

SCHOOLS AND DISCRETIONARY TIME

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SCHOOLS AND DISCRETIONARY TIME

Introduction

Every day, some 26 million U.S. adolescents ages 10 through 18 go to school. How do school environments affect adolescents' health—that is, their physical, social, and behavioral development and well-being? The role of schools in adolescent health is the subject of increasing debate (e.g., 27,147,210). School personnel often think that adolescents bring their health problems to the schools and regard efforts to address specific problems and generally improve adolescent health as the responsibilities of adolescents themselves, their parents, the health care system, and perhaps other institutions in the community (107b). The view that adolescents bring a considerable number of health problems with them to the school building each day is certainly supported by clinical evidence, but there is also evidence that schools play a role in exacerbating or ameliorating adolescents' health problems, broadly defined.¹

As discussed elsewhere in this Report, some schools offer health education, fitness activities, and lunch or other meals to students, and some schools provide health care services through school nurses or school-linked health centers (SLHCs).² Some school buildings, are located in unsafe neighborhoods and have deteriorating facilities with asbestos, lead paint, radon, or other problems with potential implications for the health of their adolescent students, but these risks will not be addressed in this chapter. The question addressed in the first half of this chapter is how school academic and social environments affect U.S. adolescents' health. As discussed further below, particular aspects of school academic and social environments have been correlated with indicators of school adaptation (e.g.,

school grades, attendance, educational attainment, being retained in grade, and school dropout³), and some of these indicators have been correlated with adolescent health outcomes (e.g., self esteem, substance use, adolescent pregnancy and childbearing, and delinquency). Some major Federal policies and programs related to the education of adolescents are also discussed.

U.S. adolescents attending school spend some of their time every day away from school. It is virtually certain that the physical, social, and behavioral development of adolescents is shaped, at least in part, by the experiences that occur during their discretionary time (i.e., time that is not spent at school or in essential maintenance activities such as eating or sleeping). The second half of this chapter is devoted to an examination of adolescents' discre-



Photo credit: Bruce Clark/Education Week

Each day, some 26 million U.S. adolescents go to school, but the role of school environments in promoting adolescent health, whether discretely or through academic achievement, only recently seems to have emerged as a concern.

¹As noted in Vol. I of this Report and in ch. 2, "What Is Adolescent Health?" in this volume, a broad definition of health—including physical, social, and mental aspects and emphasizing a sense of well-being in addition to the absence of problems—fits the period of adolescence better than a narrow definition emphasizing the absence of physical health problems. In considering adolescent health, one should take into account traditional measures of physical health, newer behavioral measures, and a broad range of indicators of optimal functional status (including emotional and social status, perceived quality of life). A fully realized view of adolescent health should also be sensitive to the developmental changes that occur during adolescence.

²Nutrition and fitness activities in schools are discussed in ch. 7, "Nutrition and Fitness problems: Prevention and Services," in this volume. Information about SLHCs is presented in ch. 15, "Major Issues Pertaining to the Delivery of Primary and Comprehensive Health Services to Adolescents," in Vol. II.

³Although "school dropout" is awkward terminology, this is such a common term in the field that OTA is using it. School dropout can be measured in various ways. In the U.S. Department of Education's report *Dropout Rates in the United States: 1988*, distinctions are made among *event dropout rates* (the proportion of students who drop out in a single year), *status dropout rates* (the proportion of the population that has dropped out at a given point in time), and *cohort dropout rates* (the proportion of a group of students that drop out over time) (202b).

tionary time. It discusses available research on how adolescents spend their time and describes issues related to the development of health-enhancing alternatives, including the National and Community Service Act of 1990 (Public Law 101-610). The chapter ends with conclusions and policy implications.

School Influences on Adolescent Health⁴

Evidence that allows inferences about causal relationships between school environments and adolescent health outcomes such as substance abuse, pregnancy, delinquency, or victimization to be made with confidence is limited. The reason is that schools are seldom considered as factors in discussions of ways to improve adolescent health, and most of the research that has been done in this area shows correlational relationships rather than causal relationships. Another problem is that school and nonschool factors (e.g., individual factors, family factors, neighborhood factors) interact with each other in complex ways that have yet to be fully understood. When considering how school environments affect the health, behavior, and well-being of 10- to 18-year-old students, it is important to keep these caveats in mind.

The bulk of the discussion below details available evidence for the effects of different aspects of school environments—academic policies, school size, school decisionmaking and other processes, timing of school transitions, and classroom size, teachers' attitudes and behavior, school policies regarding cultural diversity, and parental involvement in schools—on adolescent health. First, however, overview of the U.S. educational system, with descriptions of Federal, State, and local funding responsibilities, and student enrollment statistics, is presented as background in the first section below. Major Federal programs related to education are discussed briefly after the discussion of evidence on the effects of school environments on adolescent health.

Overview of the U.S. Educational System for Adolescents

Figure 4-1 provides an overview of the structure of elementary and secondary education in the United States. Students usually spend 6 to 8 years in the elementary grades and then go on to a 4- to 6-year program in high school. They normally complete the entire program through grade 12 by age 17 or 18 (204).

Ten-year-olds typically enter grade 5, 11-year-olds grade 6, 12-year-olds grade 7, 13-year-olds grade 8, 14-year-olds grade 9, 15-year-olds grade 10, 16-year-olds grade 11, and 17-year-olds grade 12. In 1987, adolescents ages 10 to 18 totalled an estimated 26.4 million students (13.2 million in elementary school and 13.2 million in secondary school) (204).⁵ From 1971 to 1984, enrollment in U.S. elementary and secondary schools steadily declined, but a new wave of secondary school students is expected in the years ahead (204).

U.S. schools are affected by funding, policies, and regulations at various levels of government, but public education is primarily a State and local responsibility. States establish State educational policies and determine how State monies are allocated. Generally, the States delegate operational responsibility for schools to local school boards. Some 15,000 local school boards set most policy for over 100,000 individual elementary and secondary schools in the United States (202).

The Federal Government supports elementary and secondary education through financial aid programs that include the Chapter 1 program discussed later in this chapter. In fiscal year 1989, the appropriation for Chapter 1 was \$4.6 billion (202a). Federal spending for education is a small percentage of overall spending for elementary and secondary education. At its highest point in 1979-80, Federal spending accounted for 9.8 percent of total expenditures. In 1985-86, the Federal Government contributed only 6.7 percent of total revenues, with the States picking up nearly half of the expenses (49.4

⁴This section draws substantially from a paper prepared under contract to OTA by Michelle Fine entitled "Middle and Secondary School Environments as They Affect Adolescent Well-Being" (72a).

⁵As noted in ch. 18, "Issues in the Delivery of Services to Selected Groups of Adolescent" in Vol. III, adolescents ages 10 through 18 numbered about 31 million in 1987. About 22.01 million (71 percent) are white, non-Hispanic adolescents; about 4.65 million (15 percent) black, non-Hispanic adolescents; about 3.1 million (10 percent) are Hispanic adolescents; and 1.24 million (4 percent) are "other" (including Asian) adolescents. The percentage of U.S. adolescents who are not "white, non-Hispanic" is growing, and this trend can be expected to continue into the foreseeable future. Racial and ethnic minority adolescents disproportionately live in poor or near-poor families.

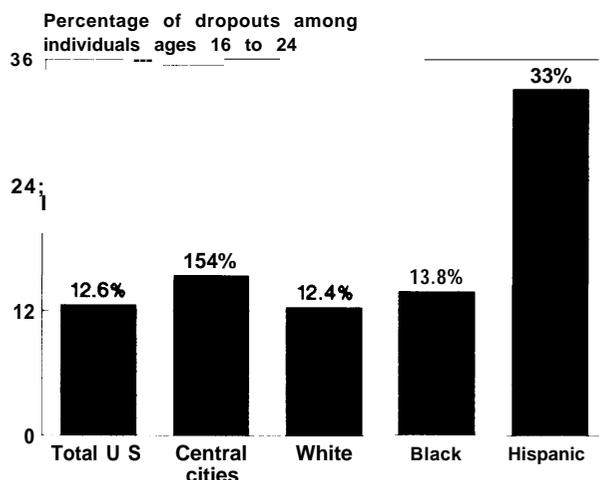
cans are higher than aggregate rates for the U.S. population (202b) (see figure 4-2).

Relationships Between Adolescent Health and School Adaptation

In the course of this assessment, OTA found that school environments, academic achievement and failure, and adolescent health are typically viewed as discrete entities. If relationships between academic achievement and failure and adolescent health are considered, it is the impact of health problems on academic achievement that is discussed, not the reverse (e.g., 108a). The role of school environments in promoting or impeding academic achievement has been controversial (32a,103a,178). The role of school environments in promoting adolescent health, whether discretely or through academic achievement, appears to be a recent concern and one not yet fully recognized by many professional educators (27,107b,147). This section reviews research that suggests that, just as adolescent health problems can affect school adaptation,⁸ some indicators of school achievement have been found to affect adolescents' health, well-being, and ultimately, their long-term economic productivity. After briefly addressing measures of school adaptation, the next section reviews evidence for the impact of aspects of school social environments and policies on school adaptation and on adolescent achievement and health. It is important to note that OTA knows of no single study that has tracked in a systematic way the impacts of school environments on school adaptation and health, and the feedback loops that must occur among these elements (see figure 4-3). It is difficult, of course, to disentangle the effects of the academic achievement and health of students attending a school from other aspects of the school environment.⁹ Thus, tentative inferences must be drawn about many of the relationships among school processes and adolescent outcomes.

Students' adaptation to school can be measured using a variety of indicators. Short-term indicators of school adaptation include school attendance, school grades, participation in extracurricular activi-

Figure 4-2—High School Dropout Rates in the United States, 1989^{a,b}



^aDropout rates shown in this figure are status dropout rates (the proportion of individuals of a specified age who are not enrolled in school and have not finished high school at any given point in time) among individuals ages 16 to 24 as of October 1989.

^bThe data on which this figure is based are Current Population Survey data from the U.S. Department of Commerce, Bureau of the Census.

^cHispanics may be of any race.

SOURCE: Office of Technology Assessment, 1991, based on U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, *Dropout Rates in the United States*, NCEs 90-659 (Washington, DC: September 1 1990).

ties, and being retained in grade. Short-term indicators of school adaptation are sometimes predictive of school dropout. One highly predictive short-term indicator is retention in grade (70,1 12). After social class controlled for ability, being retained in grade (and therefore being overage for that grade) is the best predictor of school dropout (68a).

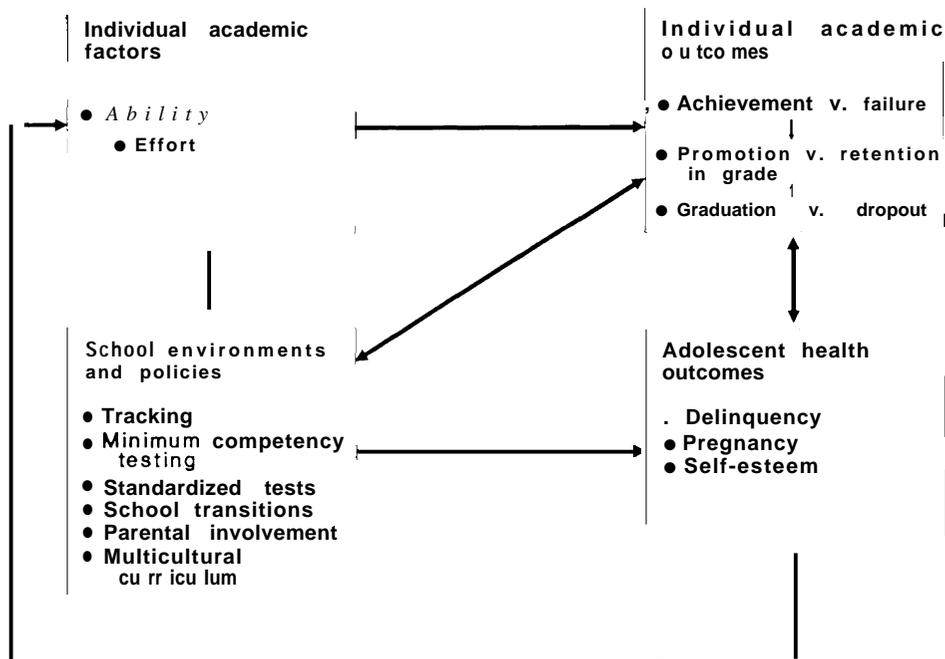
As shown in table 4-1, studies have found that dropping out of school and other indicators of poor school adaptation are associated with adolescent health outcomes that include substance abuse, delinquency, and adolescent pregnancy and childbearing¹⁰ (1,14,62,84a,85,137,210). Furthermore, the lack of a high school diploma seriously jeopardizes adolescents' future economic and social well-being (216). The consequences are particularly adverse for poor and minority students (14,81a,198). Having a

⁸For an analysis of adolescent school loss (i.e., absences) occurring as a result of illness, see ch. 6, "Chronic Physical Illnesses: Prevention and Services," in this volume.

⁹For example, a school in which many students are routinely absent, or hang around school but skip classes, or are violent in school, can have a deleterious impact on teachers and administrators (e.g., they may come to feel powerless and depressed), who in turn have an impact on the more well-behaved students. Environments such as these are commonly observed but have rarely been systematically researched (72a).

¹⁰The relationship between school dropout and adolescent pregnancy and school dropout is complex. For further discussion see ch. 10, "Adolescent Pregnancy and Parenting: Prevention and Services," in this volume.

Figure 4-3—Possible Relationships Among School Environments, School Adaptation, and Adolescent Health



SOURCE: Office of Technology Assessment, 1991.

high school diploma, even with a poor achievement record, significantly improves labor market participation (216), although poor achievement may have other negative consequences (84a,137). High school dropouts are more likely to be unemployed or underemployed than high school graduates and are half as likely to hold white collar jobs as high school graduates are (216). Because they are less likely to be employed or to have jobs with good career prospects, high school dropouts are more likely to be poor and to experience the health and other disadvantages associated with poverty (e.g., substandard living conditions, poor nutrition, diminished access to health care services). Their children are also likely to experience disadvantage.¹¹ For society as well as dropouts, dropping out of school has high costs. The societal costs include not only lost productivity and increased social welfare costs but more intangible costs associated with poverty and lack of education among certain segments of society.

According to some observers, high dropout rates and high rates of retention in grade are one indication of the failure of schools to meet their students' educational or social growth needs (81a). This failure seems particularly apparent in schools serving largely poor, racial, and ethnic minority adolescents, and adolescents in central cities. Unfortunately, dropout rates are typically reported by population groupings based on race, and not by school or community. Reporting measures of school adaptation in this way makes it difficult to disentangle school environment effects on dropout and retention in grade from the influence of other factors (e.g., family economic need). National data suggest that socioeconomic status and race/ethnicity are related to students' school adaptation, as measured in terms of retention in grade and school dropout (see table 4-2). An analysis of data from the High School and Beyond Survey using a composite family socioeconomic status index (including family income, parental education, and other factors) found

¹¹The health and other effects of growing up poor are complex and not fully understood. See ch.18, "Issues in the Delivery of Services to Selected Groups of Adolescents," in Vol. III.

Table 4-I-Evidence for the Relationship Between School Adaptation and Adolescent Health

Study ^a	Indicator of school adaptation	Adolescent health
	<i>Dropout</i>	
Berlin and Sum, 1988 (High School and Beyond survey data)	School dropout.	Associated with adolescent pregnancy and parenting; high rates of subsequent poverty and unemployment; skill deficits. Situation getting worse for blacks—in 1973, 14 percent of black male dropouts reported no earnings, as compared with 43 percent in 1984.
W.T. Grant Foundation, 1988 (national survey data)	Dropout rates.	Associated with higher rates of adolescent pregnancy. ^b
Young, 1983	Dropout status.	High school dropouts are far more likely to be underemployed or unemployed than high school graduates; employed dropouts are half as likely to hold white collar jobs as are high school graduates.
Hispanic Policy Development Project, 1989 (review of the literature)	Dropout and low-achieving graduates.	Decreased likelihood of enrolling in postsecondary education; increased levels of welfare receipt; higher unemployment rates.
	Lack of high school diploma and poor academic achievement.	Associated with early Childbearing. ^b
Fagan and Pabon, 1988	Male dropouts.	Weak social attitudes, more drug problems, and more delinquency among dropouts than among high school graduates. ^b Male dropouts are far more likely to be involved in criminal behavior than their in-school Peers. ^c
	<i>Other Indicators</i>	
Garbarino and Asp, 198 ⁷	More years of school.	Positively associated with enhanced quality of child care offered to one's own children and with political competence; negatively associated with criminal activity.
Gottfredson, 1988	Poor school grades, limited educational attainment, special education placement, being retained in grade, poor attendance.	Associated with juvenile delinquency. ^c
McPartland, Colderon, and Braddock, 1987	Poor school grades.	Associated with school property violence.
Academy for Educational Development, 1989	Lower than average academic performance, school dropout.	Associated with adolescent pregnancy. ^b
Pallas, Natriello, and McDill, 1987	Participation in extracurricular activities.	Correlates, particularly for academically marginal students, with academic progress, heightened self-expectations, reduced frequency of delinquency, and increased persistence in schools.

^aFull citations are listed at the end of this chapter.

^bThe relationship between school dropout and adolescent pregnancy is discussed in ch. 10, "Pregnancy and Parenting: Prevention and Services," in this volume.

^cFor a discussion of adolescent delinquency, see ch. 13, "Delinquency: Prevention and Services," in this volume.

SOURCE: Office of Technology Assessment, 1991.

