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Expenditures on a Child by Families, 1993

By Mark Lino
Economist
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Child-rearing expenses consume a large proportion of a family's income. Using data from the 1990 Consumer Expenditure Survey, updated to 1993 dollars, this study examines expenditures on a child in husband-wife and single-parent families with two children. Estimates are provided for major components of the budget by age of child, family income, and region of residence. Overall expenses on a child increase with the age of the child and family income. Housing makes up the largest share of total expenditures on a child regardless of the child's age or household income. Families in the urban West generally have the highest child-rearing expenses. Also, families spend more or less on a child depending on the number of other children in the household and economies of scale. Results of this study should be of use in developing State child support guidelines and foster care payments as well as in family educational programs.

Since 1960, the Family Economics Research Group of the U.S. Department of Agriculture (USDA) has provided estimates of expenditures on a child from birth through age 17. These estimates are used in setting child support guidelines, foster care payments, and in educational programs on parenthood. Recent estimates have been based on 1987 expenditure data, updated using the Consumer Price Index (5,6). Because household expenditure patterns change, new estimates were derived using 1990 expenditure data updated to 1993 dollars. This study presents these new estimates for husband-wife and single-parent families. It briefly describes the data and methods used in calculating child-rearing expenses¹ and then discusses the estimated expenses.

To partially adjust for price differentials and varying patterns of expenditures, the child-rearing expense estimates for husband-wife families are provided for urban areas in four regions (Northeast, South, Midwest, and West) and rural areas throughout the United States—as well as for the United States overall.² For single-parent families, estimates are provided only for the United States overall because of sample size limitations. Expenditures on a child are estimated for the major budgetary components: housing, food, transportation, clothing, health care, child care and education, and other miscellaneous goods and services. The box on p. 3 describes each expenditure component.

¹The report, "Expenditures on a Child by Families, 1993: Technical Report," provides a more detailed description of the data and methodology. To obtain a copy, contact: USDA, ARS, Family Economics Research Group, Federal Building, Room 439A, 6505 Belcrest Rd., Hyattsville, MD 20782 (Telephone number: 301-436-8461).

²Urban areas are defined as Metropolitan Statistical Areas (MSA's) and other places of 2,500 or more people outside an MSA; rural areas are places of less than 2,500 people outside an MSA.

Source of Data

Data used to estimate expenditures on a child are from the 1990 Consumer Expenditure Survey (CE), administered by the Bureau of Labor Statistics (BLS). The CE collects information on socio-demographic characteristics and income of households as well as expenditures. The CE, ongoing since 1980, interviews about 5,000 households each quarter over a 1-year period. Each quarter is deemed an independent sample by BLS, bringing the total number of households in the 1990 survey to about 20,000.

From these households, the following husband-wife and single-parent families were selected for this study: those (1) with at least one own child age 17 or under in the household, (2) with six or fewer children, (3) with no other related or unrelated people present in the household except own children, and (4) who were complete income reporters. Complete income reporters are households that provided values for major sources of income, such as wages and salaries, self-employment income, and Social Security income. Quarterly expenditures were annualized. The sample was weighted to reflect the U.S. population.

Methodology

The CE collects overall household expenditure data for some budgetary components (housing, food, transportation, health care, and other miscellaneous goods and services) and child-specific expenditure data for other components (clothing, child care, and education). Multivariate analysis was used to estimate household and child-specific expenditures, controlling for income level, family size, and age of the younger of two children so estimates could be made for families with these varying characteristics. Regional estimates were derived by controlling for region. The

Housing expenses include shelter (mortgage interest, property taxes, or rent; maintenance and repairs; and insurance), utilities (gas, electricity, fuel, telephone, and water), and house furnishings and equipment (furniture, floor coverings, major appliances, and small appliances). It should be noted that for homeowners, housing expenses do not include mortgage principal payments; such payments are considered in the CE to be a part of savings. Therefore, total dollars allocated to housing by homeowners are underestimated in this report.

Food expenses include food and nonalcoholic beverages purchased at grocery stores, convenience stores, and specialty stores; dining out at restaurants; and school meals.

