhoods, some behaviors, including adolescent childbearing and dropping out of high school, become not only common but normative.

Empirically, neighborhood poverty and the social isolation that accompanies it are associated with both teenage sexual behavior and educational outcomes over and above individual and family effects (Brooks-Gunn et al. 1993). These contextual effects appear to be nonlinear, that is, especially pronounced for the most disadvantaged settings, particu-

larly for African Americans (Crane 1991; Hogan and Kitagawa 1985). For non-Hispanic White youth, the absence of affluent neighbors seems more important than the presence of poverty, possibly because Whites typically do not live in as extremely impoverished areas as do African Americans (Brooks-Gunn et al. 1993). Relatively little research has focused upon youth from other racial/ethnic groups.

Contextual effects have been hypothesized for development in general and for developmental psychopathology in particular (Bronfenbrenner 1986; Jessor 1992, 1993). Jessor's (1992, 1993) conceptual framework exemplifies this ecological approach. He identifies several contexts as important to adolescent development: neighborhood, school, peer group, and family. These social contexts are seen as having both objective (e.g., neighborhood crime rate) and subjective (e.g., fear of crime) dimensions. According to Jessor (1992, 1993), these contexts present both risk (e.g., presence of illegal activities) and protective (e.g., institutions such as churches) factors. To date, the ecological perspective on psychopathology has had limited application (e.g., Blythe and Leffert 1995; Homel and Burns 1989; Klebanov, Brooks-Gunn, and Duncan 1994; Kumpfer and Turner 1991).

The conceptual model guiding our analysis is depicted in Figure 1. This model consists of three major components: family background; neighborhood context; and the outcome, adolescent mental health. Family background is considered exogenous, that is, it is not determined by components of the model. The characteristics of the family, especially SES and race/ethnicity, are seen as selecting the family into a particular neighborhood climate via processes of housing preferences and residential segregation (Massey and Denton 1993). In addition, family background is seen as influencing adolescent mental health independent of its connection to neighborhood. Several processes potentially contribute to an independent effect of family, including genetic risk, shared environment (other than neighborhood), and interpersonal transmission—for example, dysfunctional family relations (Plomin 1989).

We distinguish two subcomponents of neighborhood: its structural properties and the individual's subjective experience of living within that neighborhood. As illustrated in

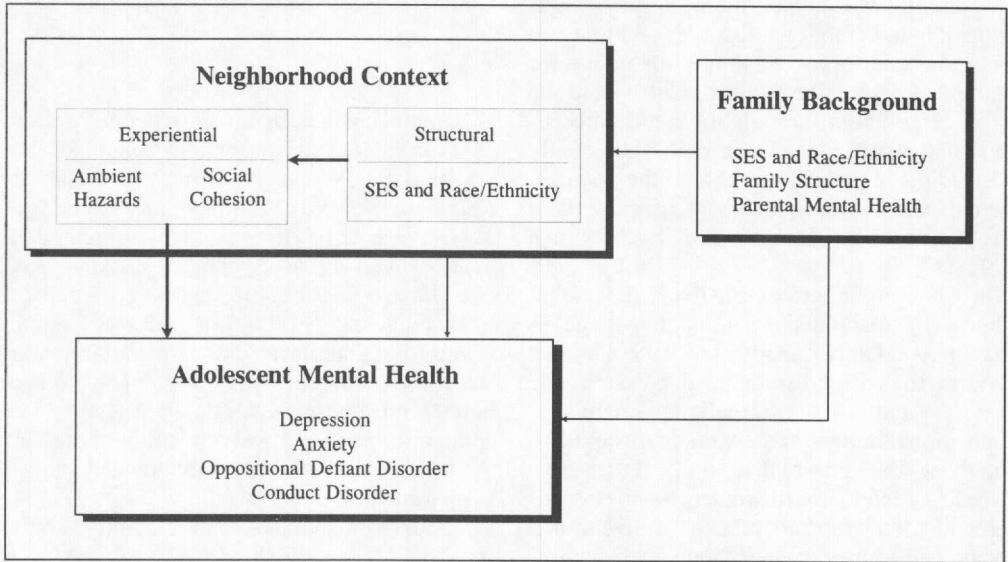**Figure 1. Contextual Effects on Adolescent Mental Health**

Figure 1, the structural component encompasses the stratification of neighborhoods by SES and their segregation by race/ethnicity. These structural properties are seen as systematizing the daily lives of residents, thereby generating the experiential component of neighborhood.

Our model highlights two experiential components of neighborhood that are especially pertinent to mental health. The first is an indicator of the presence of threatening conditions, which we label ambient hazards. These conditions include graffiti, crime, violence, drug use and dealing, and so forth. The second component, social cohesion, is seen as essential to the control of ambient hazards. In addition, social cohesion is viewed as potentially counteracting the impact of ambient hazards upon individuals. These aspects of neighborhood—ambient hazards and social cohesion—are analogous to the individual-level concepts of social stress and resources that figure prominently in sociological approaches to mental health (Aneshensel 1992; Pearlin 1989).

Our thinking here parallels that of Massey and Denton (1993). They contend that racial segregation concentrates poverty in urban ghettos, which intensifies physical decay in housing, a process that becomes self-reinforcing and irreversible after a threshold of housing abandonment is crossed. Segregation, concentrated poverty, and physical decay contribute to social disorder (e.g.,

graffiti and public drinking). Social disorder, in turn, promotes psychological and physical withdrawal from the community because it signifies a violation of widely shared norms about what constitutes a "good" neighborhood. According to Massey and Denton (1993), residents come to mistrust neighbors, increasingly stay indoors and off the streets, limit social contacts with close friends and family, and generally retreat from public participation in the community. This withdrawal weakens informal processes of social control that ordinarily help to maintain a neighborhood's stability. If left unchecked, this process ultimately generates additional indicators of social disorder (e.g., welfare dependency, single parenthood, and family disruption) and crime. Poverty and segregation, therefore, shape the social experience of living within a neighborhood.