Table 4-2-National Data on the Relationship of Students' Race/Ethnicity and Socioeconomic Status to School Adaptation

Study ^a	Adolescent health outcomes
Aspira, 1983 (cohort study)	New York City dropout rates exceed 68 percent for blacks and 80 percent for Hispanics.
Tobier, 1984 (survey of adults)	In 1985, 32 percent of New York City's white adults had fewer than 4 years of high school, as compared with 39 percent of blacks and 57 percent of Latinos.
National Assessment of Educational Progress, 1990 (large data set on the reading ability of students)	Students in general are better readers in the 1980s than they were in the 1970s, although no discernible changes occurred between 1984 and 1988; blacks and Hispanics made improvements during the period of 1971 to 1988—nearly all 13- and 17-year-olds can read basic material; however, the mean reading profile of black and Hispanic 17-year-olds remains only slightly better than white 13-year-olds.
U.S. Department of Education, 1987 (national survey data collected from schools)	In 1986, among 18- to 19-year-olds, 13 percent of white males, 11 percent of white females, 15 percent of black males, 15 percent of black females, 29 percent of Hispanic males, and 24 percent of Hispanic females were classified as dropouts.
Neckerman and Wilson, 1987 (U.S. Bureau of the Census data collected retrospectively as self-reports from adults)	National dropout rate is 27 percent; central city dropout rate is 42 percent; dropout rate in poverty areas in central cities is 54 percent. In poor neighborhoods—defined as over 50 percent living below the poverty line—dropout rates vary: in Anaheim, California, for instance, the dropout rate is 75 percent; in poor neighborhoods in Madison, Wisconsin, the dropout rate is 20 percent; in poor neighborhoods in New York City, the dropout rate is 58.5 percent.
Rumberger, 1987 (U.S. Department of Education national survey data from 1984)	In 1972, national dropout rate was 22.8 percent; in 1984, dropout rate was 29.1 percent; New York State dropout rate was 25.3 percent in 1972 and 37.8 percent in 1984; New York State estimates that 62 percent of Hispanics drop out, and 53 percent of blacks drop out.
Barrow and Kolstad, 1987 (High School and Beyond survey data)	The dropout rate among students from the lowest socioeconomic quartile is about 22 percent; the dropout rate among students from the highest socioeconomic quartile is about 7 percent. The relationships between socioeconomic variables and dropout rates often differ substantially between the sexes and among white, black, and Hispanic students.
Berla, Henderson, and Kerewsky, 1989 (review of the literature)	By age 15, 25 percent of all students have been held back once or more. By age 11, 44 percent of black males, 26 percent of black females, 38 percent of Latino males, and 32 percent of Latino females have repeated one grade.

^aFull citations are listed at the end of this chapter.

SOURCE: Office of Technology Assessment, 1991.

that the dropout rate among students from the lowest socioeconomic quartile was about 22 percent, whereas the dropout rate among students from the highest socioeconomic quartile was about 7 percent (10a).

Blacks and especially Hispanics have considerably higher rates of retention in grade and school dropout rates than white non-Hispanic adolescents, especially in urban areas (7,175,198,203). As shown in table 4-2, Berla and colleagues report that by age 11, 44 percent of black males, 26 percent of black females, 38 percent of Latino males, and 32 percent of Latino females have repeated at least one grade (12). As noted above, 13.8 percent of black 16- to 24-year-olds, 33 percent of Hispanic 16- to 24-year-olds on average, and 15.4 percent of 16- to 24-year-olds living in central cities report not having a high school education (the so-called status dropout rate) (figure 4-2). It is notable that dropout rates in central cities are higher than in the United States as a whole, and dropout rates in cities with a high proportion of minorities are about one and a half times greater than the overall dropout rates (148).

Overview *of the Effects of Specific Factors on School Environments and on Adolescent Health*

The next several sections of this chapter examine evidence regarding the effects of the following factors on adolescent health:

- specific academic policies (e.g., use of minimum competency tests, use of other standardized tests, tracking of students by achievement levels),
- school size,
- school decisionmaking policies and orientation to punishment,
- arrangements for school transitions,
- class size,
- teacher behaviors,
- school policies regarding cultural diversity, and
- parental involvement in schools.

As discussed below, school *academic policies* that emphasize raising achievement levels through means such as standardized testing and school policies that implicitly or explicitly track students by achievement level may have some positive effects on high-achieving students but generally have been found to have detrimental effects on academically marginal, low-income or minority adolescents. Especially for low-income or minority students, school environments that emphasize these practices are

likely to affect adolescent health by diminishing self-esteem, increasing psychological symptoms, and segregating adolescent friendships (89,188). These policies have been found to be associated with low levels of academic achievement and increased rates of retention in grade and school dropout among academically marginal low-income and minority students (84,89,1 10,1 17).

School size has often been found to be related to student attendance levels, levels of participation in extracurricular activities, and reported sense of responsibility (74,168). Large school size--e.g., more than 1,000 students--has been associated with adverse adolescent health outcomes, even when location (e.g., urban, rural) and social class or minority composition of the school is controlled for. These include increased rates of a range of behaviors including vandalism, drug selling, theft, and violence (74,137,203) and elevated rates of school expulsions, disciplinary transfers, and school suspensions, which are indicators of delinquency (127,133). Some studies have found larger schools to have higher rates of retention in grade and dropout (127,168). In contrast, some studies have found that school size has no effect on academic achievement (178), a measure of school adaptation that is related to health outcomes (table 4-2).

Some *school decisionmaking and other processes* have been associated with high dropout rates and delinquent behaviors (84, 137,158,178). Adolescents in schools where students, teachers, and parents collaborate in school decisionmaking and other processes tend to have higher rates of attendance, fewer behavioral problems, and higher levels of academic achievement (84,137,178). Some studies have found that students in schools with a punitive orientation are more likely to be violent and express feelings of alienation (178).

The *timing and nature of transitions to different levels of schooling* also have been found to influence adolescent health. In general, school transitions that occur in the 7th and 10th grades seem to cause the most difficulties (18,22, 169). Such transitions seem to have the most detrimental effects on females and may also negatively affect low-income students (1 1,18). During school transitions, some adolescents show diminished levels of self-esteem, school participation, and academic achievement (18,22,169). These effects are influenced by the number of

teachers adolescents are exposed to and the size of their classes (22,15 1).

As discussed further below, the evidence on the effect of *class size* on student achievement is somewhat ambiguous. It does appear, however, that small classes are beneficial to academically marginal students.

Teachers are likely to be influential in mediating the effects of school environments on adolescent health and well-being. Of course, school environments are likely to have a large influence on *teachers' attitudes and behaviors*. For example, a school's orientation towards punishment, its decisionmaking strategies, the school's physical conditions, and work demands have been found to affect teachers (9,40,144). When teacher practices are substantially controlled by administrative decisions, teachers are more likely to have low levels of morale and job satisfaction, and high rates of absenteeism (9,40). In schools that emphasize shared decision-making, teachers have better attitudes about their students, higher levels of morale and satisfaction, and are more likely to successfully implement and maintain new practices (24,40,45 ,72,122, 194). Teachers that use cooperative teaching strategies (e.g., team teaching) foster adolescent health through their effects on achievement, cross-racial friendships, and lower levels of delinquency (75,141 ,178). Working conditions and administrative policies that affect teachers' behaviors (e.g., absenteeism) and teachers' attitudes (e. g., morale, attitudes toward students) and evidence for the effects of teacher behaviors on adolescent health are discussed below.

School policies that ignore *racial and ethnic differences in their social arrangements and curriculum* may have adverse consequences for students' social development and academic achievement (72). It could be argued that minorities are forced to choose between their own culture and their academic and professional development when schools sensitivities, and resultant curricula and activities, do not reflect the cultural diversity of their members. In schools that lack a multicultural perspective, minority students are likely to develop negative attitudes about their ethnicity or oppositional cultural forms (e.g., consider "being smart" to be "acting white") (43,102,157a). Schools with bilingual programs

have been found to enhance minority students' levels of academic achievement (43).

Finally, it appears that adolescent students' levels of achievement are enhanced by *parental expectations of achievement and parental presence in schools* (25,35,70,73,195).^{1 2}

Evidence for the Effects of Specific Academic Policies on Adolescent Health

Among the school reforms of the 1980s were efforts to raise academic standards by increasing course requirements for graduation and by using standardized testing or minimum competency tests (MCTs). Another approach that some schools have used is separating students by achievement levels—also known as academic tracking.

Using Standardized Testing and Other Practices To Raise Academic Standards—Since 1980, 45 States and the District of Columbia have changed requirements for earning high school diplomas, primarily by increasing the course units required to graduate (166). **The length of the school day has been changed (or changes have been recommended) in 13 States and the District of Columbia, And in 12 States, the teaching career ladders have been changed.** Increases in requirements have been found to place additional responsibilities on teachers and lengthen the school day without additional support.

Available evidence suggests that such policies have had some adverse consequences, especially for academically at-risk students. Increased course requirements diminish time for participation in extra-curricular activities, participation which particularly for marginal, poor and minority students, enhance academic progress and reduce delinquency. Pallas and colleagues found that an increase in course requirements was associated with increased alienation among marginal students who seem to be most attached to courses outside the core curriculum (164). Unfortunately, Pallas and colleagues noted, teachers in the schools where increased course requirements were required were seldom given the support they needed to reach academically marginal students. Raising standards was therefore an empty gesture, tending to push low-achieving students out of school.

¹²For further discussion of parents' influence on adolescents' health, see ch. 3 "Parents and Families' Influence on Adolescent Health," in this volume.

Table 4-4 also suggests that the use of standardized testing and MCTs have adverse consequences for marginal students. One study found that standardized testing is practiced in larger schools where there are more marginal students and tends to result in curricula that conform to the test (138). Several studies have found that, although standardized testing has small positive effects on high-achieving students, students in schools where such testing is used are more likely to be retained in grade (84,138,185). Educators generally agree that promoting adolescents who are not ready to be promoted will not be beneficial to their health unless they receive additional support to learn the skills they lack (71), but many educators have voiced concerns that standardized testing has the capacity to further marginalize disadvantaged students (209,213).

Similar, yet more pronounced, are the effects of the recent national shift toward the widespread use of MCTs. In 1989, 24 States used MCTs for remediation, 12 for promotion, and 24 for graduation (91). According to Haney and Madaus, the recent national shift toward the use of MCTs has had profound and devastating consequences for students' academic performance (91). The use of MCTs has been linked to increased rates of retention in grade and school dropout in school districts that use MCTs (91). Some evidence suggests that dropout rates may be disproportionately high for at-risk (e.g., black and bilingual) adolescents (91,110). MCTs may also have adverse psychological consequences (e.g., apprehension, diminished self-esteem) for some students.

To sum up, school academic policies that emphasize raising achievement levels by increasing courses, using standardized testing, or using MCTs can adversely affect academically marginal students through increasing rates of retention in grade and increasing rates of school dropout.

Tracking Students by Achievement Levels- Policies used to track students by achievement level range from the use of selective criteria for entry into schools which parents can "choose" for their child, district-wide stratification of public high schools, heterogeneous course offerings, school intake policies, teacher-selected ability groupings, and differential access to school guidance counselors. Such policies may be developed and implemented by local school districts, by individual schools, by teachers within schools, or by guidance counselors.

School districts that stratify their public schools and use selective criteria for entry into "choice" schools foster differential ability groupings **across** schools. Administrators who build in specialized courses, and who admit a homogeneous **intellectual mix of** students to schools are tracking within a school, whereas teachers who **create** student ability groupings are tracking within their classes. Finally, guidance counselors who devote more of their resources **to counseling** academically tracked students about educational and vocational options reinforce the existing system of tracking.

Schools **that use** student selection criteria typically receive a disproportionate share of district resources (21 1). Furthermore, national data suggest that schools **that have** a higher concentration of at-risk poor and minority students receive fewer resources for staffing and materials, and such schools have been found to rely more heavily on remedial and rote memory activities (143).

Tracking **practices that skim the best** students off the top and place them in selective schools may not only have adverse consequences for marginalized schools but may also minimize overall achievement records of entire school districts. In a longitudinal analysis of adolescents attending nonselective schools in London, Rutter and **colleagues** found **that the intellectual** heterogeneity of students was strongly associated with positive educational outcomes for the entire school (178). Rutter and colleagues concluded that schools need a substantial nucleus of average- to above-average-intellectual-ability students in order to achieve schoolwide. Other researchers, examining schools with good academic records, have found that most such schools restrict or reject tracking, reinforcing Rutter's conclusions **that** heterogeneous ability groupings enhance school achievement outcomes (79). Furthermore, schools where school composition is skewed towards marginal students have been found to have disproportionately high rates of dropout and low rates of achievement (21 1).

Tracking **that occurs** when teachers place students into "ability groupings" is sometimes rather arbitrary; **criteria** unrelated **to the** ability of students have been demonstrated to have **effects on the** placement of students into "ability groupings." According to Hallinan, for example, teachers often create a set number of equally sized groups that assume that student ability is equally distributed in their class-

room (89). Students who are older when entering an elementary school are more likely to be placed in the highest ability groups, an observation suggesting that advantages resulting from age and previous experience play a role in determining ability groupings (89). Adolescents who are placed in low-ability groups have been found to fall behind academically, and students chosen for high-ability groups have been found to achieve more than their peers of equal ability who are not in high-ability groups (89). Placement in ability groupings also seems to exert an effect on adolescent friendships: students placed in ability groups are less likely to have crossracial and crossachievement friendships than students not placed in ability groups (89,188). Minority students may also come away from tracking with more negative attitudes towards their own ethnic group. For example, Iadicola examined the effects of tracking across schools and found that Hispanics, especially females, who attended schools with higher rates of testing and higher numbers of ability groupings were more likely to express negative attitudes toward their ethnicity (102). Ingrained social patterns of racial stratification seem to be reinforced by institutionalized tracking practices which only reinforce white students' preferences to bond with similar others.

Some studies have found that minority, poor, rural, and vocationally tracked students report that counselors do not play a significant role in their future goals, whereas academically tracked students report that they do (18,19). This situation may sometimes result from academically tracked students' greater initiative in contacting guidance counselors, but it may sometimes result from counselors' seeking a greater role in counseling academically tracked students. Evidence suggests that in some situations, guidance counseling is more directed to high-achieving students (18,119).

To sum up, tracking students by achievement level is inequitable because academically tracked students receive better instruction, easier access to counseling, heightened teacher expectations, better peer evaluations and more interesting curricular content than students in lower achievement groups (155). Since there is evidence that ability groups are sometimes based on arbitrary criteria (e.g., a student's entry into selective "choice" school may reflect the parents' ability to negotiate or may be determined in part by a student's age) and because the students in groups receive different school

resources, it can be argued that ability groupings *create* differences in students' academic achievement levels rather than minimize them. Students marginalized by the tracking process achieve less and drop out more than students in matched schools that do not use tracking (155).

Available evidence suggests that a heterogeneous mix of intellectual ability is associated with high rates of overall school achievement. Thus, it can be argued that minimizing the intellectual mix of schools (i.e., tracking across schools) or offering specialized courses to high achieving students and remedial courses for low-achieving students (i.e., tracking within schools) may not responsibly serve the majority of adolescents. Policies that place students into homogeneous groupings may have detrimental effects on the majority of adolescents' academic achievement levels. Nonetheless, some observers have concluded that tracking persists because of fears about the effects of "untracked" schools on the best students (37).

Evidence for the Effects of School Size on Adolescent Health

In considering the differences between the effects of large and small schools on adolescent health, it is important to realize that size of school is confounded with variables that include location (i.e., rural v. urban), financing, and school-related processes. Large schools are typically in urban, often more socially disorganized, settings than small schools with a high density of low-income students. These schools often receive less money or receive money with restrictions on how it can be utilized (25). Large schools are also often associated with more administrative staff, more centralized decisionmaking processes, and fewer opportunities for teachers and students to participate in school policymaking (40,168). Furthermore, large schools have been found to have more rigid and compartmentalized roles, more complexity in their communication patterns, larger class sizes, more institutionalized tracking, and punitive and controlling disciplinary orientations (25,27,75,85,163,203). Finally, the students attending large schools may be different from students attending small schools. For example, more students attending large schools (i.e., minority, lower income, and poorer students) may confront problems with health, housing, language, welfare, and academic difficulties (24).

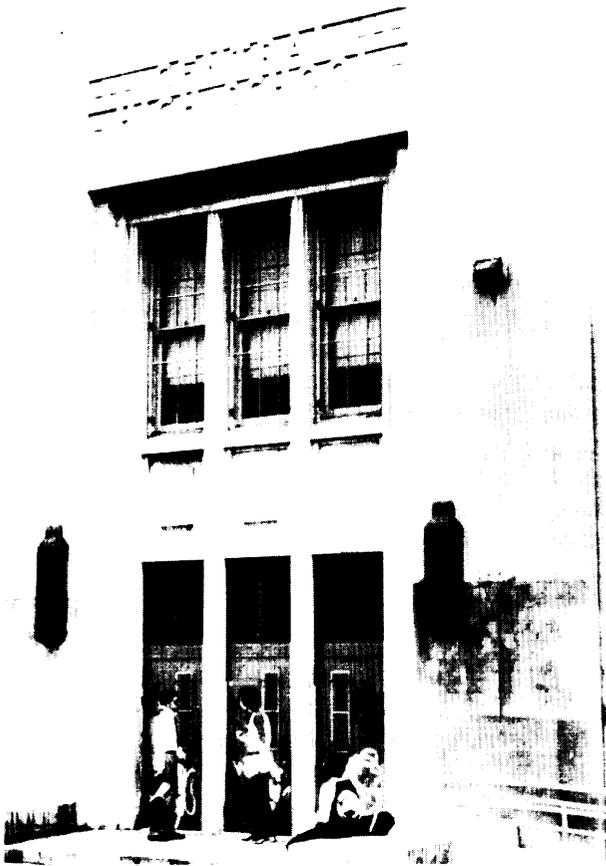


Photo credit: April Saul/Education Week

Many large urban schools serving socioeconomically disadvantaged students lack the combination of features that promotes adolescents' health and well-being,

A longitudinal study in England by Rutter and colleagues found no relationship between school size and students' academic achievement (178), but numerous other investigators have found correlations between large school and adverse academic and health outcomes, especially for marginal, poor, and minority students (27,74,75,118,130,162).

Large school size has been correlated with high levels of alienation among students and teachers (24,25), with high delinquency rates, high suspension rates, low attendance rates, and high dropout (27, 133,137,168). Small schools have been found to have lower levels of vandalism, less anomie, and lower levels of victimization (74).

Although small schools seem to be beneficial for all students, they appear to be most beneficial for academically marginal low-income and minority

students (27,75, 130, 162). School size seems to affect social cohesion, participation in school activities, sense of responsibility, and interactions with faculty (168). Small schools offer greater social cohesion and intimacy and Garbarino found marginal students to be four times more active in small schools than in large ones (74). Large schools tend to have more diverse curricula and more tracking, and such schools may tend to marginalize adolescents with relatively poor academic achievement records (see discussion above).

To sum up, small schools seem to be associated with better academic and health outcomes for adolescents than large schools. Furthermore, school size appears to differentially matter most to academically marginal low-income and minority students. Larger schools are associated with negative academic outcomes (i.e., increased rates of retention in grade and school dropout), as well as delinquency (i.e., higher rates of drug selling, theft, vandalism), behavioral problems (i.e., higher rates of expulsions, suspensions, and disciplinary transfers), and lower rates of participation in extracurricular activities and fewer interactions with faculty.

It may be that the health outcomes of adolescents attending schools of different sizes are particularly influenced by the impact that size of school has on shaping school-related processes. Possibly school size is only important because it shapes a wide array of school processes. If that is the case, simply changing the size of the school without attending to all of the associated factors (e.g., less funding, increased bureaucracy) would, in all likelihood, be futile. In the next section, the effects of school-related processes that have sometimes been associated with school size are examined for their impact on adolescent health.

Evidence for the Effects of School Decisionmaking and Other Processes on Adolescent Health

There is limited evidence regarding the relationship between school processes and adolescent health outcomes. Rutter and his colleagues were among the first investigators to systematically examine the relationship between processes that occur within schools and student outcome variables (178). They devised a composite school process measure which reflected the degree of emphasis on academic achievement, the extent to which courses were planned and taught by teams of teachers, the availability of incentives and rewards for student

performance, and the degree of encouragement that adolescents were given to participate and take responsibility for themselves and for others. In a longitudinal study in England, Rutter and colleagues found that such processes improved adolescents' academic achievement and school attendance rates and minimized behavioral problems and delinquency.

Some investigators have examined the relationship between the decisionmaking process used by school administrators and school staff and adolescent health.¹³ McPartland and colleagues found that schools where students participate in decisionmaking have lower rates of vandalism, and students report enhanced communication (137). Gottfredson and colleagues found that the schools where students, teachers, administrators, and parents have access to the decisionmaking process tend to have reduced rates of delinquency (84). Furthermore, schools that have poor teacher-administration cooperation and where teachers report lack of administrative soundness tend to have higher dropout and delinquency rates and more discipline problems (84).

Some investigators have found a relationship between a school's orientation towards punishment and adolescent health. They have found that schools that frequently use punishment and that focus on control tend to have high rates of school victimization and increased rates of disciplinary problems and that students who attend those schools often report feeling alienated (84,178). Optow has argued on theoretical grounds that schools that underreact to school-based violence (e.g., ignore) or overreact to school-based violence (e.g., inflict excessive punishment) make it difficult for adolescents to develop trusting relationships with adults from whom they can learn to control their aggressive impulses (158).

To sum up, available evidence suggests that some school processes—i.e., relying on team teaching efforts, encouraging students to participate in decisionmaking and relying more on rewards and positive incentives for student performance than on punishment—improve students' academic achievement, school attendance rates, and are associated with reduced rates of delinquency, dropout, school victimization, and reported alienation among students.

Evidence for the Effects of School Transitions on Adolescent Health

School transitions are changes from an elementary school to either junior high or middle school and changes from junior or middle school to high school. Figure 4-1 illustrates the common ways that school transitions have been organized in the United States. The most common school configuration is kindergarten through 6th grade (elementary school), 7th through 9th grade (junior high school), and 10th through 12th grade (high school) (204). Another common configuration is kindergarten through 8th grade, followed by 9th through 12th grade. Yet another common configuration is kindergarten through 4th grade, 5th through 8th grade (middle school), and 9th through 12th grade.

Whether looking at evidence of retention in grade, suspensions, schoolwide victimizations, or academic achievement, several studies suggest that seventh grade is often a difficult year, especially when it corresponds to the frost year out of elementary school. In a 1988 analysis of Philadelphia's grade reorganization, Pugh compared seventh and eighth graders in junior high schools (schools configured grades 7 through 9) with seventh and eighth graders in middle schools (schools configured grades 5 through 8 or grades 6 through 8) (169). The seventh and eighth graders in junior high schools—i.e., students who underwent school transitions in the seventh grade—had substantially more suspensions (35 v. 23 percent) and retentions in grade (15 v. 8 percent), had lower rates of attendance, and on achievement tests adjusted for socioeconomic status scored 12.9 points lower than the seventh and eighth graders in middle schools did. The Pugh analysis is consistent with other analyses (72a).

Blyth and colleagues conducted a 5-year longitudinal study of 594 white adolescents from the 6th through 10th grades (1974-79) in 18 schools in Milwaukee (18). Some of the students attended schools configured kindergarten through grade 6, grades 7 through 9, and grades 10 through 12 and others attended schools configured kindergarten through grade 8 and grades 9 through 12 (18). Blyth and colleagues interviewed the students in grades 6, 7, 9, and 10. They looked at the students' global self-esteem, grades, achievement tests, and partici-

¹³The effects of school decisionmaking policies on teachers' attitudes and behaviors are examined in a separate section of this chapter below.

pation in extracurricular activities. Blyth and colleagues found that seventh grade female students in schools where transitions occurred in the seventh grade were more likely than female students in schools configured kindergarten through grade 8 to have drops in grade point average, self-esteem, and rates of participation in extracurricular activities. Seventh grade male students in schools where transitions occurred in the seventh grade similarly had lower grade averages than seventh grade male students in schools configured kindergarten through grade 8. Male self-esteem was not affected by school transitions. Adolescent males' rates of participation in extracurricular activity decreased in the seventh grade when they changed schools, but their rates of participation ultimately returned to the base level; the rates for females never returned to their base level.

Becker found that students from the lowest income groups scored higher on achievement tests in elementary schools than adolescents from the same background in middle schools, suggesting that low-income groups fare better with elementary school structures than with middle school structures (11).

In an attempt to understand why school transitions cause difficulties for adolescents, some investigators have examined how different school arrangements mediate the effects of school transitions on adolescent health. Braddock and other investigators have found that schools where adolescents change classrooms for different content areas are associated with the majority of problems at transition (11,18,22). Braddock and colleagues found that seventh grade students appear to be most academically productive in schools where they interact with two or three different teachers rather than with six or seven (22).

Reviewing the evidence and building on developmental theories of adolescents, Eccles and Midgley found that structures and practices in middle or junior high schools are not suited to the developmental needs of early adolescents (57a). They argue that size differences, tracking practices, competitive motivational strategies, controlling teacher behaviors, using a lecture format and the absence of opportunities for students to practice autonomous behaviors all conflict with adolescent development. These investigators also found that transition effects (e.g., student attitudes about school) are mediated by changes in the school and classroom environment

such that negative attitudes were associated with schools that were not developmentally appropriate.

To sum up, available research on school transitions is limited, but some evidence suggests that school transitions are associated with increased rates of suspension, retention in grade, and decreased levels of achievement, attendance, self-esteem, and participation in extracurricular activities. Female students seem to be particularly adversely affected by transitions that occur in the seventh grade. The research that has been conducted to date suggests that there may be better and worse developmental moments for shifting from one school to another; the experience of transition may in and of itself be traumatizing; and some school transitions may conflict with adolescents' developmental needs (72a). In addition, some research has shown that adverse effects can be ameliorated by specific changes in school environments such as prolonged contact with a single teacher rather than multiple classes and teachers (27).

Evidence for the Effects of Class Size on Adolescent Health

The evidence on the relationship between class size and adolescent health is somewhat difficult to interpret. In 1986, Robinson and Wittebols compiled a comprehensive review of the literature on class size and achievement for the Educational Research Service (174). Their review of 22 studies published from 1950 to 1985 found that 50 percent of kindergarten through grade 3 studies, 38 percent of the grade 4 through grade 8 studies, and 18 percent of the grade 9 through 12 studies indicate that small classes have a positive effect on student achievement. Robinson and Wittebols concluded that available research fails to show that small classes have a positive effect on high school students' achievement levels generally.

According to Fine, a class size of 15 to 20 seems to be substantially more productive when dealing with low-achieving students than a class size of 35 (72a). In high schools in which students are educationally disadvantaged, classes of 35 reinforce what Goodlad and others have written about—passive downtime will constitute upwards of 85 percent of most secondary classroom instructional practices (83). McNeil argues that such teaching is a structurally created characteristic of large schools and oversized classes (82).

To sum up, it appears that class size may have differential impacts on students in different grade levels. At the high school level, class size may have more impact on academically marginal students than on average students. Improved classroom size may be a necessary but not sufficient condition for improved academic achievement of academically marginal students (72a).

Evidence for the Effects of School Environments on Teachers' Attitudes and Behaviors

Studies examining the relationship between school environments and teachers' attitudes and behaviors are summarized in table 4-3. These studies relate contextual factors (e.g., working conditions, location, size) and teacher involvement in decision-making practices with teachers' attitudes and behaviors.

Corcoran and colleagues, analyzing national school and teacher survey data, report that many U.S. educators—specially urban secondary school teachers—experience poor working conditions (40). According to Corcoran and colleagues, poor working conditions reported by educators include substandard facilities, a lack of space, inadequate classroom materials, large classes, a lack of influence in decisions, and concerns about safety. These conditions are associated with high absenteeism, low effectiveness, low morale, and low job satisfaction. Moos found that teachers on whom work demands are high tend to rely more on rote teaching methods (143).

Various school reforms have been investigated by researchers as sources of influence on teacher behaviors (see table 4-3). One wave of reforms has emphasized “standards” and *monitoring teacher behaviors* in public schools. Bachrach and colleagues have characterized schools that operate under these reforms as schools organized around controlling teachers' activities, centralized decision-making, and rendering the curriculum “teacher-proof” (9). A more recent series of reforms, often called “restructuring,” has emphasized bringing teachers into policy and decisionmaking processes.

National survey data indicate that teachers in urban and other schools where incentives and school policies are determined largely by school administrators report being more suspicious, feeling more contempt, having higher rates of absenteeism, expe-



Photo credit: Sharon Knarvik

Teachers' morale, sense of commitment, and other attitudes and behaviors that can be expected to improve the school environment for adolescents are enhanced by school reforms emphasizing collaborative and inoperative relations within schools.

riencing lowered morale and feelings of powerlessness, and being distrustful of administrators (9). The majority of these teachers also experienced problems with inadequate instructional time, receiving minimal feedback from administrators, and the extensive use of standardized tests (9,40). Furthermore, teachers in schools where decisionmaking is centralized express a desire to be given a greater voice in decisionmaking and to have more communication with administrators (9).

School reforms emphasizing collaborative and cooperative relations within schools have been found to increase teacher satisfaction, successful implementation and maintenance of new practices, morale, sense of ownership and commitment, while they tended to decrease rates of absenteeism (9,24, 40,194). Furthermore, educators who reported having a substantial say in shaping policy also report more positive views of adolescents and more optimism that they can make a difference in the adolescent's academic accomplishments (72a).

To sum up, there is clear evidence that teachers are negatively affected by poor working conditions and administrative policies that centralize decision-making and use narrow authority structures. Teachers' attitudes and behaviors that can be expected to improve the school environment for adolescents are enhanced by a collective and cooperative school environment.

Table 4-3-Evidence for the Relationship of Various School Environments to Teachers' Attitudes and Behaviors

Study ^a	School environment	Adolescent health
	<i>Poor working environment</i>	
Corcoran, White, and Walker, 1988 (national school and teacher survey data)	Urban schools where teachers expressed concerns about substandard physical renditions, lack of space, resources, safety, and classroom size.	Poor working renditions related to absenteeism, low effectiveness, low morale, and low job satisfaction for teacher—especially for urban secondary school teachers.
	Schools in which teachers are required to use standardized testing.	Teachers report that standardized tests are a threat to their professionalism.
Moos, 1985	Schools where very high work demands are placed on teachers.	Teachers in such schools tend to rely more on rote learning teaching methods.
	<i>Centralized decisionmaking with little input from teachers</i>	
Bachrach, Bauer, and Shedd, 1986 (national survey of teachers)	Schools in which policies and incentives are made by administrators.	Teachers who report having minimal input to decisions concerning their working conditions and incentives had higher rates of absenteeism and lower morale.
	Schools are currently organized around controlling teachers' activities, centralized decision making and rendering curriculum "teacher-proof." Majority of teachers experience problems with instructional time, problems receiving feedback from administrators.	Teachers are alienated, tired, and feel powerless.
Pallas, Natriello, and McDill, 1989	School social climate perceived as positive.	Teachers' perceptions of mean ability of students in their classroom were positively related to perceived school social climate (regardless of the actual ability levels of their students).
	Positive school climate.	Positive school climate is positively related to the extent to which there seems to be a shared sense of purpose among teachers-goal consensus.
Bryk, Lee, and Smith, 1990	Increased administrative control and narrowing of authority of teachers.	Teachers expressed that they did not feel apart of the school community and that people did not listen to their ideas (alienation).
Bachrach, Bauer, and Shedd, 1986	Centralized decisionmaking in schools.	Teachers report being more suspicious, feeling more contempt, having deteriorated morale, and being distrustful of administrators; teachers indicate that they should be given a greater voice in decisionmaking; teachers reported dissatisfaction with communications with administrators.
	Schools in which teachers' classroom policies are controlled.	Teachers have higher rates of absenteeism and lower reported morale.
Fine, 1984	Teachers' perception of influence in shaping policy.	Educators who saw themselves as powerless tend to view adolescents they work with as beyond help; educators who report having substantial say in shaping policy also report more positive views of adolescence and more optimism about making a difference.
	<i>Collaborative environment with teachers involved in decisionmaking</i>	
Bryk and Driscoll, 1988	Schools that have collaborative relationships between teachers and administrators and schools that focus on cooperative processes.	Teachers report increased satisfaction; decreased rates of absenteeism.

Table 4-3-Evidence for the Relationship of Various School Environments to Teachers' Attitudes and Behaviors-Continued

Study ^a	School environment	Adolescent health
Stevenson, 1987	Collective and cooperative school climate.	Teachers report enhanced sense of ownership, more successful implementation of new practices.
Lifton, 1988; Dade County Public School, 1988 (preliminary evidence from teacher surveys in restructured school district)	Schools restructured to give teachers more input into decision making.	Preliminary evidence that teacher morale, commitment, willingness to continue teaching are enhanced.
Corcoran, White, and Walker, 1988 (national school and teacher survey data)	Small schools, with high levels of teacher influence and with staff cohesion.	Teachers in such schools expressed more positive attitudes towards students.

^aFull citations are listed at the end of this chapter.

SOURCE: Office of Technology Assessment, 1991.

Evidence for the Effects of Teacher Behaviors on Adolescent Health

Limited evidence suggests that the behaviors of teachers and students are interconnected. Educators using team teaching (where teachers share responsibility for a group of students either within or across schools) affect adolescent health in a positive way. Furthermore, teachers in schools with centralized decisionmaking, where there is little coordination between the efforts of teachers and school administrations, are more likely to use authority and coercion as part of their instructional style, which also affects adolescent health.

Studies have found that adolescents who have teachers that use team teaching have increased levels of academic achievement and are more likely to develop interracial friendships (24,124,141). Team teaching approaches also have been associated with decreases in student dropout, delinquency, and suspension (75,178). Further, the use of coercive techniques by teachers has been associated with lowered self-esteem among students and increased frequency of classroom disruption (137). Students who report that they are treated disrespectfully by their teachers report higher rates of feelings of alienation and school victimization (85). Furthermore, in schools where coordination between teachers and principals is poor, adolescents are more likely to have high discipline and criminal problems (133).

Evidence for the Effects of School Policies Regarding Cultural Diversity on Adolescent Health

It has been argued that “social education” in which students come to learn about and respect critically and creatively their own ethnic and racial heritage is important so that adolescents can generate strategies for managing difference as difference, not as deficits (73). It also has been argued that schools as they are currently organized do not educate students about ethnic diversity and students are, therefore, more likely to form stereotypes and have their racial and other biases reinforced (69,73). There is currently considerable debate—and limited evidence—about how to celebrate, rather than disparage, cultural diversity (58a).

Research that has examined the effects of schools on racial and ethnic minority adolescents’ health outcomes¹⁴ suggests that there are insidious school processes that differentially affect minorities. For example, when schools ignore ethnic differences in their social arrangements and in their curriculum, there are consequences for minority adolescents related to academic achievement and the degree of attachment to their own ethnic group. Iadicola compared schools that differed with respect to the degree of Hispanic cultural influence on the curricula and the percentages of non-Hispanic white and Hispanic students. Iadicola found that Hispanic students in schools with a high degree of non-Hispanic white cultural influence were more likely to express lower levels of attachment to their own group (102). It could be argued that schools in low-income communities that do not embrace cultural differences are structured so that Hispanic students are forced to “make a choice” —between self and family and between personal development and community involvement (102). Obgu has argued that racial stratification and classroom materials that reflect the perspective of whites with little or no acknowledgement of minorities results in black adolescents’ behaving in ways that undermine their academic success (157a). Some studies suggests that multicultural education and school-based collaborations with minorities in the community can improve minority adolescents’ academic achievement (43,102). In interviews with students and educators, Fine found that students in integrated schools valued differences between diverse groups as strengths, not defects (70). In contrast, students in a fully segregated school learned stereotypes and had their racial biases reinforced (70). However, there is still considerable confusion among teachers and others about defining and implementing multicultural education (58a). According to one informed observer, the support that multicultural education needs will come only from comprehensive policymaking and from teachers who see differences among students as reasons for “celebration” rather than for hand-wringing (58a).

¹⁴The delivery of health and related services to racial and ethnic minority adolescents is discussed in ch. 18, “Issues in the Delivery of Services to Selected Groups of Adolescents,” in Vol. III.

Table 4+ Evidence for the Relationship of Parental Involvement in Schools to the School Environment and Adolescent Health

Study ^a	Form of parental involvement	School environment	Adolescent health
Svec, 1986 (experimental study)	In experimental study, randomly assigned high school drop outs went to school with or without parents to negotiate reentry to school.		More schools refused the drop-outs who did not have their parents with them.
Bryk, Lee, and Smith, 1990 (review)	Parents expect achievement and place importance on educational attainment.		Parental expectations are highly and consistently related to academic outcomes.
	Parents volunteer in schools.		Parental volunteering is associated with positive outcomes, especially for elementary school students.
	Parent involved in professional councils at school sites.		Intervention had no significant influences on student academic achievement.
	Decentralization (community control) in New York City.	Principals are more sensitive to community interests, schools have more legitimacy in the community, culturally relevant curriculum is developed.	Intervention had ambiguous impact on student achievement.
Fine, 1989; Fine and Phillips, 1990 (interviews with educators and with low-income parents of middle-school students)	Parents' presence at schools.	Especially with low-income students, parents' presence serves as a reminder to teachers that they need to be concerned about the impact of school on their students.	Students whose parents question school policies are more likely to receive fair treatment.
Comer, 1988 (intervention among 3rd, 4th, and 5th graders in schools in low-income districts in New Haven, Connecticut, and Maryland)	As part of a comprehensive school intervention program, parents work closely with school administrators, teachers, a mental health specialist, and a nonprofessional support person to meet the emotional, social, psychological, and academic needs of their children. Some parents work as classroom assistants, tutors, or aides; some join the school's governing body.	Relations between parents and school staff improve. School administrators, staff, and parents' collaboration results in increased organizational effectiveness.	Preliminary evidence suggests intervention improved reading, language, and math scores. Behavior problems declined.

^aFull citations are listed at the end of this chapter.

SOURCE: Office of Technology Assessment, 1991.