We hypothesize that neighborhood structure (i.e., economic stratification and segregation) is associated with the adolescent's experience of living within the neighborhood. Experiencing one's environment as threatening or cohesive, in turn, is associated with mental health outcomes. In addition, as Figure 1 shows, the structural neighborhood is seen as independently influencing adolescent mental health through other, unmeasured processes.

The outcomes with which we are concerned are indicators of adolescent mental health. Because we conceive of the impact of

neighborhood as pervasive rather than disorder-specific, we include multiple dimensions of mental and emotional disorder. Were we to focus instead upon a single disorder—for example—depression, our model would be informative about the neighborhood antecedents of that disorder, but provide potentially misleading conclusions about the general mental health consequences of neighborhood (cf. Aneshensel, Rutter, and Lachenbruch 1991).

It is not possible to exhaustively include all adolescent disorders because the range is quite large. Consequently, we have sampled two internalizing disorders, depression and anxiety, and two externalizing disorders, oppositional defiant and conduct. It should be noted at the onset that these latter two disorders refer to disruptive patterns of behavior that run counter to conventional norms and values, that is, deviant behavior. The meaning of these behaviors is debatable, especially in situations where conventional norms are problematic, for example, in cultures of opposition (Massey and Denton 1993) *vide ut supra*. We return to this theme in the discussion section.

METHODS

Sample Selection and Field Procedures

A detailed account of study procedures appears elsewhere (Siegel et al. 1996). Subjects were selected from a three-stage, area probability sampling frame of Los Angeles County: census tracts, blocks, and households. Listed households were screened to determine whether an adolescent between the ages of 12 and 17 years lived there as a permanent resident. In households with multiple adolescents, one adolescent was selected randomly using the next birthday method. Of the 1,417 eligible households, interviews were completed with 877 (61.9%) adolescents. Omitting adolescents not interviewed because the enrollment period ended (N = 184) increases the response rate to 71.1 percent.

Interviews were conducted in person at the respondent's home in English or Spanish. The Spanish instrument was a verified translation and back-translation of the English version. Interviews lasted an average of 2.2 hours.

Sample recruitment and interviewing began in October 1992 and ended in April 1994.

Sample

Sample characteristics correspond well to 1990 census data for gender and age, but non-Hispanic Whites are somewhat underrepresented, whereas Latinos are somewhat overrepresented. The sample is weighted to the 1990 census racial/ethnic distribution and to a flat age distribution, that is, 16.7 percent in each age category within each racial/ethnic group. Weights also adjust for variability in selection probabilities resulting from households with multiple eligible adolescents. The application of these weights compensates for threats to external validity inherent in subject nonparticipation.

The most distinctive feature of this sample is its heterogeneity. The 877 adolescents in the sample are between the ages of 12 and 17 years, with an average of 14.5 years. Approximately equal numbers of males (53.5%) and females participated (46.5%). The ethnic composition of this sample is diverse. Almost half of the sample is Latino (48.5%), a category that itself encompasses considerable diversity: Mexican American (U.S. born) (40.2%); Mexican (Mexico born) (38.1%); Salvadoran (10.8%); Guatemalan (3.0%); other Central and South American (3.8%); and other (4.0%). The remainder is composed of non-Hispanic Whites (25.8%), African Americans (11.4%), Asian Americans (10.6%), and those of other racial/ethnic backgrounds (3.6%).

The sample is also diverse in its socioeconomic characteristics. For fathers, 30.6 percent had not graduated from high school, 29 percent were high school graduates, 11.8 percent had some post–high school education, and 28.5 percent had graduated from college or had advanced degrees. For mothers, this distribution is 35.3 percent, 28.4 percent, 16.1 percent, and 20.2 percent, respectively. The median annual household income is $28,750, which translates into a per capita income of $8,452. About one in four (26.9%) households lives below the federal poverty standard (U.S. Bureau of the Census 1994).

Measurement

Adolescent Mental Health. Two internalizing disorders, depression and anxiety, were

assessed using adolescent self-report of recent symptoms. Depressed mood was measured with the Children's Depression Inventory (CDI; Kovacs and Beck 1977), a 21-item inventory that assesses symptoms of depression during the past two weeks, with items scored from 0 to 4 (e.g., "I do not feel sad; I feel sad sometimes; I am pretty sad all the time; I am so very sad that I can't stand it.") A total CDI score is calculated by summing across the items (after rescoring weight loss for those who are dieting). The scale has excellent internal consistency reliability and adequate test-retest reliability (Weiss et al. 1991) and has been shown to be a valid measure of depressed mood among referred and nonreferred populations of adolescents (Compas, Ey, and Grant 1993). In our sample too, the CDI demonstrates excellent internal consistency reliability overall (alpha = .86) and in subgroups defined by age, gender, and race/ethnicity. The CDI mean is 10.18 (s.d. = 7.80) for a possible range of 0 to 84; the observed range is 0 to 51.

Anxiety was assessed with a subset of eight items, for example, "feeling nervous and shaky," from the Hopkins Symptom Checklist (Derogatis et al. 1974). Each item was self-rated based on how much the adolescent was bothered by the symptoms during the past two weeks; response categories ranged from 1 to 5, from "not at all" to "extremely." The anxiety measure also demonstrates strong reliability (alpha = .86) overall and within specific subgroups. The summated scale encompasses the full potential range of 8 to 40, with a mean of 12.70 (s.d. = 5.15).