Evidence for the Effects of Parental Involvement in Schools on Adolescent Health

Research on parental involvement has been limited until recently to national surveys that focus on traditional forms of involvement by parents. Investigators have examined the effects of parental expectations, parental volunteering, and parental presence in schools and have generally found—especially when research findings are related to local school districts—that parental involvement is beneficial to adolescents (see table 4-4).

Probably the most thoroughly documented effect that parents have on adolescent health is related to their expectations that their children will achieve. A review by Bryk and colleagues noted that studies consistently find that parents who expect their children to achieve and who place importance *on* educational attainment affect their levels of academic achievement (25). Although not as well documented, evidence suggests that adolescents are also positively affected by the presence of their parents at school—whether at school to volunteer, to serve as advocates for their children, or simply to be present (25,70,73,195). The importance of parental

involvement is recognized in Comer's comprehensive school interventions, first implemented in New Haven, Connecticut, elementary schools, and now being implemented in more than 50 schools around the country, including 2 middle schools and a high school (35) (see box 4-A).

In a recent review, Bryk and colleagues noted that parental involvement on professional councils at school sites in Salt Lake City had no significant influence on student academic achievement (25). These investigators also described a study of community control in New York City. This evaluation found that parental choice had an ambiguous effect on student achievement (25).

Summary: School Influences on Adolescent Health

Although it is limited, of variable methodological quality, and difficult to conduct, available research strongly suggests the importance of school environments on academic achievement and on adolescents' health. Studies in the last 20 years provide contrast to earlier studies that led many to believe that schools make little difference (32a, 103a). These earlier studies have been criticized because they focused mainly on a limited measure of attainment and examined a very narrow range of school variables (175a). According to Rutter's studies in England, and a host of studies in the United States reviewed in this chapter, social variables account for much of the variation between schools, and hence some of the variation in adolescent health (175a). Generally, school policies found to have adverse effects on the minority, low-income, academically marginal students include MCTs without the addition of academic supports, academic tracking, large school size, punitive orientation, little support during transitions between levels of schooling, and lack of cultural diversity and appreciation of racial and ethnic differences. School policies generally found to have positive effects on adolescent health include participatory decisionmaking, parental involvement in schools, and a *combination* of other process variables (178). Effects of the school environment on adolescent health are often mediated through teachers' attitudes and behaviors and through adolescents' academic achievement, most prominently retention in grade and school dropout. *The most compelling evidence suggests that improving*

schools to benefit adolescents requires a combination of approaches. This combination can be summarized as a school that is a small, comfortable, safe, intellectually engaging, and emotionally intimate community (72a). Transitions are minimized, and when they must occur, they are managed with a view toward meeting the developmentally appropriate needs of adolescents. Teachers are encouraged to initiate and develop new programs that are sensitive to the diversity of their students. The curriculum responds to individuality as well as to differences, while developing a common knowledge base among students in a particular school. Teacher, parent, and student participation in decisionmaking is encouraged. Unfortunately, this combination of features characterizes few schools, particularly those public schools serving socioeconomically and educationally disadvantaged students, many of whom are racial and ethnic minorities.

Box 4-A reviews selected promising interventions that attempt, at least in part, to address the shortcomings of many contemporary American schools.

Major Federal Policies and Programs Related to Education

As discussed elsewhere in this Report, Federal programs related to education are primarily the responsibility of the U.S. Department of Education.¹⁵ The U.S. Department of Labor also has some responsibilities in this area.

U.S. Department of Education

In 1989, the U.S. Department of Education had a budget of approximately \$22 billion and was responsible for 187 programs spanning six different offices (see figure 4-4). The U.S. Department of Education does not administer educational programs targeted specifically to adolescents but includes adolescents as part of the school-aged population. It is impossible to determine total expenditures on adolescents, because U.S. Department of Education funds are distributed to State and local educational agencies that determine their own priorities.

The U.S. Department of Education's priorities include increasing educational services to econom-

¹⁵See ch. 19, "The Role of Federal Agencies in Adolescent Health," in Vol. III.

Box 4-A—Innovative Approaches to Improving American Schools¹

In recent years, promising interventions in schools have been tested and found to demonstrate beneficial effects on adolescent health through their effects on adolescents' levels of academic achievement, school persistence, attitudes toward school, self-esteem, and confidence. These interventions, discussed further below, are generally of two major types:

- interventions that are focused on *improving individual learning and preventing selected health problems associated with school failure* (e.g., adolescent pregnancy and parenting); and
- interventions that are focused on *changing school and/or community environments*.

Interventions focused on individual learning and preventing selected health problems associated with school failure include peer tutoring interventions; cooperative learning interventions; summer learning interventions; and interventions that provide incentives and supports to students to graduate and go on to college. Interventions focused on improving school environments include the School Development Program developed by Yale child psychiatrist James Comer and also include some school-linked health centers (SLHCs). Examples of these two major types of interventions that have undergone some evaluation and seem to show some promise are discussed below. Also discussed below is the 'comprehensive school/community health' model, which is drawing considerable attention from researchers and policymakers who are concerned about the health of U.S. adolescents (27,107b,108b,147),

Promising Interventions Focused on Improving Individual Learning and Preventing Selected Health Problems Associated With School Failure

As noted above, interventions that focus on improving the skills of low-achieving students through means that do not involve academic tracking include peer tutoring interventions, cooperative learning interventions, summer learning interventions, and, most recently, interventions that provide incentives and supports to students to graduate and go on to college. Several interventions that *offer* a more intensive focus on individual students than can typically be found in the large public schools that are attended by many minority, poor, and academically at-risk adolescents are discussed below. All of the interventions discussed below have undergone at least some preliminary evaluation in terms of outcomes for adolescents and appear to hold some promise for enhancing adolescents' adaptation to school.

Peer tutoring interventions—Peer tutoring means using older or same age students to work individually with students to teach a particular content area. Peer tutoring strategies emerged from concerns about how educators can deal creatively with 35 students or more, engage students in appreciating rather than depreciating peer differences, and promote active participatory learning among students. Generally, peer tutoring appears to be an effective approach for adolescents. Some studies have found peer tutoring to be less costly than computer-assisted instruction, to enhance levels of academic achievement beyond those found in conventional classes, and to be beneficial for tutors and tutees (31,97,121).

Cooperative learning interventions—Teachers using cooperative learning strategies create groups where each student has exclusive knowledge of a topic and where the students need to work together as a group to create a final product. This strategy often stimulates interdependency among students. Cooperative learning appears to satisfy many educational ends simultaneously (104,206). Cooperative learning enables heterogeneous groups of students to work across ability levels, thus reducing the need to track students. It encourages students to participate actively as teachers and as learners with their peers. It facilitates empathy across and within racial, ethnic, and ability groups, and it shifts the questions of absolute authority away from teachers.

In elementary schools, cooperative learning strategies tend to enhance students' academic achievement, teaching instruction, and students' sense of empathy (6,152). Investigators have sought to document the effects of cooperative learning on achievement in secondary schools. One analysis of 27 selected studies involving 37 comparisons of cooperative v. control learning strategies concluded that over two-thirds of the studies favored cooperation (207). Math and language arts seem to be the curricular areas most amenable to positive effects of cooperative learning.

Summer learning interventions—Particularly for socioeconomically disadvantaged students, summers are typically a time of enormous educational regress. Heyns argues that schools that provide educational interventions

¹Evidence on preschool interventions will not be taken up in this chapter.

Box 4-A—Innovative Approaches to Improving American Schools¹-Continued

during the summer to low-income and academically disadvantaged students can and do reduce disparities in the academic skills associated with the background characteristics of children and adolescents (99).

The Summer Training and Education Program (STEP) is an intervention designed to help reduce dropout levels among poor and educationally deficient youth by focusing on two factors that are closely associated with dropping out of school: poor academic performance and adolescent parenthood (184a). STEP targets low-income 14- and 15-year-olds who are performing below grade level in either reading or math and offers them two consecutive summers of remediation, life skills instruction and work experience, and various support services (e.g., counselor advocates and group meetings) during the intervening school year. The goal of STEP is to reduce participants' summer learning losses, increase their reading and math skills, increase their graduation rates, and decrease their pregnancy and parenting rates.

A national evaluation of STEP managed by the Philadelphia nonprofit corporation Public/Private Ventures is comparing STEP participants' outcomes to outcomes for a control group of students in the federally funded Summer Youth Employment and Training Program (who received remedial education and a summer job but no other support services) (184a). Preliminary results from the evaluation indicate that STEP minimized participants' academic losses over the summer.² Furthermore, STEP increased participants' reading and math scores and increased their knowledge of contraception (184a). Preliminary findings regarding STEP's impact on dropout rates among participants are consistent with the hypothesis that STEP reduces dropout behavior but are based on small numbers and are not statistically significant. Firm conclusions about STEP's long-term effects on participants will have to await the completion of the research in 1993.

Interventions to provide incentives and support for **adolescents to graduate and go on to college**—Eugene Lang's celebrated I Have a Dream (IHAD) Project is perhaps the best known of these types of interventions. The IHAD project began when Lang promised to pay college tuition fees for a class of sixth-graders then preparing to graduate from his elementary school alma mater (99a). Lang realized quite quickly, however, that while a tuition guarantee was essential, if IHAD students were to graduate, they would need considerable additional social and academic support. The basic features of all IHAD projects have come to include "a sponsor,³ a tuition guarantee, a project coordinator,⁴ and additional support services [for students (e.g., tutoring, cultural enrichment)]" (99a). IHAD student participants are known as "Dreamers" (99a).

The publicity surrounding Lang's project helped it become the formal prototype for many similar programs—140 by summer 1990, at a total cost in private funds of \$50 million, according to a 1991 report by Public/Private Ventures (99a). Evaluating the effectiveness of IHAD projects is difficult, however, both because IHAD sponsors have been reluctant to allow formal research (99a,207a) and because individual IHAD and similar projects (207a) vary considerably within the basic framework

Public/Private Ventures obtained permission from the Greater Washington IHAD Foundation to evaluate its IHAD Projects, most of which were begun in the 1988-89 school year.⁵ It is too early to tell whether the Greater Washington area projects will be effective in achieving their ultimate objective of high school graduation and

²See ch.10, "Pregnancy and Parenting: Prevention and services," in this volume for further discussion of the national evaluation of STEP,

³Sponsors are the individuals who guarantee the college tuition and provide financial support for other aspects of IHAD projects. Contacts between sponsors and Dreamers are infrequent, but according to Public/Private Ventures' evaluation "they are valued by both groups" (99a). Personal contact seemed to be central to the meaning sponsors derived from IHAD support, as opposed to more anonymous forms of charity (99a). Comments by Dreamers suggested that "some Dreamers develop commitment to IHAD's [achievement] goals as a way to reciprocate sponsors' generosity (99a).

⁴According to Public/Private Ventures, "the relationship with the project coordinator is a Dreamer's crucial link to the IHAD program": "Project coordinators represent a continuous stable source of support for these youth. Unlike teachers, project coordinators provide a haven in the midst of a school environment that can be indifferent or competitive...Project coordinators advocate for Dreamers within a school and leverage additional resources, such as tutoring, trips or concrete assistance during emergencies. They can and do drive youth to school, thus improving attendance, and bring in parents for teacher consultations, thus increasing parental involvement" (9%). Many Dreamers form strong emotional attachments to project coordinators. However, contacts with project coordinators are voluntary and vary among students and project coordinators. Project Coordinators are not formally associated with the students' schools.

⁵The Public/Private Ventures evaluation is funded by a private foundation (99a). Various supporters back the 8 classes now overseen by the Greater Washington IHAD Foundation. An initial sponsor formed the Greater Washington IHAD Foundation and convened a class in 1987. Sponsors as of 5-1990 included individual benefactors (three *); pairs of business executives (three classes); a group of professional athletes and a business executive (one class); and two churches (one class) (99a).

college entry (99a).⁶ However, Public/Private Ventures' preliminary 1-year review of three of the Washington area's IHAD projects, based on interviews with 14 of the Dreamers and project coordinators, found that IHAD was a "promising" intervention (99a). In its 1-year review, Public/Private Ventures found that:

- the IHAD intervention had targeted and reached very disadvantaged youth;
- the timing of the IHAD intervention (at the end of fifth or sixth grade—the beginning of junior high or middle school entry) was "developmentally propitious";
- the IHAD model seemed to have a positive effect on Dreamers' attitudes towards education, and
- the IHAD intervention provides adult relationships (i.e., sponsors, project coordinators, mentors⁷) that are meaningful to youth (99a).

On the other hand, Public/Private Ventures expressed concern that "support services, especially tutoring, are necessary program components, but are provided unevenly" (99a). It also noted that enrichment activities (e.g., a summer program for Dreamers) and incentive awards are inconsistently delivered within each school and among schools. Project coordinators were found to be overburdened and in need of help in gaining access to social services for their students (99a). Public/Private Ventures found that the "inconsistency of the services is probably inevitable within the present Foundation structure" and that "the quality of Foundation-wide activities, such as the summer school, is worrisome" (99a). The evaluators recommended additional oversight by the Greater Washington IHAD Foundation's board of directors to improve these aspects of the program.

IHAD raises an interesting public policy dilemma (99a). According to Public/Private Ventures, the benefits of IHAD may derive from IHAD's private sponsorship:

IHAD's unique contribution may be exclusive to the private sector: an association with a wealthy and even famous benefactor. This benefit can have immense repercussions for a youth from a poverty background: a sudden change of luck, intermittent reminders of a special status, and a long-term commitment by a distant and powerful advocate. Publicly funded interventions can probably never deliver this sense of a special connection, or elicit the high expectations that youth—and some school officials—attribute to sponsors (99a).

Nonetheless, it may be that many of the elements of IHAD--the project coordinator who provides a haven for adolescents in a competitive and often hostile school environment, tutoring, the link to intensive social and academic support services, guaranteed college tuition--an be reproduced in school and community settings using public funds.

Promising Interventions Focused Largely on Changing School and Community Environments

While some interventions focus on improving the school adaptation of selected individuals, other interventions focus largely on changing school and sometimes community environments, although they may "build in" individually focused attention (e.g., 35). The primary purpose of interventions focused on changing these environments is to make schools (and, sometimes, communities) more health-promoting environments for adolescents. One of the most frequently cited of these approaches to improving school environments is Comer's School Development Program (35). In addition, proponents of SLHCs often view SLHCs as a means of integrating a health perspective into a school, as well as a way to deliver health and other nonacademic services to individual adolescents (141a).⁸ These approaches come under the general rubric of "comprehensive school health" (107b,108a), establishing the school as a health-promoting environment (27), or school/community linkages to promote adolescent health (147).

Comer's School Development Program—A longitudinal study of an intervention developed by Yale University child psychiatrist James Comer provides strong evidence that creating a collaborative dynamic between educators and parents, as opposed to the traditional social service bureaucratic relationship, markedly advances both

⁶A newsarticle reported mixed results for the initial Eugene Lang class in New York City (152b).

⁷Mentors were provided by IHAD at only one of the schools. In this school, approximately 30 employees of the sponsors' company "adopted" two Dreamers each: "They phone the Dreamers, wrote them letters and attended company-sponsored trips and dinners with them. . . Additional contacts could be initiated if either the mentor or the youth desired [and they often were]" (99a). Public/Private Ventures' evaluation notes that mentors were sometimes frustrated by the differences in values between the mentors and the Dreamers, and that one mentor recommended training for mentors and matching youth with mentors from similar backgrounds (99a). Interventions using mentors to prevent specific adolescent health problems are discussed in other chapters in this volume; there are no evaluations of such interventions available.

⁸The role of SLHCs in health services delivery are discussed further in Vol. I of this Report, *Summary and Policy Options*, and inch. 15, "Major Issues in the Delivery of Primary and Comprehensive Health Services to Adolescents," in Vol. III.

Box 4-A—Innovative Approaches to Improving American Schools¹-Continued

organizational responsiveness to students' personal needs and students' academic work (35). Unlike some current educational reforms which focus on instruction and curriculum, the Comer intervention is based on the understanding that "many kinds of development, in social, psychological, emotional, moral, linguistic, and cognitive areas, are critical to future academic learning" (35).

The Comer intervention, also known as the School Development program, seeks to overcome what Comer terms "a basic problem underlying the schools' dismal academic and disciplinary record: the sociocultural misalignment between home and school" (35). For many black and Hispanic children whose parents have had a traumatic social history, Comer suggests, education must do more than teach the basics (127a). It must also address students' emotional, social, and psychological needs (127a). The School Development Program has three goals: 1) to induce parents to participate in the school's life; 2) to force school administrators, teachers, and other staff to share authority in managing the school; and 3) to bring guidance counselors, mental health professionals, and teachers into a team that meets regularly to combat behavior problems (127a). A school governance and management team, consisting of parents and teachers, the principal, a mental health specialist, develops a comprehensive school plan covering academics, social activities (e.g., potluck suppers to teach children social skills and enable parents to meet teachers), and special programs. A mental health team assigns a member to work with a child who is having difficulty and tries to identify whether some school process is contributing to the behavior. Parents are also encouraged to become classroom assistants, tutors, or aides.

The Comer process has already been adopted by more than 100 schools in nine districts in eight States (127a). In the schools where Comer's programs are being implemented, the evaluation data for at-risk students are very encouraging. In the two New Haven elementary schools where the program was implemented, behavioral problems in the schools declined and math and reading scores climbed. Similar results were achieved, from 1985 to 1987, in 10 predominantly black schools involved in the Comer program in Prince Georges County, Maryland (35). A more rigorous evaluation of the Comer intervention in Prince Georges County is being developed.

School-linked health centers⁹—As discussed further elsewhere in this Report, SLHCs vary in the services they offer. Comprehensive SLHCs (and comprehensive community-based centers for adolescents) are centers that aspire to provide health services that address the range of problems that many adolescents face: care for acute physical illness, general medical examinations in preparation for involvement in athletics, mental health counseling, laboratory tests, reproductive health care, counseling for family members, prescriptions, advocacy, and coordination of care. The more comprehensive of the centers may also offer adolescents additional services, such as educational services, vocational services, legal assistance, recreational opportunities, child care services and parenting education for adolescent parents. The defining feature of a comprehensive Service center for adolescents is the extent to which the center attempts to be responsive to the specific needs of adolescents by, for example, offering free care or using sliding-fee schedules for payment, evening and weekend hours of operation, confidentiality of services, and staff members who are knowledgeable about and committed to adolescents. OTA has concluded that SLHCs are the most promising recent innovation to improve U.S. adolescents' access to health and related services. Although there is as yet little systematic evidence that SLHCs for adolescents improve health outcomes, there is clear evidence that such centers can improve adolescents' access to the health and related services that adolescents are most likely to need.

In the opinion of many observers, however, SLHCs are not just a site for delivering health services to adolescents. **SLHCs can be a** means of integrating a health perspective into a school and making schools more health-promoting environments. They can provide health services to faculty, provide linkages with health professionals and services outside the school building, serve as a source of referral and consultation for teachers and students, and make health-promoting suggestions to school administrators. Perhaps as a consequence of this perspective on SLHCs, some evaluations of SLHCs have focused on whether the presence of an SLHC improves the health of the entire student body in a school, not just the users of clinic services (e.g., 107c). However, it is as yet difficult to make judgments about the ability of SLHCs to improve school environments and so influence the health of entire student bodies: there have been few evaluations and those that have been conducted are

⁹See Vol. I of this Report, *Summary and Policy Options*, the "Report Brief," and ch. 15, "Major Issues in the Delivery of Primary and Comprehensive Health Services to Adolescents," in Vol. III.

methodologically weak hence, findings concerning impact are mixed.¹⁰ Most important, however, evaluations have not formally evaluated whether SLHCs have become fully integrated into schools.

The comprehensive school/community health model—An increasing recognition that there are inherent limitations to what individuals, the traditional health care system, schools, and social services can do on their own to promote and improve adolescent health has led observers to recommend more comprehensive and integrated approaches. Evaluations of SLHCs (see above) by Kirby and others have pointed to the need for additional integration of SLHCs into schools and communities (e.g., 2a,107c). In their review of the provision of mental health services in SLHCs, for example, Adelman and Taylor suggested that SLHC-based mental health services take a more preventive orientation, in part by becoming better integrated into the daily life of a school (2a). Kirby and his colleagues suggested that SLHCs develop communitywide programs involving parents, youth-serving agencies, religious and other community leaders, and the media (107c).

One approach to integrating school and community programs offered by Kirby makes the *community* the center of the effort: programs are subject to community control and programs are overseen by a “child health council” (107b). Because schools are the one institution regularly attended by most young people ages 5 to 16, however, Kirby suggests that “schools represent the public institution with the greatest opportunity for playing an important role in improving the health of most youth” (107b). According to Kirby, a comprehensive school/community health program at the school level:

- includes health instruction, school health services, other school activities, and a reinforcing school environment;
- integrates special programs for parents and includes adult mentors; and
- has linkages with health and youth-serving agencies, churches, businesses, and local media (107b).

Thus, schools are the central locus of efforts to promote and improve adolescent health, but they are not expected to act alone (see also 27,147).

As pointed out by Kirby and others (107b,147), the implementation of comprehensive school/community health programs has been impeded by the failure to resolve some important issues. Key issues include resistance by schools to adopting additional responsibilities and a lack of formal evidence that integrated school/community programs are more effective than more segmented efforts (107b). Recently, however, a sense of urgency about adolescent health and achievement has stimulated many learned observers, including those in the education community, to come out in support of a greater role for schools in improving adolescent health (e.g., 27,147). **The analysis in this chapter (and throughout this Report) strongly suggests that a key to improving adolescent health would be to encourage the view of schools as environments that can either promote or impede adolescent health, rather than merely as settings in which to place additional responsibilities, such as the delivery of additional “programs,” without providing additional supports.**

¹⁰See ch. 15, “Major Issues in the Delivery of Primary and Comprehensive Health Services to Adolescents,” in Vol. III.

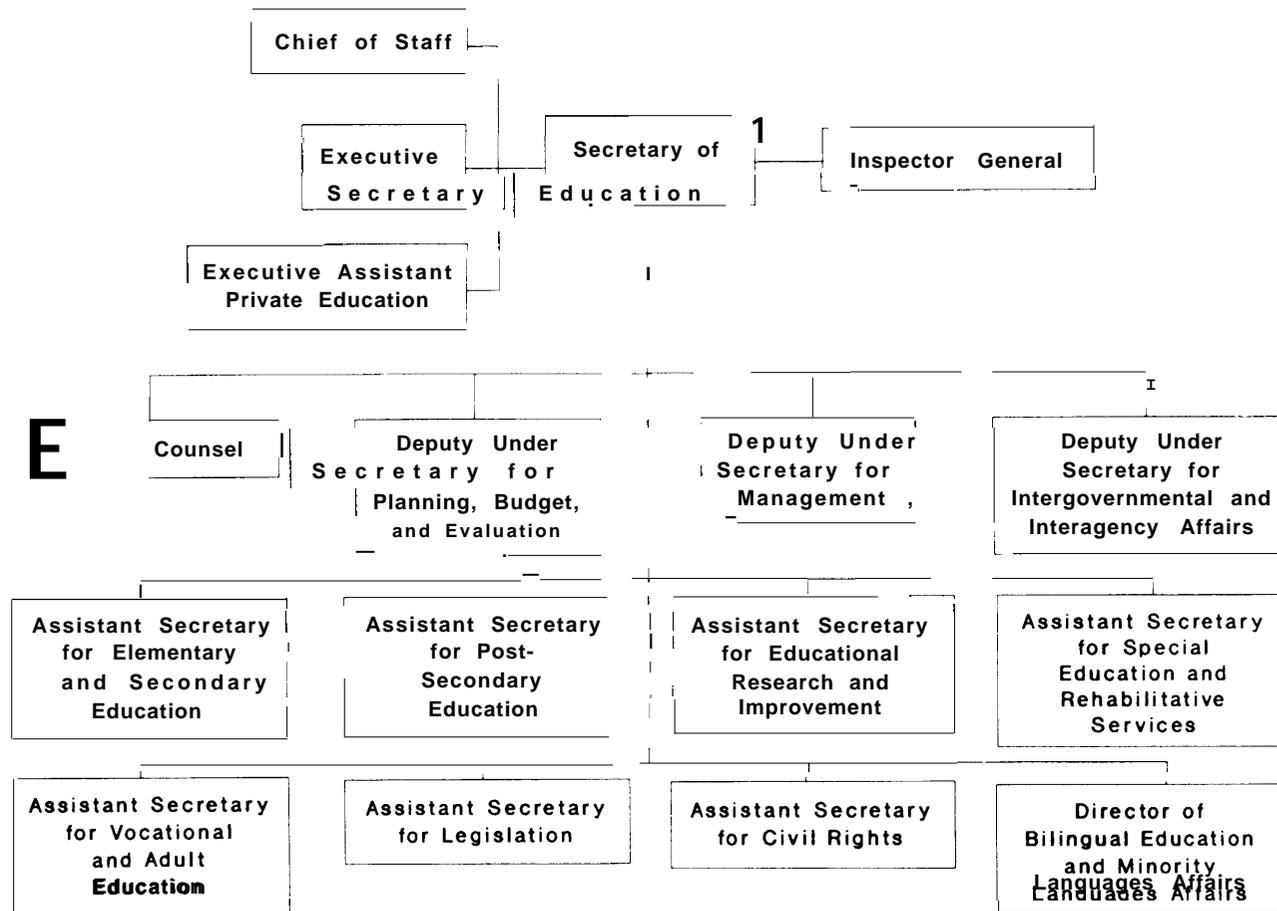
SOURCE: Office of Technology Assessment, 1991.

ically and educationally disadvantaged children. For the past two decades, the primary Federal vehicle for helping schools meet the educational needs of educationally disadvantaged children (i.e., children performing below their appropriate grade level, children of migrant workers, children with physical disabilities, and neglected or delinquent children under State care) has been grant programs authorized by Chapter 1 and administered by the Office of the Assistant Secretary for Elementary and Secondary Education.

The Office of the Assistant Secretary for Elementary and Secondary Education has one of the largest appropriations in the U.S. Department of Education, approximately \$6.6 billion in fiscal year 1989. Although the proportion of funding allocated to adolescents cannot be precisely determined, major programs that provide adolescent-related efforts include the following:

- Chapter 1 grants to provide financial assistance to State and local educational agencies to meet

Figure 4-4--U.S. Department of Education



SOURCE: U.S. Department of Education, organizational chart, Washington, DC, Sept. 15, 1989.

the special educational needs¹⁶ of disadvantaged children and adolescents;¹⁷

- education of homeless children and youth, as authorized by the Stewart B. McKinney Homeless Assistance Act;
- Indian education programs, as authorized by the Indian Education Act of 1988;
- training for elementary and secondary school teachers in math and science, as authorized by the Dwight D. Eisenhower Mathematics and Science Education, Hawkins-Stafford Amendments of 1988; and
- drug abuse education and prevention coordination in States and communities, as authorized by the Drug-Free Schools and Communities Act of 1986.

Chapter 1, Title I of the Elementary and Secondary Education Act, provides Federal assistance for State and local programs of education for disadvantaged U.S. pupils at all levels, from prekindergarten through secondary school (202a). The fiscal year 1989 appropriation for Chapter 1 was \$4.6 billion, making this program the largest program of aid to elementary and secondary education in the United States.

Chapter 1 was initially authorized as Title I of the Elementary and Secondary Education Act in 1965 (202a). In 1988, Congress reauthorized the Chapter 1 program, again as part of the Elementary and Secondary Education Act, in the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 (Public Law 100-297) (202a). The 1988 law, better known as the Hawkins-Stafford Act, made a number of changes in State and local educational agency programs of Chapter 1.¹⁸ Among other things, the Hawkins-Stafford Act provided for the following:

- *incentives to enhance accountability and improve performance*—the Hawkins-Stafford Act contained several provisions aimed at evaluating the performance of individual pupils, schools, and local educational agencies served

by Chapter 1 and at providing Federal assistance to improve this performance. The law specifies that if an individual pupil participates in Chapter 1 for a year without academic improvement, the local educational agency must consider changing the services provided to that pupil. If the aggregate performance of pupils in a school fails to improve over 1 year, the local educational agency must develop a program improvement plan. It is important to note that the law allows State and local educational agencies a great deal of flexibility in setting the standards to which they are to be held accountable.

- *programs to increase parental involvement in the education of Chapter 1 participants*—The law requires local educational agencies to implement procedures ‘of sufficient size, scope, and quality to give reasonable promise of substantial progress toward achieving the goals’ of informing parents about the Chapter 1 program, training parents to help instruct their children, and consulting with parents. The agencies are required, among other things, to develop written policies for parental involvement in planning and implementing Chapter 1 programs, to convene an annual meeting of parents, and to provide program information and an opportunity for regular meetings for parents if the parents so desire. The law gives general guidance and lists numerous examples to illustrate the types of authorized parental involvement activity that would allow local educational agencies to meet their responsibilities—e.g., parent training programs, the hiring of parent liaisons, the training of school staff to work with parents, the use of parents as tutors or classroom aides, and parental advisory councils—but it leaves local educational agencies with about the same level of flexibility in the area of encouraging parental involvement as they had before. Thus, it remains to be seen

¹⁶Federal support for ‘special education’ programs under Public Law 94142, the Education of the Handicapped Act, as amended, is not discussed in this chapter. See ch. 19, “The Role of Federal Agencies in Adolescent Health” in Vol. III, and ch. 11, “Mental Health Problems: Prevention and Services,” in this volume.

¹⁷No age breakdowns are available for current funding of Chapter 1. However, in the 1987-88 school year, 21 percent (1,037,127) of the population served were students in grades 7 through 12 in both public and private schools, with funding for these adolescents totaling \$3.8 billion.

¹⁸Local educational agency programs of Chapter 1 represent about 90 percent of Chapter 1 funding (202a). Chapter 1 local educational agency grants are calculated by the Federal Government on a county basis. State education agencies receive the aggregate funds for counties in their States, then allocate the county amounts to individual local educational agencies.

what impact the new provisions will have on the actual level of parental involvement.¹⁹

- *programs for secondary school pupils and school dropouts*—The Hawkins-Stafford Act devoted substantial attention to establishing programs specifically for compensatory education of secondary school students. Although local educational agencies have always been authorized to use Chapter 1 funds for secondary school students, Chapter 1 services have historically been focused on pupils in kindergarten through sixth grade. In 1985-86, for example, about 88 percent of all Chapter 1 basic grant participants were enrolled in kindergarten through grade 6, while only 5 percent were in grades 10 through 12. Two different titles of the Elementary and Secondary School Education Act, as amended by the Hawkins-Stafford Act, provide authorizations for programs of school dropout prevention and secondary school basic skills improvement: Title VI and Title I, Chapter 1, part C.

—Title VI contains 1-year demonstration grant authorizations under the School Dropout Demonstration Assistance Act of 1988 and the Secondary Schools Basic Skills Demonstration Assistance Act of 1988. The former act authorizes demonstration grants to local educational agencies for dropout prevention and reentry activities both within schools and in cooperation with community organizations and businesses.²⁰ Dropout prevention and reentry activities may include services to address poor academic achievement, work-study programs, services intended to improve student motivation and the school learning environment, remedial services to youth at risk of dropping

out, occupational training, educational programs offering jobs or college admission to students who complete them, summer employment, etc. The fiscal year 1989 authorization for this program to address school dropout programs was \$50 million; the appropriation was \$21.7 million (202a).²¹ The Secondary Schools Basic Skills Demonstration Assistance Act authorizes a program of national demonstration grants to local educational agencies for activities to help educationally disadvantaged secondary school students attain grade level proficiency in basic skills and learn more advanced skills. The grants may be used to initiate or expand compensatory education programs for secondary school students or dropouts, transition-to-work activities in cooperation with the private sector or community-based organization, and use of secondary students as tutors of other educationally disadvantaged pupils. The fiscal year 1989 authorization for this program was \$200 million; however, no funds were appropriated for the program. In fiscal year 1990, the first year of funding, just under \$5 million was appropriated for the program (202b). According to the U.S. Department of Education, basic skills programs can continue to be carried out through Chapter 1 basic and concentration grants and the School Dropout Demonstration Assistance Act.

—Title I, Chapter 1, part C established a longer term formula grant program of State grants to secondary schools for basic skills improvement plus dropout prevention and reentry. In general, funds will be allocated to States in proportion to the Chapter 1 basic grants their schools receive.²³

¹⁹The Hawkins-Stafford Act authorized on a demonstration basis, in the Even Start program, support for projects that provide basic education for both educationally disadvantaged children ages 1 through 7 and their parents who reside in areas of relatively high poverty concentration. This program is intended to provide general basic education to parents and to increase their involvement in helping to instruct their children (202a). It may have the potential to benefit adolescent parents.

²⁰At least nine other U.S. Department of Education programs and three U.S. Department of Labor programs may help schools that have dropout programs. For information about these programs, which range from large grant programs (e.g., Chapter 1 and the Job Training Partnership Act programs) to small programs explicitly focused on helping students complete school, see the March 1990 Congressional Research Service issue brief entitled 'High School Dropouts: Current Federal Programs' (202b). That publication notes that little is known about the extent to which the available programs actually help students complete school (202b). It also notes that because the fragmentation of programs may be confusing to organizations working with dropouts, greater coordination may be desirable. OTA's discussion of the general problem of fragmentation in Federal programs for adolescents is presented in ch. 19, "The Role of Federal Agencies in Adolescent Health," in Vol. III of this Report.

²¹Title VI also required the Secretary of Education to establish a standard definition of the term 'school dropout.' Such a definition was published in the Federal Register on May 10, 1988, p. 16667 (202a).

²²As of March 1990, fiscal year 1988 and 1989 appropriations for the School Dropout Demonstration Assistance Act had provided 2 years of assistance to 89 projects in 31 States and the District of Columbia (202 b). Evaluations were not yet available.

²³All of these changes are discussed at length in a January 1989 Congressional Research Service report entitled "Education for Disadvantaged Children: Major Themes in the 1988 Reauthorization of Chapter 1" (202a).

U.S. Department of Labor

Within the U.S. Department of Labor, the Employment and Training Administration is the agency most directly supporting activities affecting adolescents. In program year 1989, funding for youth was estimated to account for 58 percent (\$2.2 billion) of the budget. Employment and Training Administration projects for youth typically focus on adolescents and young adults ages 16 and over. The Employment and Training Administration supports employment and training programs for economically disadvantaged youth under the 1982 Job Training Partnership Act. Three programs authorized under Titles II-A, II-B, and IV of the Job Partnership Training Act support the provision of services to high school dropouts and potential dropouts ages 14 or 16 to 21 (202b),

Title II-A provides training grants for disadvantaged adults and youth to States, which pass on 78 percent of the funds to local service delivery areas for training of people who are economically disadvantaged or face other barriers to employment (e.g., lack of a high school diploma) (202b). Local service delivery areas must spend 40 percent of the funds for youth ages 16 to 21. States must use a portion of their education set-aside (8 percent of the total grant) for literacy training, dropout prevention, and school-to-work transition programs. The fiscal year 1990 appropriation for Title H-A was \$1.7 billion.

Title II-B provides Summer Youth Employment and Training grants for low-income youth to States, which pass on funds to service delivery areas for summer on-the-job training, work experience, and supportive services for disadvantaged youth ages 16 to 21 (202 b). At local option, 14- and 15-year-olds may also be served. Local service delivery areas' plans must include assessments of participants' reading and math skills and describe available remedial education activities. The fiscal year 1990 appropriation was \$699 million.

Title IV authorizes various federally administered programs affecting adolescents, such as Job Corps and programs designed for Native Americans and migrant workers (202 b). Job Corps, a joint venture between the U.S. Department of Labor, private

corporations, and nonprofit organizations, provides employment and training in primarily residential centers for severely disadvantaged adolescents and young adults ages 16 to 21. The U.S. Department of Labor provides funding for the centers, which totaled \$741.8 million in program year 1989, and corporations and nonprofit organizations organize and manage the centers under a contractual agreement. In program year 1989, there were 100,000 participants in Job Corps. After completing the program, 66.9 percent of the participants were placed in jobs and 16.7 percent went on for further education.

Title IV also establishes funding for research, which is administered by the Division of Research and Demonstrations in the Office of Strategic Planning and Policy Development. One of the primary goals is to address the problem of unemployed youth or those at risk of becoming unemployed. Specific programs include grants to integrate Federal, State, and local services; to investigate patterns of youth achievement; to link school and employment with apprenticeships; to evaluate demonstrations providing alternative education to at-risk youth; and to analyze interagency demonstrations. In one recent year, there were 35 such research projects underway, and the average cost per project was approximately \$275,000.

Under the Employment and Training Administration's Office of Work-Based Learning, the Bureau of Apprenticeship and Training administers various apprenticeship programs authorized by the National Apprenticeship Act of 1937. Federal staff from the Bureau of Apprenticeship and Training, as well as State personnel in some States, assist in providing technical assistance to the apprenticeship programs, which are sponsored by industry. The average age of most apprentices is about 29, and about 17 percent of apprentices are between the ages of 16 and 22. There is one type of apprenticeship program designed specifically for adolescents. The School-to-Apprenticeship Program, which makes up less than 1 percent of all apprenticeship programs, provides adolescents with the opportunity to attain valuable job skills in an apprenticeship when they are high school seniors (101).