Two externalizing disorders were assessed using subscales of Stony Brook Child Psychiatric Checklist-3R (Gadow and Sprafkin 1987). Conduct disorder refers to a "persistent pattern of conduct in which the basic rights of others and major age-appropriate societal norms or rules are violated" (American Psychiatric Association [APA] 1987:53). It is frequently manifest as physical aggression, covert stealing, lying, cheating, truancy, or being a runaway (APA 1987:53). Conduct disorder was assessed as a count (0 vs. 1) of 13 behaviors, for example, "stolen or taken something belonging to another person" and "had a serious physical fight with someone" over the past year. Its reliability is good (alpha = .73) and consistent across subgroups. Adolescents reported 0 to 11 behav-

iors, just short of the full range of 0 to 13; the average is 1.23 behaviors (s.d. = 1.75).

Oppositional defiant disorder refers to a "pattern of negativistic, hostile, and defiant behavior without the more serious violations of the basic rights of others that are seen in conduct disorder" (APA 1987:56). A person with this disorder is argumentative, easily annoyed, loses one's temper, deliberately annoys others, and defies rules (APA 1987: 56). This disorder was assessed in the same manner as conduct disorder for six behaviors, for example, "blamed other people for your own mistakes" and "taken your anger out on others or tried to get even." The scale displays its full potential variation, 0 to 6 behaviors; demonstrates good reliability (alpha = .74); and has a mean of 2.74 behaviors (s.d. = 1.92).

The four measures of psychopathology are positively and significantly ($p \leq .001$) correlated with one another, but only moderately so.[1] The highest correlations are between the two internalizing disorders (r = .47) and between the two externalizing disorders (r = .44). The correlations between internalizing and externalizing disorders are of much smaller magnitude (average r = .24).

Subjective Neighborhood. To assess the adolescent's subjective appraisal of his or her neighborhood, a study-specific list of Likert-type attributes was rated with response categories of "strongly agree" (coded 1) to "strongly disagree" (coded 4). Principal components and reliability analysis identified two conceptually distinct and meaningful subscales.

The first dimension, *ambient hazards*, asks about 11 potential dangers and demonstrates excellent reliability (alpha = .90). The potential dangers are safety; violent crimes; drive-by shootings; property damage; gangs; drug use and dealing; graffiti; whether the police give people a hard time for no reason; and whether the neighborhood and housing are clean (scoring reversed), ugly, or in good shape (scoring reversed). On average, adolescents endorsed between three and four of the listed hazards. Some teens (18.7%) did not report any of these conditions, whereas others (29.1%) mentioned six or more. The most commonly reported hazards were gangs (59.8%), drug use or dealing (43.3%), and graffiti (49.5%).

The second dimension of neighborhood

quality is *social cohesion*, which demon-
strates acceptable reliability across its three
items (alpha = .64). The adolescents gener-
ally see themselves as living in neighbor-
hoods in which people are socially connected
to one another: Approximately four in five
teens agreed or strongly agreed that kids
know one another (89.2%), adults know one
another (79.3%), and that people are friendly
(84.6%). Two-thirds of the sample (67.7%)
endorsed all three of these conditions,
whereas only a few teens (2.7%) did not
endorse any of these conditions. Ambient
hazards and social cohesion are modestly
correlated with one another (r = −.27; p ≤
.001).

RESULTS

Types of Neighborhoods

We consider first the extent to which
characteristics of these neighborhoods coa-
lesce to form meaningful types. Neighbor-
hoods are operationalized with 1990 census
data for the 49 sampled tracts and grouped
using cluster analysis. Two sets of character-
istics are analyzed. Socioeconomic status
(SES) is represented by three indicators:
median household income, percent of popula-
tion below the poverty line, and percent of the
labor force in professional, executive, or
management level occupations (hereafter re-
ferred to as management occupations). The
racial/ethnic composition of the neighborhood
is measured with two variables: percent Black
and percent Hispanic. The distributions of
these characteristics, shown in the last row in
Table 1, indicate that the sampled census
tracts capture the diverse character of the
population of Los Angeles County.

Using the centroid hierarchical method of
analysis, eight clusters were extracted using
peaks in the cubic clustering criterion and the
pseudo *F*-statistic as criteria. As shown in
Table 1, more than half of the sampled tracts
fall into two clusters: cluster 2, underclass[2] to
working-class Hispanic neighborhoods, and
cluster 6, middle-class White and Hispanic
areas. The neighborhood clusters are clearly
differentiated on the basis of SES and
race/ethnicity. In general, the more affluent
the neighborhood, the greater the spread of
income within that neighborhood. The racial/
ethnic indicators reveal two distinct patterns:

(1) highly segregated residential areas with
high concentrations of one racial/ethnic group
and (2) integrated neighborhoods.

Socioeconomic status and race/ethnicity are
not independent of one another.[3] Instead,
neighborhood SES is contingent upon neigh-
borhood racial/ethnic composition and vice
versa. African Americans are most highly
segregated and most densely concentrated in
impoverished neighborhoods. Latinos, like
African Americans, are disproportionately
represented in the poorest neighborhoods, but
unlike African Americans, they are also
integrated into other neighborhoods. These
patterns suggest that, whereas SES may be of
primary importance to ethnic segregation,
racial segregation may be attributable to
additional factors, at least in Southern Cali-
fornia.

Families Living Within Neighborhood Types

We turn now to the characteristics of
sample families living within these neighbor-
hood types. In general, the distribution of
families across neighborhood types, shown in
Table 2, approximates the distribution of
census tracts across neighborhood types (see
Table 1). The exception is the most affluent
cluster, which is markedly below expecta-
tions. This deficiency is due to an error in the
selection of household addresses for screen-
ing: An insufficient number of addresses were
generated for one of these two tracts. As a
result, cluster 8 is combined with cluster 7 in
all subsequent analyses because of its small
number of subjects and because these two
clusters are most similar in SES and racial/
ethnic composition.

The poverty data reveal greater economic
disparities between neighborhood clusters
than is suggested solely by the income data.
The poverty rate takes into consideration not
only income, but also the number of persons
dependent upon that income. The families in
this study are likely to have a greater than
average number of household members be-
cause they contain a minimum of two
persons—the adolescent and his or her parent.
As a result, per capita income for families is
less than the overall average for all house-
holds.

The racial/ethnic composition of these
families corresponds closely to that of their
neighborhoods. However, in most of the

TABLE 1. Characteristics of Census Tract Clusters

Cluster Description	Census Tracts N	Census Tracts Percent	Socioeconomic Status — Median Household Income (thousands $)	Socioeconomic Status — Percent Poverty	Socioeconomic Status — Percent in Management[b] Occupations	Race/Ethnicity — Percent Black	Race/Ethnicity — Percent Hispanic
1. Underclass; Black and Hispanic	2	4.1	15.8–17.4	30.1–37.8	10.8–13.2	58.2–61.2	35.6–37.5
2. Underclass to working-class; Hispanic	11	22.4	17.5–27.7 (24.3)	14.8–35.0 (24.8)	5.7–18.3 (12.2)	0.0–12.7 (2.3)	69.4–94.0 (83.8)
3. Working-class; Black	2	4.1	22.2–31.5	10.7–14.6	18.3–29.1	78.7–90.9	4.3–17.2
4. Working-class; non-Hispanic White, Hispanic, and Black	3	6.1	20.8–25.2 (22.4)	19.8–28.0 (21.1)	20.7–26.9 (24.5)	11.0–16.8 (15.9)	26.0–32.1 (27.2)
5. Working-class; Hispanic and non-Hispanic White	5	10.2	21.2–35.6 (26.3)	8.9–22.1 (20.3)	11.2–21.9 (13.9)	2.2–18.5 (3.3)	49.9–62.4 (55.3)
6. Middle-class; non-Hispanic White and Hispanic	15	30.6	30.9–52.9 (36.7)	2.1–18.5 (7.8)	15.5–33.2 (23.5)	0.3–12.4 (4.6)	18.6–45.6 (27.8)
7. Middle to upper middle-class; non-Hispanic White	9	18.4	35.3–67.7 (55.1)	1.5–8.8 (5.8)	32.8–53.1 (41.7)	0.0–3.7 (1.9)	5.4–23.3 (12.9)
8. Upper middle-class; non-Hispanic White	2	4.1	96.4–96.8	3.8–6.5	56.4–63.2	1.4	5.7–6.9
Total	49	100.0	15.8–96.8 (33.5)	1.5–37.8 (10.7)	5.7–63.2 (21.9)	0.0–90.9 (3.3)	4.3–94.0 (31.4)

Note: N = 49; Data from the 1990 Census, Summary Tape File 3B (U.S. Department of Commerce 1992).

[a] Median values are in parentheses and are presented only for clusters of more than two census tracts.

[b] Percent of either parent in the labor force who work in professional, executive, or management occupations as defined by the 1990 U.S. Census.

TABLE 2. Characteristics of Families with Adolescents by Neighborhood Type

| Cluster | Families in Cluster | | Sample Characteristics | | | | |
| | | | Socioeconomic Status | | | Race/Ethnicity | |
Description	N	Percent	Median Household Income (thousands $)	Percent Poverty	Percent in Management[a] Occupations	Percent African American	Percent Latino
1. Underclass; Latino and African-American	78	8.9	16.2	47.1	15.3	56.0	45.2
2. Underclass to working-class; Latino	208	23.7	17.2	44.0	9.8	1.0	94.5
3. Working-class; African-American	42	4.8	23.4	41.3	16.9	81.9	14.6
4. Working-class; White, Latino, and African-American	36	4.1	18.2	31.2	13.5	2.5	60.1
5. Working-class; Latino and White	72	8.2	23.8	36.2	21.4	7.7	64.2
6. Middle-class; White and Latino	284	32.4	36.2	16.1	29.1	4.0	43.3
7. Middle- to upper middle-class; White	152	17.3	48.8	4.8	53.0	1.0	21.3
8. Upper-class; White	5	0.6	80 or more	n.a.[b]	n.a.[b]	n.a.[b]	n.a.[b]
Total	877	100.0	27.0	26.9	26.0	11.4	52.6

Note: N = 877. The terminology differs between Tables 1 and 2 because Table 1 uses the terminology employed by the census, whereas Table 2 uses the terminology of our research.
[a] Percent of either parent in the labor force who work in professional, executive, or management occupations as defined by the 1990 U.S. Census.
[b] Too few to compute percentage.

neighborhood clusters, the sample has a somewhat higher concentration of Latinos and lower concentration of African Americans than the overall population. The Latino population in Los Angeles tends to be young and to have high fertility rates, which may contribute to the higher concentration of Latinos in the family sample.

The correspondence between the structural characteristics of the neighborhood and the attributes of resident families is probably best interpreted as social selection. Families volitionally move into and out of neighborhoods (subject to financial constraints, personal circumstances, and barriers of segregation), and these movements, or lack thereof, define the structural attributes of the neighborhood.