Adolescents' Discretionary Time²⁴

Neither researchers, policymakers, nor even parents know a great deal about how U.S. adolescents use their time when they are not in school or engaged in basic maintenance activities (e.g., eating, sleeping). A number of questions remain to be answered. For instance, how many hours per week do adolescents typically spend in discretionary activities? Where do they engage in such activities? With whom, if anyone, are such activities shared? Furthermore, does the use of adolescents' discretionary time vary by age, race, gender or other cultural, ethnic, or demographic factors?

Despite the paucity of systematic data on the topic, it is virtually certain that the physical, social, and behavioral development of U.S. adolescents is shaped, at least in part, by experiences that occur during their discretionary time. Hence, it is likely that the constructive and creative use of discretionary time will enhance adolescents' prospects for healthy development. Toward this end, future policies regarding adolescent development must be well informed by knowledge about the past, present, and potential uses of discretionary time.

Given the large "amounts of time that adolescents devote to highly structured activities (such as schooling and homework) and essential maintenance activities (such as eating, sleeping, and personal hygiene), their *discretionary time probably constitutes the most abundant and flexible resource that exists for the provision of health-enhancing programs*. Studies have shown that recreational and leisure activities, as well as work activities, can provide adolescents with opportunities for experiences of mastery and competency (103); creativity and self-expression (50); self-improvement and self-definition (125); self-fulfillment and personal meaning (50); enhancement of character and personality (103); testing oneself in competition (106); development of interpersonal and social skills (103); and, the development of autonomy (50). Leisure and work activities also can contribute to social experimentation and recognition (125); improved physical health (17); an increased sense of freedom (50); identification with positive role models and mentors (66); companionship and improved relationships with others (50); and, of course, entertainment and

relaxation (132). Research has shown that leisure and work activities which involve the attainment of specific goals (59) and meaningful goal-directed activity (65,129) are positively related to important developmental variables such as self-esteem, positive affect, and life satisfaction.

For a number of reasons, U.S. adolescents today probably spend much less time with their parents and families than in previous years. The reasons include the breakdown of two-parent families due to separation and divorce (29,77); the deterioration of extended family relationships as a result of high rates of geographic mobility and urban migration (76); the rapid entry of mothers into the work force (216) and the concurrent emergence of numerous "latchkey" children who are unattended after school (192); high incidence of parental substance abuse and mental illness, and parents' attendant inability to exert positive socializing effects upon their children (68); decreased family size and, therefore, fewer siblings who are available to socialize youngsters (16,29); and, fiscal exigencies which constrain the availability of funds for after-school programs (128).

According to some observers, U.S. adolescents have become increasingly separated from adults, have fewer adult responsibilities, and communicate less frequently with adults. Indeed, one study indicates that relatively few adolescents ask their parents for advice about such basic concerns as jobs, college, school problems, sibling problems, health or diet, drinking, sex, trouble with other adolescents, and drugs (154). To the extent that adolescents spend less time with their parents, their development is likely to be shaped less frequently and less influentially by parents and more often by peers or others with whom adolescents come into contact during their "free" time or by parental surrogates and role models who appear on television or elsewhere. Some observers suggest that the relative isolation of adolescents from adults has helped to bring about "adolescent rolelessness" (153). Others contend that adolescents' insulation from "the real business of life" produces apathy, self-hatred, boredom, loneliness, meaninglessness, and acute feelings of frustration (46).

²⁴This section draws substantially from a paper entitled "How Can Society Contribute to Meaningful Use of Adolescents' Spare Time," prepared under contract to OTA by Ronald Feldman (66a).

Given the central role of discretionary time in adolescent growth and development, it is unfortunate that relevant research concerning this topic is very limited. Such research is essential to better comprehend how adolescents use their discretionary time and how we can devise appropriate policies and programs to promote health-enhancing uses of discretionary time.

How Do U.S. Adolescents Spend Their Time?

Results from the Monitoring the Future/High School Seniors Survey, which surveyed a nationally representative sample of about 17,000 U.S. high school seniors, indicate that U.S. adolescents consider discretionary and leisure activities to be of great importance (8). Seventy percent of the high school seniors who were interviewed in 1986 stated that it was either “extremely important” or “quite important” to have “plenty of time” for recreation and hobbies. This was the highest²⁵ percentage reported in the survey’s 10-year history. In considering the attributes of preferred jobs, 78 percent of the 1986 high school seniors regarded more than 2 weeks of vacation as “pretty important” or “very important,” while 83 percent deemed it “pretty important” or “very important” that their job afford “a lot of time for other things in life. Both figures were higher than at any other time in the survey’s history.

A review by Easterlin and Crimmins further substantiates that a significant shift has emerged in the leisure aspirations of American adolescents during the decade from 1976 to 1986 (55). Among 14 life goals studied, the goal with the greatest increase in importance to adolescents in the decade from 1976 to 1986 was “having lots of money.” The 1986 adolescent respondents considered it much more important than their counterparts a decade earlier to own such items as a vacation house, at least two cars, and a recreational vehicle. Although in both 1976 and 1986 these goals were exceeded in importance by other goals, including “a good marriage and family life,” the foregoing goals rose most in importance and were integrally related to high valuations of leisure time.

Perhaps the most systematic study of American adolescents’ use of time was a study by Czikszen-

Table 4-5-Where Adolescents Spend Their Time^a

Home (41%)	
Bedroom	12.9%
Living room	8.9
Kitchen	8.1
Yard or garage	4.1
Dining room	3.3
Basement	2.2
Bathroom	1.6
School (32%)	
Classroom	19.8
Miscellaneous locations	2.3
Cafeteria	2.2
Halls	2.0
Gym	1.9
Student center	1.3
Library	1.2
School grounds	0.8
Public (27%)	
Friends’ home	5.4
At work	5.3
Automobile	3.8
Other public areas	3.0
Store or cafe	2.8
Street	2.0
Park	1.7
Walking	1.5
Indoor recreational facility	0.8
Church	0.8
Bus or train	0.4

^aThe data shown in this table were derived from a study of 75 adolescents who for a 1-week period carried an electronic pager and were buzzed frequently during the day and asked to record their activities (see text). The data here are based upon 2,734 weighted self-reports. Each percentage point is equivalent to approximately 1 hour per week spent in the given location or activity.

SOURCE: Adapted from M. Csikszentmihalyi and R. Larson, *Being Adolescent: Conflict and Growth in the Teenage Years* (New York, NY: Basic Books, 1984).

mihalyi and Larson published in 1984 (44). These investigators utilized an innovative research procedure in which 75 adolescents were asked to carry an electronic pager and a pad of self-report forms for 1 week. At a random moment within every 2-hour period, a signal was sent to the pager and the adolescent was instructed to complete a self-report form about his or her activity at that time. Despite sampling limitations, this study did provide an overview of 75 adolescents’ daily experience.

As shown in table 4-5, the investigators found that the sampled adolescents spent 41 percent of their time at home, 32 percent at school, and 27 percent in locations such as friends’ homes, work or parks (44). Much (nearly 40 percent) of the time these adolescents spent at school was spent in places other than

²⁵Lest it be thought that placing a high value on leisure time means that contemporary adolescents are lazier now than they were in past, it is important to compare adolescents’ attitudes towards leisure time to those of adults. A survey recently reported in the *Washington Post* found that many private sector executives considered vacations crucial to their psychological and physical well-being (215a).

the classroom (e.g., miscellaneous locations, cafeteria, halls, gym). Time spent in these locations frequently afforded opportunities for unstructured social interaction with peers.

As shown in table 4-6, the sampled adolescents spent 40 percent of their time in discretionary activities such as socializing, watching television, reading, and engaging in sports or games (44). They spent approximately 31 percent of their time in daily maintenance activities such as chores, errands, eating, traveling from one place to another, sleeping, and personal care (e.g., grooming, dressing and bathing). Finally, they spent 29 percent of their time in activities that the investigators characterized as 'productive,' primarily studying, classwork, or jobs and related activities. Even though the sampled adolescents devoted more time to self-selected discretionary activities than to maintenance or productive activities, it is probable that the researchers' estimates of the subjects' discretionary time are low. The reason is that data were not collected during such prime leisure periods as Sundays, weekdays after 11 p.m., and the summer.

If one considers the sampled adolescents' leisure time (see table 4-6), one finds that the greatest proportion of this was spent in socializing; the adolescents spent one-sixth of their waking hours socializing. In addition, the sampled adolescents reported engaging in conversation while studying, watching television, and eating. In total, therefore, the sampled adolescents probably spent about one-third of their day conversing with others. Hence, conversation was by far the single most prevalent activity in the sampled adolescents' lives. The next largest amount of leisure time, after that spent socializing, was spent in watching television. The sampled adolescents spent much smaller proportions of their leisure time in essentially solitary activities such as reading, thinking, and listening to music or in activities that typically involve friends and peers such as sports and games or arts and hobbies. Altogether, more than one-half of the adolescents' discretionary time was spent in social interaction with others and in activities that adults often consider to be of secondary importance. In terms of sheer amount of time, peers were by far the greatest presence in the sampled adolescents' lives.

In the late 1970s, Farley conducted a related study with 129 Canadian adolescents who ranged between 10 and 17 years of age (60). Information regarding

Table 4-6-What Adolescents Spend Their Time Doing^a

Leisure activities (40%)	
Socializing	16.0?!
Watching television	7.2
Miscellaneous	4.6
Reading (nonschool)	3.5
Sports and games	3.4
Thinking	2.4
Arts and hobbies	1.5
Listening to music	1.4
Maintenance activities (31%)	
Chores and errands	14.3
Eating	5.6
Transportation	4.9
Rest and napping	3.2
Personal care	3.2
Productive activities (29%)	
Studying	12.7
Classwork	12.0
Jobs and other activities	4.3

^aThe data in this table were derived from a study of 75 adolescents who for a 1-week period carried an electronic pager and were buzzed frequently during the day and asked to record their activities (see text).

SOURCE: Adapted from M. Csikszentmihalyi and R. Larson, *Being Adolescent: Conflict and Growth in the Teenage Years* (New York, NY: Basic Books, 1984).

the daily activities of 129 adolescents was collected by recall of a sequential record of every activity that lasted at least 15 minutes. Aside from weekday school attendance, passive leisure was the activity grouping that clearly emerged as the most widespread on both weekdays and Sundays. Nearly 90 percent of the adolescents devoted some time each day to passive leisure activities. On the average, the adolescents in this study spent 2 to 3 hours per day passively. Nearly three-quarters of this time was accounted for by television watching. Low levels of participation were recorded for such activities as working away from home, cultural or educational activities, and organizational activities. Only 18 percent of the respondents participated in adolescent organizations, and an even lower percentage (12 percent) took part in church activities. Nevertheless, 100 percent of the subjects who participated in adolescent organizations or church activities regarded these organizations as 'important' or 'very important.'

Related research further supports the observation that a great deal of American adolescents' time is spent watching television. Some studies indicate that more than 70 percent of U.S. adolescents watch television daily (105) and that adolescents spend up to 25 hours per week watching television (145,191). Hispanic adolescents may watch television for as many as 30 hours per week (87). Home-based video

games and televised music videos are of increasing interest to American adolescents (42,135). While some critics regard these leisure time activities as an “addiction” (189), the effects of such activities depend upon a wide range of variables such as the extent of peer and parental involvement and the substantive content of the videos. Rigorous research concerning the effects of these activities is virtually nonexistent.

Schneller conducted a 1988 study of adolescents’ discretionary activity based on diaries logged every half hour from the close of school until bedtime (179). This study found a negative correlation between television viewing and activities such as participation in social or cultural events, adolescent movement activities, excursions, and outdoor games. Selnow and Reynolds’ 1984 study of 184 sixth, seventh, and eighth graders similarly found a negative correlation between television viewing and membership in school, church, and musical groups (182). The authors concluded that extensive television viewing entails “opportunity costs” that preclude other forms of valuable activity. Adolescents who view greater amounts of television are less likely to take advantage of the social learning opportunities that can be provided by group membership.

The optimum amount of solitary activity is likely to vary in accord with the unique needs of each adolescent. For more mature adolescents, increased time alone generally is associated with better adjustment. Although some adolescents do not regard the experience of being alone as particularly pleasant, those who spend at least a moderate amount of time alone—that is, about 30 percent of their waking hours—appear to be better adjusted than others (108). Hence, being alone for reasonable periods of time may serve a constructive developmental function for adolescents (42,1 15).

In comparison with younger children, adolescents tend more often to be alone or with peers during the after-school hours (192). Some studies have shown that adolescents spend up to 10 hours per week at video arcades (149) and shopping malls (4).²⁶ As children are increasingly left to fend for themselves,

parents fear about their children’s safety (62). Among other things, they express concern about after-school injuries, excessive television viewing, being kidnapped, and sexual abuse (98). Concurrently, they worry that their adolescent children may not be utilizing their discretionary time in a way which contributes to more effective social, emotional, and behavioral development.

Alternatives for the Constructive Use of Adolescents’ Discretionary Time

As discussed elsewhere in this Report,²⁷ since at least the early 1900s, a number of extrafamilial youth-serving agencies and, to some extent, other entities (e.g., schools, municipal recreation centers) have developed to enhance adolescents’ access to health-enhancing alternatives for occupying their discretionary time. Just as there has been little systematic research on how, where, why, and with whom adolescents spend their discretionary time, there has been little systematic research into the nature, quality, and effectiveness of existing alternatives for the constructive use of adolescents’ discretionary time. Nonetheless, as discussed below, many of these entities have attempted to base their programs on research on adolescent development and the prevention of problem behavior. Views on the basic requirements of programs to promote healthy adolescent development are discussed below, as are several typical programs and, when available, evaluations of their effectiveness. Perhaps because adolescents’ discretionary time has not been a central focus of research or policy development, several issues about the nature of these alternatives have yet to be resolved. These issues are raised in the next section of this chapter.

Basic Requirements of Alternatives for the Constructive Use of Adolescents’ Discretionary Time

According to Kerewsky and Lefstein, a number of factors are of particular importance in the design of effective and developmentally appropriate programs for adolescents (107).²⁸ Such factors include self-exploration and definition, meaningful participation, positive interaction with peers and adults,

²⁶Substance abuse problems among U.S. adolescents are discussed in ch.12, “Alcohol, Tobacco, and Drug Abuse: Prevention and Services,” in this volume.

²⁷See ch. 2, “What Is Adolescent Health?” in this volume.

²⁸Current understandings of the developmental needs of adolescents are discussed in ch. 2, “What Is Adolescent Health?” in this volume.

physical activity, competence and achievement, and structure and clear limits. Kerewsky and Lefstein suggest that effective programs for adolescents ought to be characterized by the following “nonnegotiable” criteria: they must have a clearly defined mission; be responsible to the local community; be safe and clean; and be caring, enjoyable and supervised. Moreover, they must meet at least once weekly in the after-school hours, be locally based, and be available during vacations. Several other criteria are regarded by Kerewsky and Lefstein as “negotiable—that is, desirable under ideal circumstances but hardly expected in all instances (107). Specifically, programs should be accessible both physically and financially; include parent participation and provide in-service training for staff; and have a means of assessing the results. And, to the extent possible, programs should not overlap with local organizations and should proceed upon the basis of interagency collaboration. A variety of adolescent programs meet many, if not all, of these criteria.

Lefstein and Lipsitz assert that appropriate and effective program alternatives for adolescents must take place in environments that offer realistic expectations for adolescents, caring relationships with adults, and diverse opportunities for constructive and enjoyable activities with peers (120).

Costello suggests that adolescents must acquire four important capacities that are essential for well-functioning adults: 1) physical vitality, 2) the ability to sustain caring relationships, 3) resourcefulness, and 4) social connectedness (41). Toward these ends, adolescent development programs should enable adolescents to engage in physical and mental activities which are adequate to accomplishing the tasks of everyday life. They should promote adolescents’ sense of self-worth and the well-being of others in the family and the community. They should promote adolescents’ ability to seek and sift information, apply practical knowledge, and improve one’s cognitive and social skills. And, they ought to strengthen adolescents’ sense of affiliation with a social community, which validates the adolescents’ personal identity, provides support and services, and requires contributions in turn.

The available literature suggests the efficacy of basing program design efforts on a developmental

perspective regarding adolescents (66a). Adolescents mature at varying rates. Both developmental and programmatic needs may differ considerably in accord with such factors as the participants’ gender, race, socioeconomic status, and ethnicity (107). Moreover, the quantity, quality, and operational features of programs for adolescents can be expected to vary in accord with the nature of the respective communities in which they are located. The accessibility and utility of adolescent development programs necessarily are shaped by such factors as the community’s financial resources, geographic location, and demographic composition.

The available literature reveals many ways for American adolescents to spend their discretionary time. These may be either formally organized, informally organized, or unorganized (66a). Several types of programs are discussed further below.

Youth-Serving Organizations

Many youth-serving programs are sponsored by national organizations that are funded primarily by the independent sector. One tabulation indicates that more than 300 national youth organizations operate with chapters of varying size throughout the United States (61). Two of the largest national organizations are the Boy Scouts and the 4-H Clubs, each with a membership of over four million youth in 1986. The membership in these and seven other major youth organizations (Girl Scouts of America, Boys and Girls Clubs, Young Men’s and Young Women’s Christian Association, Camp Fire, and Salvation Army) totaled 17 million in 1980, representing over one-third of all elementary and high-school age youths (13).

Long established agencies dominate the adolescent service field. In 1983, for example, the Boy Scouts of America had a 1983 membership equal to 15.9 percent of all American males 7 through 16 years of age (19). Between 1972 and 1983, however, the number of Scouts and Explorers in the organization declined by 22 percent, from 2,405,220 youth to 1,867,982 (19). From 1984 through 1988, by contrast, some youth organizations experienced increases in membership--e.g., the Boys Clubs²⁹ (+2 percent), Girl Scouts (+8 percent), Boy Scouts (+16

²⁹In order to more accurately reflect its membership, the Boys Clubs of America recently changes its name to the Boys and Girls Clubs of America.

percent), Girls Clubs³⁰ (+25 percent), and Camp Fire (+48 percent). Concurrently, however, there was a decline in the youth membership of the YMCA and YWCA (60).

In recent years, the Boy Scouts, Girl Scouts, the Salvation Army, and related organizations have progressed substantially beyond their original missions. They have established a variety of new programs including after-school programs for latch-key children, problem-solving programs for minority youths, and programs that help parents to promote ethical decisionmaking on the part of their children. Some organizations have devised highly targeted programs for special populations such as runaways and neglected or abused adolescents.