The Subjective Neighborhood

Next we turn to how the objective conditions that differentiate neighborhood types influence the subjective experience of living within that type of neighborhood. Ambient hazards, the adolescents' perceptions of their neighborhoods as threatening, are shaped by the type of neighborhood in which they reside, as shown in Table 3.[4] The gross neighborhood effect is sizable (Model I), accounting for 22.2 percent of the variance in these perceptions. Three types of neighborhoods are distinctive: the most impoverished areas (1), which, on average, are seen as most hazardous; and middle-class (6) and affluent (7, 8) communities, which tend to be perceived as least hazardous. Between these extremes, adolescents tend to rate their neighborhoods in a similar manner. The neighborhood effect appears to reflect the impact of socioeconomic conditions as distinct from racial/ethnic composition because the working-class neighborhoods, which differ from one another in racial/ethnic composition, do not differ in terms of ambient hazards.

The differentiation of threatening conditions by neighborhood type is not changed appreciably by the introduction of control variables (Model II), although some of these variables are themselves related to perceptions of threat and, accordingly, produce a modest increment in explained variance. One of these variables is a community-level indicator of residential stability: Ambient hazards are most evident in neighborhoods characterized by a low density of long-term residents. Conversely, neighborhoods appear safe when there are many long-term residents, irrespective of how long an adolescent himself or herself has lived in that neighborhood.

Three characteristics of the adolescent are associated with ambient hazards, independent of neighborhood type and residential tenure: race/ethnicity, age, and family structure. Other things being equal, older teens tend to rate their neighborhoods as threatening, whereas teens who live with both of their natural parents tend to see their environments as safe. African-American adolescents rate their communities as more threatening than other adolescents, even when the racial/ethnic composition and socioeconomic status of their neighborhoods are statistically controlled.[5] African-American adolescents, therefore, are especially likely to be exposed to ambient hazards because they are African Americans and because they are disproportionately likely to live in underclass neighborhoods.

In contrast to ambient hazards, neither neighborhood nor individual characteristics exert strong influences upon perceptions of social cohesion, as shown in Table 3. Social cohesion is differentiated slightly by the set of neighborhood types, but no one neighborhood type emerges as distinctly different from the others (Model I).[6] This pattern is unchanged when other variables are added to the regression equation (Model II). Two of the variables that are associated with ambient hazards are also associated with social cohesion. Adolescents who live in residentially stable neighborhoods tend to see their communities as both safe and cohesive, irrespective of how long they themselves have lived in these communities. Older adolescents tend to see their neighborhoods as disconnected as well as threatening. In addition, females see their neighborhoods as less cohesive than do males. In contrast to the results for ambient hazards, there is no discernible association between race/ethnicity and social cohesion.

The factors considered in this analysis, both at the community and at the individual level, have substantially greater explanatory efficacy for ambient hazards than for social cohesion. This differential is most marked for the neighborhood typology. The remaining variables produce approximately the same increment in explained variance for social

TABLE 3. Subjective Aspects of Neighborhood by Neighborhood Context and Family Background

	Regression Coefficients							
	Ambient Hazards				Social Cohesion			
	Model I		Model II		Model I		Model II	
Independent Variable	b (S.E.)	β	b (S.E.)	β	b (S.E.)	β	b (S.E.)	β
Neighborhood Cluster[a]								
1. Underclass; African-American and Latino	3.944*** (.882)	.185	2.690** (.962)	.126	.013 (.222)	.003	−.125 (.243)	−.026
2. Underclass to working-class; Latino	.816 (.738)	.057	.828 (.741)	.058	−.080 (.186)	−.025	−.036 (.187)	−.011
3. Working-class; African-American	.095 (1.048)	.003	−.570 (1.232)	−.020	.280 (.264)	.044	−.122 (.311)	−.019
4. Working-class; non-Hispanic White, Latino, African-American	.514 (1.124)	.016	−.686 (1.146)	−.022	−.197 (.283)	−.028	.035 (.289)	.005
6. Middle-class; non-Hispanic White and Latino	−2.762*** (.713)	−.213	−2.474*** (.715)	−.190	.284 (.284)	.098	.246 (.180)	.085
7, 8. Middle to upper middle-class; non-Hispanic White	−5.802*** (.769)	−.366	−5.836*** (.819)	−.368	.240 (.193)	.068	.291 (.207)	.082
Neighborhood Stability								
Percent households in same home 5+ years	—	—	−5.468*** (1.509)	−.125	—	—	.870* (.381)	.089
Adolescent Attributes								
Lived in same home 5+ years (/mo)	—	—	.161 (.391)	.013	—	—	.156 (.098)	.056
African-American (/other)	—	—	2.073* (.868)	.108	—	—	.223 (.219)	.052
Latino (/other)	—	—	.002 (.482)	.000	—	—	−.100 (.122)	−.036
Per capita income (thousands of dollars)	—	—	−.035 (.036)	−.036	—	—	−.002 (.009)	−.010
Age (years)	—	—	.221* (.106)	.062	—	—	−.124*** (.027)	−.156
Female (/male)	—	—	.579 (.362)	.047	—	—	−.182* (.091)	−.067
Family Structure[b]								
Intact nuclear	—	—	−1.224* (.522)	−.099	—	—	−.002 (.132)	−.001
Single parent	—	—	−.170 (.575)	−.012	—	—	−.006 (.145)	−.002
Intercept	25.570*** (.637)	—	24.841*** (1.888)	—	8.885*** (.160)	—	10.551*** (.476)	—
R^2	1.222***	—	.258***	—	.015*	—	.056***	—
F	41.209	—	19.936	—	2.232	—	3.376	—
d.f.	6.868	—	15,859	—	6.868	—	15,859	—

* $p < .05$; ** $p < .01$; *** $p < .001$.
[a] Omitted reference category is (5) Working-class; Latino and non-Hispanic White.
[b] Omitted reference category is composite of reconstituted family and other.

cohesion as for ambient hazards. However, a model containing only the individual-level variables (not shown) has a considerably greater R^2 value for ambient hazards (.143) than for social cohesion (.041). Thus, both the community-level and the individual-level variables contribute more to perceptions of danger than to perceptions of affinity.

Table 4 reveals that the experiential neighborhood pervasively influences the mental health of adolescents. Of the neighborhood and family factors considered in this analysis, the presence of ambient hazards is the sole factor related to each dimension of mental health: The more threatening the neighborhood, the more common the symptoms of depression, anxiety, oppositional defiant disorder, and conduct disorder. Social cohesion independently contributes to only one disorder, depression, and this association is inverse: Depression is lowest when people in the neighborhood know one another. At the bivariate level, social cohesion also is inversely associated with oppositional defiant disorder ($r = -.08$; $p \leq .05$) and anxiety ($r = -.07$; $p \leq .05$). To determine whether the impact on psychopathology of ambient hazards is contingent upon the level of social cohesion, hazard-by-cohesion interaction terms were assessed. None of these terms attained statistical or substantive significance.

The independent impact of the neighborhood clusters is circumscribed, with select neighborhoods being associated with three of the four types of symptoms, as also shown in Table 4. For oppositional defiant disorder, symptoms are extremely low in working-class African-American communities and somewhat high in middle-class communities with dense concentrations of non-Hispanic Whites and Latinos. The average level of depression tends to be low in one type of neighborhood, impoverished Latino neighborhoods, but this coefficient needs to be interpreted in conjunction with the similarly sized coefficient for Latino adolescents, which is in the opposite direction. Thus, Latino adolescents generally experience more depressive symptoms than their peers, except in poor neighborhoods with dense concentrations of Latinos. Similarly, Latinos living in impoverished Latino neighborhoods are especially unlikely to exhibit indications of conduct disorder.

Although the neighborhood clusters play a limited role in the multivariate analysis, it should be noted that the basic model

containing only the neighborhood typology is statistically significant for the two externalizing disorders and approaches significance for depression. The amount of variance explained in these bivariate models, however, is small: 6.3 percent ($p \leq .001$) for oppositional defiant disorder, 1.6 percent ($p \leq .05$) for conduct disorder, and 1.3 percent ($p \leq .08$) for depression. Only one cluster is distinctive for conduct disorder: Behaviors indicative of this disorder are most common in underclass African-American neighborhoods. Behaviors indicative of oppositional defiant disorder are least common in working-class African-American communities and most common in middle-class or more affluent neighborhoods. Although these differences are limited, they do demonstrate the structural foundation for the experiential effects described above.

Of the background characteristics considered in this analysis, gender is most extensively associated with symptomatology. On average, females manifest more symptoms of depression and anxiety, whereas males manifest more symptoms of conduct disorder. Gender does not contribute appreciably to oppositional defiant disorder. Age is positively correlated with three of the four disorders and approaches statistical significance for the fourth, depression ($p \leq .06$). Oppositional defiant disorder is most prevalent in single-parent families, the sole independent impact of family structure, although at the bivariate level symptoms of conduct disorder are also more common in single-parent households. The independent contribution of family income is mixed: Income is inversely associated with depression, but positively correlated with oppositional defiant disorder.

Collectively, the variables analyzed here account for a modest amount of the variance in mental health outcomes. The variables display the least explanatory efficacy for symptoms of anxiety, being about twice as potent for the other three outcomes. To ascertain the contribution of the neighborhood variables, these regression equations were reestimated without the neighborhood variables. The variance accounted for by the model containing only background characteristics is 5.3 percent ($p \leq .001$) for depression, 3.3 percent ($p \leq .005$) for anxiety, 5.0 percent ($p \leq .001$) for oppositional defiant disorder, and 6.5 percent ($p \leq .001$) for conduct disorder. A comparison to the R^2