Within the private sector, the Boys and Girls Clubs of America is the major nationwide organization with a primary focus on direct service for disadvantaged youths. In 1983, the Boys Clubs served about 1.2 million youth (20). Of these, 61 percent ranged in age from 11 to 18 years, 75 percent were from families with annual incomes under \$12,000, 30 percent from families that receive public assistance, 51 percent from minority families, and 46 percent from single-parent households (20). Data from 1988 indicate that the membership of the Boys and Girls Clubs of America has remained stable with 1.285 million members at 1,100 facilities across the Nation (21). However, the proportion of 11- to 18-year-old members declined from 61 percent in 1983 to 53 percent in 1988.

Boys and Girls Clubs' programs focus on a broad range of concerns including citizenship and leadership development, health and fitness, adolescent employment, delinquency prevention, and the promotion of talent in sports and the arts. The Boys and Girls Clubs have developed curricula for youth programs in a number of areas, including health promotion, delinquency prevention, adolescent employment, citizen and leadership development, alcohol abuse prevention, and education for family life.

The Girls Clubs of America (now Girls Inc.) experienced an increase in membership from 200,000 in 1984 to 250,000 in 1988 (81). It also experienced an increase during the same period in the proportion of black, Hispanic, and Asian members (from 44 percent to 50 percent). However, only 29 percent of

Girls Club members range in age from 12 to 18 years (81). Among the Girls Clubs' innovative programs are AIDS education, a pregnancy prevention program, Friendly Persuasion (a program for substance abuse prevention), and Operation SMART (science, math, and relevant technology).

As Wynn and colleagues have noted, adolescents can participate in a wide range of programs offered by independent sector organizations. There are career groups such as Junior Achievement; character-building organizations such as the Boy Scouts; political groups like Young Democrats and Young Republicans; veterans' organizations such as the Sons of the Veterans of Foreign Wars; hobby groups such as Junior Philatelists of America; and, ethnic groups like the Ukrainian Youth Organization and Indian Youth of America (205). In the absence of adequate surveys, however, few systematic data are available regarding the total number of adolescents who participate in privately supported youth organizations. It is especially difficult to ascertain the membership of such private organizations as high school fraternities, sororities, and local social clubs.

A number of studies have reported beneficial effects as a result of program participation in national youth-serving organizations. In 1987, Ladewig and Thomas found, for instance, that former 4-H members attained higher levels of education than nonparticipants and, as adults, were more likely to be involved in civic activities and political organizations (114). Likewise, a large-scale survey of high school seniors by Hanks found that adolescents' participation in voluntary organizations was related to subsequent voting behavior and involvement in political campaigns (92).

Community Service Programs

Approximately 4,000 adolescent community service programs are in existence in the United States (181). The programs include more than 50 full-time youth service corps, 550 campus-based service programs, 3,000 school-based service programs, at least 50 service corps and programs that are organized by local communities, and Federal service programs overseen by ACTION.

Cities are particularly active sponsors of youth service programs. Thus, for instance, the City

³⁰Girls Clubs of America is now known as Girls Inc.

Volunteer Corps of New York City (CVC), with an annual \$8 million budget, has pioneered volunteer efforts in human service delivery. It has established a program for high school adolescents who work full-time in the summer and part-time during the school year. In 1988, CVC instituted a small program for students already in college, offering summer stipends and bonuses for one and two semesters of part-time Corps work. About **600 CVC** volunteers work on projects in city parks, building rehabilitation, centers for retarded adults, nursing homes, and schools. Every 3 months, the participants change projects so that they can have a variety of environmental and human service work experiences during a 1-year period. CVC also offers completion incentives: **\$2500** for those who complete 1 year of service, or \$5000 toward college for those who choose to resume their studies (210).

Adolescents who participate in community service programs can obtain a variety of benefits. A survey of a random sample of participants in projects sponsored by young volunteers overseen by the Federal program ACTION found that the young participants intended to continue volunteer service both in school and as adults and, also, that they would encourage others to volunteer (2). Moreover, adolescent participants have reported gains in understanding community service, ability to work with others, development of career objectives, willingness to learn, and reduced need for supervision. Calabrese and Schumer's study of ninth grade participants in a 20-week school community service program showed reduced levels of alienation, isolation, and discipline problems (26). Likewise, in a study of 11- to-17-year-old volunteers in community improvement projects, Hamilton and Fenzel found that participants developed positive attitudes toward social responsibility for needy people and a commitment toward continued volunteer work (90). Participants also developed vocational and interpersonal skills and gained greater knowledge of themselves and others.

School-Based Programs

Schools typically are accessible and often-used sites for adolescent development and adolescent service activities. Peer counseling and peer tutoring programs are among the most successful and visible programs that have been offered in schools. Such programs often are reported to yield a wide range of

benefits both for the tutees and the tutors (48,80, 111,1 16). Reported benefits include gains in tests of ego and moral development (32). Adolescents in such programs have been employed as counselors (49), trainers (126), therapists for the remediation of behavior disorders (33), and peer mediators. In one New York City school, administrators reported that a peer mediation program cut the suspension rate in half (52).

Many school-based programs address adolescent problems primarily on a reactive basis, but some school systems also have initiated a wide range of community service programs that are essentially proactive and preventive in nature. Following extensive deliberations, the Carnegie Council on Adolescent Development recommended that adolescent community service be part of the core program in middle school education (27). The Carnegie Council on Adolescent Development observed that students can volunteer to work in such diverse settings as senior citizen centers, nursing homes, soup kitchens, child care centers, parks, and environmental centers. Assistance for such programs can be provided by institutions of higher education. The Early Adolescent Helper Program of the City University of New York, for example, has involved hundreds of students from 17 New York City middle and junior high schools in educational enrichment and adolescent service activities (27).

Significant benefits for adolescents have been identified by many studies of school-based programs. Thus, Conrad and Hedin's study of 4,000 students in experiential educational programs reported that the students showed improvements in self-esteem, moral reasoning, personal and social development, attitudes toward adults, and involvement in the community (36). Similarly, Hanks and Eckland's study of 1,627 high school sophomores found that participation in school-based extracurricular activities is associated with later educational attainment and with participation in adult voluntary organizations (93). Related studies have shown participation in extracurricular activities to be associated with higher educational goals (190), subsequent educational attainment (159), occupational attainment and income (160), and participation in voluntary organizations and the political process (161). The studies do not allow any firm conclusions about causality.



Photo credit: Ron Larson/Youth Service America

Some studies suggest that participation in extracurricular activities can keep adolescents in school and enhance their academic progress.

Municipal Recreation Centers

Numerous adolescent development programs have been established at municipal recreation centers throughout the Nation.

As noted by Lefstein and Lipstiz, for example, the Arlington County (Virginia) Recreation Division operates neighborhood centers that offer planned activities and drop-in programs for adolescents (120). A Junior Jamboree program is conducted on alternate Saturdays which offers arts and crafts, sports, cooking, field trips, and health information for 12- to 15-year-olds (120).

Similarly, the Concord (California) Recreation and Human Services Division has created a Department of Leisure Services which operates a city-wide recreation program at elementary schools, intermediate schools, high schools, and local community centers (120). The Department of Leisure Services has established a variety of adolescent Services Target Programs for low-income neighborhoods where parents cannot afford to pay for special out-of-school activities for their children. Besides offering an extensive array of games, sports, and special interest classes, the program seeks to help the participants to build social skills and to experience a world other than their own impoverished neighborhoods by means of parties, excursions out of the neighborhood, and other events. After 1 year of programming that included recreation, counseling, and employment, juvenile crime decreased in three

target neighborhoods by 31 percent, 63 percent, and 69 percent, respectively (120).

A unique collaborative program with the private sector has been established by the East Oakland (California) Youth Development Center (120). The center sponsors a comprehensive program that offers job skills development, basic skills tutoring, counseling, and recreation. Over 1,000 adolescents ranging in age from 10 to 21 years are registered as members (120). While the City of Oakland invested \$350,000 in community development funds toward initiation of the program, the Youth Development Center was launched largely by means of an aggressive fundraising campaign conducted by the Community Affairs Department of the Clorox Company. The Clorox Company contributed \$247,000 toward construction of the center, pledged \$50,000 annually for program operation, and initiated an endowment campaign aimed at matching the company's own gift of \$1.5 million. Since the Center opened, 25 foundations and more than 70 corporations have contributed funds for its operation (120).

Churches and Synagogues

There is a great need for ample and diverse family-based activities that are attractive to adolescents. Churches and synagogues are among the foremost institutions that can offer such activities on a regular basis.

Some of the most extensive family-oriented programs have been devised by the Church of Jesus Christ of Latter Day Saints (Mormons) (197). The Mormon church promotes "wholesome recreation" as a part of its religious creed by setting aside 1 weekday evening as a "Family Activity Night" (197). Families are free to choose the activity that they desire but are encouraged to engage in varied and challenging activities that appeal to all age groups. The church makes available a comprehensive *Family Resource Manual* which identifies family enrichment activities (e.g., first aid, food storage, and home repairs) as well as physical, cultural, social and intellectual activities. Each church parish has a small activities committee that helps families to develop their own activities. Information about exemplary programs is disseminated to other such committees on a yearly basis.

Churches and synagogues also have sponsored a wide range of community service programs (120) and family camps for parents and their children.

Some of these have introduced programming that teaches or reinforces selected family and societal values (96), while others have concentrated on sports, skills development, or cultural and educational learning such as was introduced by the Chautauqua movement (58).

Other Alternatives

Various innovative alternatives for the constructive use of adolescents' discretionary time have been developed by a wide range of agencies at the national, regional, and local levels.

One innovative alternative is a family recreation program, known as "Together Is Better," that has been introduced nationally by the Canadian Parks and Recreation Association (95). This program emphasizes a high degree of interaction among family members. Examples include family picnics, group hikes, and family games. Information kits about activities such as kite-making, backyard camping, hiking, and tracing family trees are distributed nationally. A major marketing campaign gives the overall program a central focus and creates high visibility.

The U.S. Air Force's Community Action Program sponsored a Youth Services Camping Program for boys in the State of Michigan, that brought together 590 14- to 17-year-old low achievers, predelinquents, expelled or suspended students, and wards of the court (201). The Youth Services Camping Program emphasized vocational opportunities, health care, recreation, fellowship and leadership. The behaviors and self-concepts of all categories of the boys participating improved substantially (201). A suburban community center achieved similar results by integrating small numbers of antisocial adolescents into activity groups with prosocial adolescents (67). Innovative adolescent development programming can occur at community centers and neighborhood agencies sponsored by religious organizations, fraternal associations and other groups. Revitalized efforts at these sites and others can capitalize upon major adolescent development resources that have been underutilized in recent decades.

Public libraries are important, but often overlooked, sites for adolescent development programs. Some libraries offer creative opportunities for adolescents to provide support across generations including service as storytellers for young children

and as "computer tutors" for children and adults (172). They also offer programs for consolidating academic and reading skills, learning practical life skills such as budget planning and hunting safety, and exploring social or emotional issues that are relevant to adolescence (215).

Finally, paid jobs constitute an important resource for the constructive use of adolescents' discretionary time (3). As are other alternatives, paid jobs are likely to be most beneficial when they engage adolescents in meaningful tasks, bring them into regular contact with adults and responsible peers, and provide fair and adequate remuneration for the services that are provided (183). Special care must be taken to ensure that adolescents do not devote excessive amounts of time to paid jobs and thereby forgo opportunities to keep up with their schoolwork or to take part in other growth-enhancing activities with their peers and family (193).

Major Issues in the Elaboration of Health-Enhancing Alternatives for the Use of Adolescents' Discretionary Time

A number of major issues must be addressed if significant improvements are to be made in the quantity, quality, and diversity of health-enhancing alternatives for America's adolescents. These pertain both to key barriers that impede the development of innovative programs and to a variety of unanswered questions that must be resolved, at least in part, if significant advances are to be made.

Counterproductive Theories of Adolescent Development

Adolescent services, and the misperceptions upon which they often are based, have evolved largely from theories of adolescent deviance (199). These formulations view adolescents, particularly those from low-income households, as essentially deviant or potentially deviant. From this standpoint, adults must guide adolescents along a fairly narrow path toward adulthood and they must correct and constrain those who stray. Given the prevalence of this perspective, programs are most likely to be funded when they can claim the capacity to combat a particular deviancy such as drug use, vandalism, or delinquency. Proactive and preventive programs are less likely to attract the financial support that they deserve.

Correspondingly, agencies that serve adolescents sometimes tend to overreact to incidents of adolescent deviance that are depicted by the mass media. This can lead them to emphasize programs that are essentially reactive rather than proactive. It also reinforces the stereotype of ‘‘adolescents as deviants’’ on the part of the public, policymakers, and the adolescent service community. The result is a highly fragmented service delivery system, increased barriers to the elaboration of holistic service delivery programs, and heightened activity by entrepreneurial agencies that may design their programs more to reflect the availability of public funds than the serious needs of the community.

Categorical Funding Sources

The specialized funding that has been promoted by single-purpose advocacy groups, legislative committee systems, and narrowly targeted adolescent service bureaucracies make the delivery of comprehensive adolescent services all but impossible. The ability of both public and private agencies to plan coherent adolescent services is often undermined by the rigidity of Federal, State, and local categorical funding requirements and by the tendency to formulate narrowly targeted contracts in response to specific problems that come to the public’s awareness (135). Legislative committee systems used to formulate public policies and programs often tend to conceptualize adolescents categorically as drug-users, runaways, adolescents in need of job training, or in terms of similarly constraining definitions that overlook the fact that a single adolescent may have multiple needs.³¹ In the real world, the same adolescent is often a dropout, a drug abuser, a mother or a father, in need of mental health care, and unemployable in the local labor market—a fact that politicians, grantmakers, service providers, and even families sometimes fail to recognize (51,199).

Categorical conceptualizations have led to the haphazard growth of specialized direct service agencies and provided little opportunity or incentive for programs to cooperate, coordinate, or engage in systematic long-term planning of comprehensive adolescent programs.

Another problem is that public and private funds for adolescent programs tend to be awarded on a short-term basis. But, when funds are doled out for only 1, 2, or 3 years at a time, it is virtually impossible to plan coherent long-term programs and to develop initiatives that seek to sustain or expand hard-won gains. It also is difficult to retain talented staff who may have more secure jobs waiting elsewhere. Inordinate staff attention must be directed constantly toward the acquisition of financial resources. A patchwork quilt aggregation of poorly interrelated and inadequately integrated programs may emerge from a myriad of funding sources. Moreover, counterproductive competition can occur on the part of agencies who might otherwise benefit from a collaborative and collegial relationship. Time spent in school and time spent in discretionary (nonschool, nonmaintenance) activities constitute large segments of an adolescent’s life. Outside the family and home,³² school buildings and personnel, and peers and adults in community settings (including the media) constitute important and influential environments for adolescents. This chapter reviewed shortcomings in many of these settings and ways in which these environments can be improved.

Public Support v. Private Support

A fundamental issue in the provision of adolescent development programs pertains to the optimum mix between public support and private support. Private auspices may be highly effective for the creation and sustenance of such programs. Yet there are communities that do not have the resources—whether in funds or in leadership—to support the development of an infrastructure which is sufficient to create and maintain an array of programs.

Key questions regarding this issue have been articulated by Wynn and colleagues (215). If the provision of community supports for adolescent development programs ought to be through voluntary efforts, where can resources be found to sustain them at an adequate level? Should a quasi-public corporation or organization be created to assist in stimulating and sustaining community support? Or, should government play a more active role in the provision of community supports? Might we actually need to create a social care and community

³¹The problem of multiple committee jurisdictions in Congress and the fragmentation of Federal programs for adolescents is discussed in ch. 19, *Role of Federal Agencies in Adolescent Health*, in Vol. III.

³²Parents and families’ influences on adolescent health are reviewed in ch. 3, ‘‘Parents and Families’ Influence on Adolescent Health,’’ and elsewhere in this volume.

support system like our educational system or health care system to foster the development of adolescent programs? How can government effectively support the informal, voluntary, and associational nature of many existing and potential forms of community support? And, would government bring with it rigid formulas or bureaucratic approaches that are antithetical to the existence of community supports?

An overview of Federal expenditures for children and adolescents indicates that only a scant portion of governmental resources is devoted to nonschool developmental programs.³³ In 1980, for instance, the greatest percentages of Federal outlays for children and adolescents were for income maintenance programs (35.5 percent), nutrition (19.4 percent), education (16.5 percent), health (8.4 percent), employment (6.4 percent), housing (5.3 percent), and community development (5.2 percent). A relatively small percentage was allocated for child care (2.4 percent), juvenile justice (0.6 percent), or recreation (0.3 percent). Moreover, U.S. Government expenditures for recreation declined steadily, from 0.5 percent of the domestic Federal budget in 1964 to only 0.3 percent in 1980 (34). In Britain, by contrast, youth work receives approximately 1.5 percent of the national budget (215). The scant attention directed toward recreation and leisure programs for U.S. adolescents is reflected at the State level as well as the Federal level. Of 56 States, territories, and the District of Columbia participating in the 1982 White House Conference on Children and Youth, only 6 treated recreation and leisure as a major concern in their statewide conferences (205).

New York City sponsors a Youth Bureau that is responsible for planning, implementing, and monitoring development and delinquency prevention programs for adolescents. The Youth Bureau contracts with community-based organizations to provide services for youth. The community-based programs with which the Youth Bureau contracts typically provide recreational, educational, counseling, cultural enrichment, and vocational services. There were 582 such contract agencies in fiscal year 1989 with a budget of \$30.7 million (134). Altogether, the agency's budget averages less than \$16 per adolescent in New York City.

Common Infrastructure v. Adolescents as a Special Case

A strong case can be made for the provision of special funding and program initiatives designed expressly for adolescents. Indeed, a sound investment in adolescent development programs can be expected to yield highly beneficial long-term outcomes for society as a whole. Adolescents who are properly challenged, motivated, and trained are likely to develop into mature and responsible parents, breadwinners, and citizens.

Nevertheless, alternative strategies for funding and program development also can be considered. It has been suggested, for instance, that programs can be devised which are based upon the common needs of varying at-risk populations. By this formulation, the provision of community supports can be thought of not as categorical responses to a separate and independent adolescent population but as ways in which communities can assist a broad range of individuals with common interests and needs (215). Thus, efforts to convey information about health and educational resources, provide transportation services for isolated or dependent individuals, or implement mutual assistance programs can be organized across age groups rather than by means of a single age category. Systematic study of the relative advantages and disadvantages of these approaches and others would be useful.

Adolescent Development, Recreation, or Employment?