TABLE 4. Disorder by Neighborhood Context and Family Background

			Regression Coefficients							
	Depression		Anxiety		Oppositional Defiant Disorder		Conduct Disorder	
Independent Variable	b (S.E.)	β	b (S.E.)	β	b (S.E.)	β	b (S.E.)	β
Neighborhood Cluster[a]								
1. Underclass; African-American and Latino	-.085 (.218)	-.020	.009 (.061)	.008	-.198 (.131)	-.074	-.072 (.108)	-.033
2. Underclass to working-class; Latino	-.418* (.167)	-.144	-.024 (.047)	-.030	-.148 (.101)	-.082	-.187* (.083)	-.128
3. Working-class; African-American	.116 (.278)	.020	.033 (.078)	.021	-.609*** (.168)	-.170	-.194 (.138)	-.067
4. Working-class; non-Hispanic White, Latino, African-American	-.396 (.258)	-.062	-.013 (.072)	-.007	-.263 (.156)	-.066	-.231 (.128)	-.072
6. Middle-class; non-Hispanic White and Latino	-.176 (.162)	-.067	.036 (.045)	.049	.233* (.098)	.143	.018 (.080)	.014
7, 8. Middle to upper middle-class; non-Hispanic White	-.109 (.190)	-.034	.091 (.053)	.102	.224 (.115)	.112	.047 (.094)	.029
Neighborhood Stability								
Percent households in same home 5+ years	-.419 (.343)	-.047	-1.124 (1.096)	-.050	.026 (.207)	.005	-.025 (.170)	-.006
Perceptions of Neighborhood								
Ambient Hazards	.022* (.008)	.107	.009*** (.002)	.160	.028*** (.005)	.220	.022*** (.004)	.214
Social Cohesion	-.112*** (.032)	-.123	.000 (.009)	.001	-.025 (.019)	-.044	.029 (.016)	.063
Adolescent Attributes								
Lived in same home 5+ years (/no)	-.064 (.088)	-.025	.008 (.025)	.012	.068 (.053)	.044	.001 (.044)	.001
African-American (/other)	-.190 (.197)	-.049	-.085 (.055)	-.080	.047 (.119)	.019	.155 (.098)	.079
Latino (/other)	.351** (.109)	.142	.052 (.030)	.077	.020 (.066)	.013	.170** (.054)	.136
Per capita income (thousands of dollars)	-.016* (.008)	-.082	.002 (.002)	.030	.013** (.005)	.103	.001 (.004)	.012
Age (years)	.004 (.024)	.005	.004 (.007)	.020	.033* (.015)	.074	.070*** (.012)	.193
Female (/male)	.277*** (.082)	.112	.093*** (.023)	.136	.031 (.049)	.020	-.074* (.041)	-.059
Family Structure[b]								
Intact nuclear	.125 (.118)	.050	.010 (.033)	.014	.066 (.071)	.042	-.087 (.058)	-.070
Single parent	.147 (.129)	.052	.048 (.036)	.061	.214** (.078)	.122	.032 (.064)	.023
Intercept	3.188*** (.608)	—	2.128*** (.168)	—	-.252 (.363)	—	-1.217*** (.299)	—
R²	.093		.058		.135		.109	
F	5.187		3.108		7.842		6.190	
d.f.	17,857		17,857		17,857		17,857	

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.
[a] Omitted reference category is (5) Working-class; Latino and non-Hispanic White.
[b] Omitted reference category is composite of reconstituted family and other.

values reported in Table 4 indicates that about half of the explained variance in the complete model may be attributed to background characteristics. The coefficients for the background variables are similar across the model containing only background variables and the complete model. That is, the inclusion of macro-level characteristics does not appear to alter appreciably the impact of background variables.

These analyses were repeated within each type of neighborhood. No evidence was detected for differential equations across clusters. However, most clusters are small relative to the number of parameters being estimated, pointing to limited statistical power. These results are best regarded as inconclusive.

DISCUSSION

Our results link the structure of residential neighborhoods to the mental health of adolescents living within those neighborhoods. Both the census data and the survey data paint a portrait of Los Angeles County as being residentially stratified by SES and segregated by race/ethnicity. These structural arrangements are associated with the experience of living within these neighborhoods, especially with the perception of the neighborhood as threatening. In general, adolescents' perceptions of ambient hazards are inversely associated with the average SES of their neighborhood, a contextual effect that appears to be stronger than the SES of the adolescent's family.

Neighborhood residential stability is also associated with perceptions of ambient hazards and social cohesion, suggesting that adolescents benefit from living in stable communities even if they themselves are recent arrivals (cf. Sampson 1988). In transient areas, teenagers encounter weak social ties and numerous indications of social decay, such as graffiti, drug dealing, and gangs. This effect, it must be emphasized, is independent of the SES and racial/ethnic characteristics of the neighborhood and its residents (see Table 3). These results are consistent with Massey and Denton's (1993) description of a self-sustaining cycle of social disorder and social withdrawal. Also consistent with this orientation is the inverse association between social cohesion and ambient hazards.

Adolescents' experience of living in a neighborhood — in particular, exposure to ambient hazards — is associated with their mental health. As the neighborhood becomes more threatening, symptoms of depression, anxiety, oppositional defiant disorder, and conduct disorder increase. Social cohesion is inversely associated with one mental health outcome, depression. However, our measure of social cohesion is quite circumscribed and of modest reliability. The stronger psychometric properties of the measure of ambient hazards may account, in part, for the finding that perceptions of threat are more pervasively important to adolescent mental health than perceptions of social cohesion. Given the limitations of the measure of social cohesion, such an inference would be premature.

In addition, the structural neighborhood is associated with the two externalizing disorders, although the pattern of association differs: Conduct disorder is most common in the underclass cluster, whereas oppositional defiant disorder is most common in middle-class and more affluent clusters. The pattern of conduct disorder is consistent with the "culture of opposition" described by Massey and Denton (1993), in which "antisocial" behaviors may be understood as adaptation to feelings of hopelessness and despair evoked by poverty and segregation.

In contrast, the distribution of oppositional defiant disorder is inconsistent with this interpretation. This result is perplexing because the behaviors characteristic of oppositional defiant disorder are similar to those characteristic of conduct disorder except that those of the former are less serious violations of social norms, especially with regard to the rights of others, than those of the latter. Although these two sets of behaviors are positively associated, oppositional defiant disorder does not appear to be merely a less serious version of conduct disorder; rather, the symptoms of the two disorders manifest different risk factors.

The set of behaviors comprising oppositional defiant disorder resembles the stereotype of the rebellious teenager popularized by Erikson's (1950) theory of an adolescent identity crisis entailing a conflictual separation of self from parents during an inevitable period of "Stürm und Drang" (Freud 1958; Hall 1904). Although it might be tempting to

dismiss oppositional defiant behavior as "normal" adolescent behavior, empirical evidence demonstrates that there are large individual differences in the experience of such turmoil (Graham and Rutter 1973; Offer and Sabshin 1984; Rutter et al. 1976). This variability is apparent in this investigation as well. Furthermore, this variation is systematically related to the socioeconomic and demographic characteristics of the teenager.

Jencks and Mayer (1990) argue that advantaged neighbors may enhance the life chances of young people through mechanisms like collective socialization, social contagion, and institutional practices, but that affluent neighbors may also prove undesirable via processes such as relative deprivation, cultural conflict, and competition for scarce resources. This possibility implies that future research should examine both the potentially desirable and undesirable effects of neighborhoods, including affluent ones, on mental health.

More generally, the neighborhood and individual-level socioeconomic and demographic factors that are associated with symptoms of psychiatric disorder appear to be selective rather than monolithic. This pattern of specificity indicates that understanding the mental health consequences of social organization is a more complex task than describing the social etiology of a specific psychiatric disorder (Aneshensel et al. 1991). Two lines of inquiry are suggested by these results. First, the mechanisms through which social context and characteristics affect the mental health of young people need to be elaborated. Second, it is necessary to identify the conditions under which these relationships operate. We can reasonably speculate that at least some of the mediating effects detected in the first step would represent conditional relationships; that is, the impact of neighborhood is contingent upon attributes of the individual and vice versa, and these contingencies differ across mental health outcomes. If this were not the case, each independent variable would be associated similarly with all mental health outcomes. The conceptual framework of mediating and moderating social influences on mental health is well established in the sociological literature on adult mental health (Aneshensel 1992; Pearlin 1989). This body of literature provides a good starting point, we submit, for social research into the mental health of young people.

Our analysis necessarily simplifies complex connections among key constructs, prompting some caveats about the interpretation of these results. Family background is treated exogenous to neighborhood context, whereas the interplay between these domains is most likely dynamic. Families select themselves into communities on the basis of characteristics of the communities. Some of this selection may entail factors directly pertinent to adolescent mental health, for example, psychologically impaired parents may also be of low SES and thus place vulnerable children in risky neighborhoods. In addition, if neighborhood characteristics alter the life chances of adolescents, as our results suggest, this connection is likely to be present for the family unit as well, for example, the extent to which the social networks of neighborhoods assist with job-seeking activities. As described by Massey and Denton (1993), neighborhoods change in response to the characteristics and actions of their residents: The isolated action of one actor affects the subsequent actions of others thereby creating a powerful feedback loop between individual and collective behavior. Although we have attempted to separate the unique mental health impact of neighborhood and family, our analysis necessarily falls short of this ideal. Consequently, unobserved heterogeneity or endogeneity may in actuality produce the observed influence of neighborhood, family, or both.

Similarly, we treat our subjective measures of the experiential neighborhood as exogenous to mental health. Subjective measures are appropriate because our intention is to assess the adolescent's perception of his or her environment. However, distressed adolescents may have an especially negative view of their social context. In other words, the connection between the objective and subjective environment may be tenuous for some teens.

Modeling neighborhood as a typology is desirable because it captures the joint impact of two dimensions on which neighborhoods are stratified, SES and race/ethnicity. These dimensions are usually treated as distinct factors with intersecting effects. This alternative does not accurately reflect the stratification of neighborhoods in Los Angeles because SES is unevenly distributed across racial/ethnic profiles. In particular, the cluster analysis better represents the absence of

certain combinations of neighborhoods, such as affluent minority communities. The clusters derived here are only one of several reasonable ways of representing the information on the SES and racial/ethnic characteristics of neighborhoods; that is, cluster analysis is an empirical method that provides several alternative solutions. Here we are aided by the fact that this is a local survey and the investigators are knowledgeable about the specific communities studied. Thus, we are confident that our neighborhood categories are accurate reflections of these communities.

In conclusion, the results of this investigation demonstrate that research into the mental health of young people needs to consider the socioeconomic and demographic environments in which they live. The developmental perspective, which has dominated research in this area, tends to emphasize the impact of the individual's physical growth, sexual maturation, and cognitive advancement. The ecological perspectives discussed earlier place these developmental processes within a social context, but focus almost exclusively on proximal social influences, such as those involving family, peers, and school. The research reported here expands greatly the scope of social influence that needs to be incorporated into models of adolescent mental health by demonstrating that adolescents also are influenced by more distal social conditions. The empirical links between neighborhood structure, experiential neighborhood, and adolescent mental health, although of modest magnitude, nevertheless demonstrate connections among location in stratified social orders, the ordinary experience of daily life, and the mental health of young people.

NOTES

1. Log transformations are used to improve the distributions of the anxiety and conduct disorder scales; square root transformations are used for depression and oppositional defiant disorder.
2. The term underclass refers to the social and economic class with incomes below subsistence level. Although not all of these census tracts meet the definition of underclass—40 percent below the poverty line (Wilson 1987)—we use this term because in general the poverty rates are extreme.
3. The cluster analysis reveals a major limitation to principal components analysis, which has been the standard analytic method in factorial

ecology. A principal component analysis of these data yielded two empirically uncorrelated factors (eigenvalue criterion of 1.00): SES/ethnicity and race. This solution is misleading given that there is an especially dense concentration of poor Blacks in the community. This discrepancy arises because the community is both economically stratified *and* racially segregated. The principal components analysis does not produce a good representation of the data because the data are not multivariate normal.
4. The hierarchical structure of these data is accommodated by the neighborhood typologies generated by the cluster analysis, although variances may be slightly underestimated. Consequently, caution should be used in interpreting marginally significant results.
5. It is not possible to estimate the interaction of race/ethnicity by neighborhood type due to a lack of power resulting from the small number of minority adolescents residing in homogeneously non-Hispanic White neighborhoods.
6. At least one type differs significantly from one other type, given that the equation is statistically significant, suggesting that alternative reference categories be used. This strategy would increase the risk of a Type I error, however, due to multiple tests of significance, which do not seem warranted given the small magnitude of any such difference.

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