In an era of limited resources, it is essential to ascertain what proportions of available funds can be allocated optimally to initiatives that aim, respectively, at adolescent development, recreation, employment, or other goals. The guidelines for this task will be determined largely by the particular subpopulations of adolescents under consideration. Thus, adolescents from economically impoverished families or neighborhoods may benefit relatively more than other adolescents from programs that offer job skills training or employment opportunities. Nevertheless, the goals of adolescent development, recreation, and employment need not be mutually exclusive. Many types of programs can progress toward all three objectives albeit in varying respects and at differing rates.

³³An overview of Federal expenditures on adolescents is presented in ch. 19, "The Role of Federal Agencies in Adolescent Health," in Vol. III.

Extent of Adult Involvement and Supervision

Adult involvement may be necessary in the design or supervision of especially complex or demanding programs and for programs that are geared primarily toward younger adolescents. To the extent possible, though, adolescents themselves should be actively engaged in the design and operation of their own programs. In some cases when adults are involved, professional training may be desirable. Such training may be particularly important for the design and implementation of programs that require extensive expertise in administration or for programs that serve large numbers of seriously disturbed adolescents. Graduate training in adolescent work and the related helping professions has proven beneficial in programs for such high-risk populations as antisocial adolescents (67) and adolescents whose parents are mentally ill (68). Clearly, however, adult volunteers can contribute safely and cost-effectively to the vast majority of programs that aim to promote health-enhancing activities on the part of adolescents. A more concerted effort to involve adult volunteers may be needed. Because some of the adolescents and institutions' volunteers may be dealing with may present serious obstacles, it will be important to provide appropriate support and referral networks to adult volunteers.

Differing Needs for Differing Adolescent Populations

Fairly little is known about the differing developmental needs of particular groups of adolescents. Patterns may or may not be similar in varying subcultures. Increased peer-group orientation and a growing interest in group activities during early and middle adolescence has been observed concurrently, for instance, in England (187), Australia (78), and the United States (67). Yet, a crosscultural study of school dropouts has shown that Australian and American adolescents who quit secondary school use their leisure time in different ways (15). Australian school leavers typically spend their extra time in sports and recreation. By contrast, American dropouts report more visiting, loafing, and problem behaviors. The investigators posit that these differences reflect the differential structuring of available activities for adolescents in the two societies rather than national differences in leisure preferences. They suggest further that some of the deleterious consequences that are presumed to follow from dropping out in America reflect the daily social

experiences of dropouts in this country more than the act of quitting school.

Cultural and subcultural variations often are evident in the use of discretionary time by adolescents. Hispanic adolescents, for instance, devote more time than white non-Hispanic adolescents to television viewing (87). White adolescents are more likely to have paid jobs than black adolescents (66a). Yet these variations also may reflect such factors as the decreased availability of two-parent families for certain categories of adolescents, more dual-career couples, reduced employment opportunities, and diminished community availability of leisure alternatives such as public libraries, after-school programs, and for-profit or nonprofit youth service agencies. A study of Chicago neighborhoods has shown, for instance, that in areas where the median family income is below \$25,000, the average number of children per each available public library is twice the number of children in areas with higher family income (196). More than twice as much money was spent per child on libraries in the more affluent neighborhoods.

Adolescent programs can profitably bring together adolescents from differing social, cultural and behavioral backgrounds. The most dramatic examples in this regard pertain to programs that integrate adolescents with behavioral problems into groups of "normal" peers in classroom or recreational settings (23,39,47,88,170,217). Peer-based "therapy" programs for adolescents typically have been regarded as failures when interventions were attempted solely in groups comprised of antisocial peers and at institutions denoted primarily as correctional or mental health settings (13,109,131,214). The latter tend to be unnecessarily stigmatizing. In contrast, experimental evidence suggests that antisocial adolescents are more likely to achieve behavioral gains when they are treated among prosocial peers and when the interventions are offered in nonstigmatizing environments such as community centers (67).

Adolescents' needs may also be different at different times of the day. OTA observes that more programs and facilities are available during the day, but not at night or on weekends when adolescents may have little to do. Some communities have setup Friday night dances, midnight basketball sessions, and the like, but these seem to be the exception rather than the rule. Often, administrative convenience

rather than adolescent need seems to be the determining factor in program development.

National Youth Service

Since the days of the post-Depression Civilian Conservation Corps (CCC), there has been debate in this country concerning the desirability of a national youth service. The factors that are regarded as important to the success of the CCC ought perhaps to be considered as criteria for the evaluation of future proposals concerning a national youth service (57). First, the CCC was operated with a clear sense of purpose, namely, conservation work and economic support, as opposed to purely adolescent development objectives. Second, the CCC emphasized productivity. Third, many CCC projects were highly visible to surrounding communities and to the country at large. Fourth, local communities had a voice in projects undertaken by the CCC. And, fifth, each CCC camp made distinct contributions to the local economy.

New models of national youth service have been endorsed by groups such as The Commission on Work, Family and Citizenship of The William T. Grant Foundation (210), advocacy organizations such as the Coalition for National Service (56), and the public in general, who favor voluntary service by a ratio of better than seven to one (56).

Because of the size, visibility and vast impact of any form of national youth service, public acceptance of such an initiative will depend upon the answers to a variety of questions. These are likely to be based not only on economic considerations but on philosophical and political ones as well. To cite but a few: Should a national service program be mandatory or voluntary? Should it be in lieu of military service or in addition to it? Should it be during high school or afterwards? Should it offer economic incentives to the participants or not? What is the preferred length of service? Will participants necessarily replace employed adult workers? What should be the respective roles of federal and local authorities? And, what are the relative economic costs and benefits?

Few of these questions can be answered definitively. Yet, several key considerations are worth noting. With regard to financial costs and benefits, for example, a study of the California Conservation Corps by Public/Private Ventures estimates \$1.34 in benefits for each dollar spent in the program (210).

A second study suggests that the proportionate benefit is even higher, to wit, \$1.60 in public benefit for each dollar spent by the Corps (210). The Job Corps has been similarly evaluated. Analyses have shown that the Job Corps increases earnings, enables its graduates to be employed longer, and helps many to go on to full-time study (210).

From 1934 through 1939, 90,000 acres of land in the Capitol Forest in Washington State was reforested by the CCC at an approximate cost \$270,000 (101). In 1981, the acreage was harvested, and the timber value was placed conservatively at \$7,000 per acre, or \$630,000,000. Examples such as this dramatize not only the fact that significant financial benefits can accrue from large-scale youth service programs but also that planners and politicians must calculate their relative benefits on a long-term basis. They must act upon the same principles of 'delayed gratification' that are regarded as so essential to the development of healthy adolescents.

Revitalization and Reinstitution of Social Service Agency Programs

In the past several decades, much of the Nation's organizational infrastructure for adolescent development programs has deteriorated. Traditional social service agencies such as neighborhood houses and community centers have increasingly relocated to affluent suburban areas; they have employed non-professional and volunteer personnel more readily than professionals; and they reduced the quantity and quality of their programs for adolescents (200). Nevertheless, neighborhood houses, community centers, and other social service agencies can constitute excellent settings for leisure and community service programs for adolescents of all ages. Many observers believe they may be more productive sites for helping high-risk adolescents than conventional types of treatment organizations (68). The developmental gains that are achieved by adolescents in such settings can be readily generalized to their natural environments and can be achieved on the basis of expenditures that may be as much as 80 percent lower than for comparable intervention programs in mental health or juvenile justice settings (67).

A significant revitalization of social service agencies would require a major infusion of Federal, State, and local support. Among other things, funds will be necessary to train professionals and volunteers and perhaps construct or renovate facilities in



Photo credit: Youth Service America

Revitalized social service agencies could work to develop volunteer opportunities that strengthen intergenerational connections among adolescents and adults from different social and economic backgrounds.

high-need areas. Revitalized social service agencies could explore new ways to involve adolescents in instrumental tasks as well as in purely recreational activities. They could sponsor nonprofit or for-profit adolescent-operated enterprises and can provide seed money, technical assistance and supervision. They can work with schools to develop leisure counseling centers and can develop volunteer opportunities that strengthen intergenerational connections among adolescents and adults from different social and economic backgrounds. They also could establish funded positions for adolescents to serve as apprentice-level adolescent workers.

Recent Federal Initiative: National and Community Service Act of 1990

In 1990, Congress passed a law designed to enhance opportunities for national and community service for all U.S. citizens, particularly the disadvantaged. This law, the National and Community

Service Act of 1990 (Public Law 101-610), authorizes Federal financial assistance for a number of voluntary service programs, including programs for in-school and out-of-school adolescents. In presenting the rationale for the legislation, the senatorial authors of the legislation argued in part that (S. 1430, 101st Congress, 2d session):

- (1) service to the community and the Nation is a responsibility of all citizens of the United States, regardless of the economic level or age of such citizens;
- (2) citizens of the United States who become engaged in service at a young age will better understand the responsibilities of citizenship and continue to serve the community into adulthood;
- (3) serving others builds self-esteem and teaches teamwork, decisionmaking, and problem-solving;
- (4) the 70,000,000 youth of the United States who are between the ages of 5 and 25 offer a powerful and largely untapped resource for community service;
- (5) conservation corps and human service corps provide important benefits to participants and to the community;
- (6) the Volunteers in Service to America Program is one of the most cost effective means of fighting poverty in the United States. . .

Many of the activities and program requirements authorized by the National and Community Service Act of 1990 (Public Law 101-610) are particularly relevant to adolescents.

Title I of the National and Community Service Act of 1990 establishes a National and Community Service State Grant Program. Several subtitles of Title I are relevant to adolescents:

--*Subtitle B. School-Aged Service (Serve America; The Community Service, Schools and Service Learning Act of 1990).*³⁴ This subtitle provides Serve America grants to States or local applicants for service-learning programs

³⁴ "To be eligible to receive a grant [under Title I, Subtitle B], a State . . . shall prepare and submit, to the Commission [on National and Community Service, established under section 190 of the act], an application . . . including a description of the manner in which . . . economically and educationally disadvantaged youths, including individuals with disabilities, youth with limited basic skills or learning disabilities, and youth who are in foster care, are assured of service opportunities" (S. 1430, Title I, Subtitle B, Sec. 113).

for students,³⁵ community service programs, and adult volunteer programs. For the latter two programs, dropouts and other out-of-school youth (individuals under age 27 who have not completed college or the equivalent and who are not in school) are target participants and recipients. Serve America grants will be administered by the Commission on National and Community Service established under Subtitle G (202b).

-Subtitle C. American Conservation and Youth Corps (American Conservation and Youth Service Corps Act of 1990)-This authorizes grants to States, Indian tribes, local agencies, to the Secretary of Agriculture, to the Secretary of the Interior, or to the Director of ACTION for the creation or expansion of full-time or summer youth service programs focusing on conservation and human services. Full-time youth service programs are intended for 16- to 25-year-olds, and the summer youth service programs are intended for 15- to 21-year-olds. The law requires that participants' educational levels be assessed and that participants be provided with appropriate education and training. Priority for services must be given to participants without high school diplomas, and the program must enable such participants to earn a diploma or its equivalent. Arrangements may be made with schools to upgrade literacy skills, obtain high school diplomas or the equivalent, obtain college degrees, or improve work skills. Youth corps grants will be administered by the Commission on National and Community Service (202b).

-Subtitle D. National and Community Service (National and Community Service Act) -This authorizes grants to States and Indian tribes for the creation of full- and part-time national and community service programs to address unmet educational, human, environmental, and public safety needs, especially those needs relating to poverty. The programs will include full- and part-time volunteers age 17 and older. National and Community Service grants will be administered by the Commission on National and Community Service (202b).

-Subtitle E. Innovative and Demonstration Programs and Projects-One part of this provides for grants to States and Indian tribes for the creation of innovative volunteer service programs. Section 165 authorizes a rural youth service demonstration project. Projects may include volunteer service involving the elderly and assisted-living services performed by students, school dropouts, and out-of-school youth.

-Subtitle G. National Commission on National and Community Service-This establishes the National Commission on National and Community Service to administer Title I programs. The Commission is to be composed of 21 members to be appointed by the President. The Secretary of Education, Secretary of Health and Human Services, Secretary of Labor, Secretary of Interior, Secretary of Agriculture, and the Director of ACTION shall serve as ex-officio members of the Commission. Not later than January 1, 1993, the President shall prepare and submit to Congress a report containing recommendations for the improvement of the administration and coordination of volunteer, national, and community service programs administered by ACTION, the Commission on National Service, and other Federal entities.

Congress authorized \$56 million for Title I in fiscal year 1991, \$95.5 million in fiscal year 1992, and \$105 million for fiscal year 1993. In each of these years, not less than 30 percent is to be allocated for subtitle B, not less than 30 percent for subtitle C, and not less than 30 percent for subtitle D. In each year, Congress authorized \$2 million for the National Commission on National and Community Service.

Title II of the National and Community Service Act of 1990 modifies a number of existing programs. The following subtitles are relevant to adolescents:

-Subtitle B. Youthbuild Projects (amends the Domestic Volunteer Service Act of 1973 (42 USC 4951 *et seq*))--This provides for the Director of ACTION, in consultation with the Secretary of Labor, to provide Federal grants for Youthbuild projects. Such projects, which involve constructing and rehabilitating housing

³⁵The law defines service learning as a method under which students learn and develop through active participation in organized service experiences that meet actual community needs and that are coordinated in collaboration with the school and community; that is integrated into the students' academic curriculum; that provides students with opportunities to use newly acquired skills and knowledge in real life situations in their own communities; and that enhances what is taught in school by extending student learning beyond the classroom into the community and helps to foster the development of a sense of caring for others (Title I, Subtitle A, Sec. 101. Definitions).

and community facilities (e.g., youth recreation centers, senior citizen centers, community health centers) for low-income people, are intended to provide *economically* disadvantaged young people with opportunities for service to their communities and opportunities to obtain education and employment skills. At least 75 percent of the participants must be individuals who are ages 16 to 24, economically disadvantaged, and high school dropouts whose reading and math skills are at or below the eighth grade level. Projects must provide basic skills instruction and remedial education, bilingual education for participants with limited English proficiency, and secondary education leading to a high school diploma or its equivalent.

-*Subtitle C. Amendments to Student Literacy Corps* (amends the Higher Education Act of 1965 (20 USC 1018)--This amends the act to give priority in providing tutoring services to educationally disadvantaged students receiving services under Chapter 1 of Title I of the Elementary and Secondary Education Act of 1965 and to, illiterate parents of educationally or economically disadvantaged elementary school students, with special emphasis on single-parent households.

For Title II, Congress authorized \$5 million for fiscal year 1991, \$7.5 for fiscal year 1992, and \$10 million for fiscal year 1993.

While the total amounts authorized for programs with a considerable emphasis on adolescents are not very large, the National and Community Service Act of 1990 does begin to address many of the concerns about adolescent rolelessness and preparation for the future expressed by numerous observers (160,330). It is too early to judge the effectiveness of the legislation in improving the lives of adolescents, but Congress could encourage the newly established Commission on National and Community Service (also established by Public Law 101-610), to evaluate systematically the impact on adolescents in the Commission's report to Congress.

Conclusions and Policy Implications

Time spent in school and time spent in discretionary (nonschool, nonmaintenance) activities constitute large segments of an adolescent's life. Outside the family and home,³⁶ important and influential environments for adolescents include school buildings and personnel, and peers and adults in community settings (including the media). This chapter has reviewed several shortcomings in many school and other environments and suggested ways in which these environments can be improved.

Although little systematic empirical research has been supported, the studies that have been conducted suggest that academic and health outcomes of adolescent students are influenced by school environments. Overall, school environments that facilitate adolescent well-being take the shape of small (fewer than 1,000 students in the school, and 15 to 20 per class), comfortable, safe, intellectually engaging, and emotionally intimate communities. Transitions are minimized, and when they must occur, they are managed with a view toward meeting the developmentally appropriate needs of adolescents. Teachers are encouraged to initiate and develop new programs that are sensitive to the diversity of their students. The curriculum responds to individuality as well as to differences, while developing a common knowledge base among students in a particular school. Teacher, parent, and student participation in decisionmaking is encouraged. Unfortunately, this combination of features characterizes few schools, particularly those public schools serving socioeconomically and educationally disadvantaged students, many of whom are racial and ethnic minorities. Instead, the larger, often impersonal, schools that these students attend have been found to be associated with higher rates of retention in grade, suspensions from school, discipline and crime problems, lowered social cohesion, more negative student attitudes, and greater student passivity (including lower participation in school activities, and less interaction with faculty).

Specific practices such as tracking and "teaching to the test" for minimum competency testing have been associated with lowered levels of academic achievement, retention in grade, and school dropout, especially for low income racial and ethnic minority

³⁶Parents and families' influences on adolescent health are reviewed in ch. 3, "Parent and Families' Influence on Adolescent Health," and elsewhere in this volume.

students. Although school practices and policies are rarely investigated for their direct links to adolescent health and well-being, studies have shown that lower grades are associated with violence toward school property, other delinquency, and pregnancy. Students who are retained in grade school are more likely to drop out of school before graduation. In turn, school dropout is associated with high rates of subsequent poverty and unemployment, underemployment, diminished earnings, and adolescent pregnancy and parenting.

Adolescents, particularly females, can be particularly harmed by the transition from elementary to middle or junior high school grades, if such transitions are not handled well in the middle school setting. The environment of the typical junior or middle school adolescent has been found to clash with early adolescents' needs for autonomy, their budding cognitive abilities to think at an abstract level, their heightened needs for intimacy, and their heightened self-consciousness.

Teachers' attitudes and parental involvement are critical links in the relationships between school policies and environments and health outcomes for adolescents. Teachers' attitudes toward students tend to be more positive in schools that are smaller, use decentralized governance and participatory decisionmaking, and rely less on standardized testing. Parental involvement in schools has been shown to be related to increasing the responsiveness and efficiency of schools and to fair treatment of students, but the evidence on academic achievement is mixed.

Some interventions have yielded increased tolerance across racial groups and improvements in the self-esteem or academic achievement of racial and ethnic minorities; these interventions include exposure to persons of differing cultural backgrounds, learning in mixed-ability groupings, a multicultural curriculum, bilingual education, and school-based collaborations with minority communities.

Much of adolescents' time is spent away from school. The scarce data that are available suggest that sufficient opportunities do not exist for adolescents to spend their discretionary time in ways that are attractive and satisfying, conducive to healthy development, and acceptable to the adult community. The problem has been found to be worse in poor than in middle-class communities.

The Federal share in funding for schools (6.3 percent of public school revenues in 1988) rose until 1980, when it began to fall again. Financial and programmatic support for recreation and youth service activities from Federal, State, and local governments, and the private for-profit sector, has been meager and fragmented. Federal support for 4-H clubs and, more recently, the National and Community Service Act of 1990 (Public Law 101-610) is an exception.

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