Transportation expenses include the net outlay on purchase of new and used vehicles, vehicle finance charges, gasoline and motor oil, maintenance and repairs, insurance, and public transportation.

Clothing expenses include children's apparel items such as diapers, shirts, pants, dresses, and suits; footwear; and clothing services such as dry cleaning, alteration and repair, and storage.

Health care expenses include medical and dental services not covered by insurance, prescription drugs and medical supplies not covered by insurance, and health insurance premiums not paid by employer or other organization.

Child care and education expenses include day care tuition and supplies; baby-sitting; and elementary and high school tuition, books, and supplies.

Other miscellaneous expenses include personal care items, entertainment, and reading materials.

three income groups of husband-wife households (1990 before-tax income under \$28,900, between \$28,900 and \$48,900, and over \$48,900) were determined by dividing the sample for the overall United States into equal thirds.

For each income level, the estimates were for husband-wife families with two children, with the younger child in one of six age categories (0-2, 3-5, 6-8, 9-11, 12-14, and 15-17 years). Households with four members (two children) were selected as the standard since this was the average size of two-parent families in 1990. The focus was on the younger child in a household since the older child was sometimes over age 17.

It should be noted that the estimates include two-parent households with and without specific expenses; so for some families, the mean estimates may be higher or lower depending on whether they incur the expense or not. This particularly applies to child care and education estimates—about 50 percent of families in the study had no expenditures for this budgetary component. Also, the estimates only cover out-of-pocket expenditures on a child made by the parents and not by others such as grandparents or friends. In addition, the three income categories were calculated for the overall United States by dividing the sample into equal thirds. Regional income categories are based on these national income categories and may not represent equal thirds in each area.

After the various overall household and child-specific expenditures were estimated, these total amounts were allocated among the four family members (husband, wife, older child, and younger child). Since the estimated expenditures for clothing and child care and education were only for children, allocations of these expenses were made by dividing the estimated expenditures by two (the number of children in the household).

Because the CE did not collect expenditures on food and health care by family member, data from other Federal studies were used to apportion these budgetary components to a child by age. Food budget shares as a percentage of total food expenditures, for the younger child in a husband-wife household with two children, were determined using the 1992 USDA food plans (8). These shares were estimated by age of the child and household income level. The food budget shares were then applied to estimated household food expenditures to determine food expenses on a child. Health care shares as a percentage of total health care expenses for the younger child in a husband-wife household with two children were calculated from the 1987 National Medical Expenditure Survey (4). These shares were estimated by age of the child and applied to estimated household health care expenditures to determine expenses on a child.

Unlike food and health care, no authoritative base exists for allocating estimated household expenditures on housing, transportation, and other miscellaneous goods and services among individual household members. Two of the most common approaches for allocating these expenses are the marginal cost method and the per capita method. The marginal cost method measures expenditures on a child as the difference in expenses between a couple with children and an

equivalent childless couple. The method depends on development of an equivalency measure; however, there is no universally accepted measure. Various measures have been proposed, each yielding different estimates of expenditures on children.³ Some of the marginal cost approaches assume that parents do not alter their expenditures on themselves after a child is added to a household. In addition, couples without children often buy homes larger than currently needed in anticipation of children. Comparing the expenditures of these couples to similar couples with a child could lead to underestimating the expenditures on a child.

For these reasons, the per capita method was used for this study. The per capita method simply allocates expenses among household members in equal proportions. Although the per capita method has its limitations, these limitations were considered less severe than those of the marginal cost approach. A major limitation of the per capita method is that expenditures for an additional child may be less than average expenditures. Because of this, adjustment formulas for cases of one child or three or more children were devised for use when estimating expenditures on a child for households of different sizes. These formulas are discussed later on. Transportation expenses resulting from employment activities are not related to expenses on a child, so these costs were excluded from the estimated household transportation expenses using data from a 1990 study by the U.S. Department of Transportation (12).

³For a review of equivalency measures and estimates of expenditures on children resulting from them, see U.S. Department of Health and Human Services, Administration for Children and Families, 1990, *Estimates of Expenditures on Children and Child Support Guidelines* (11).

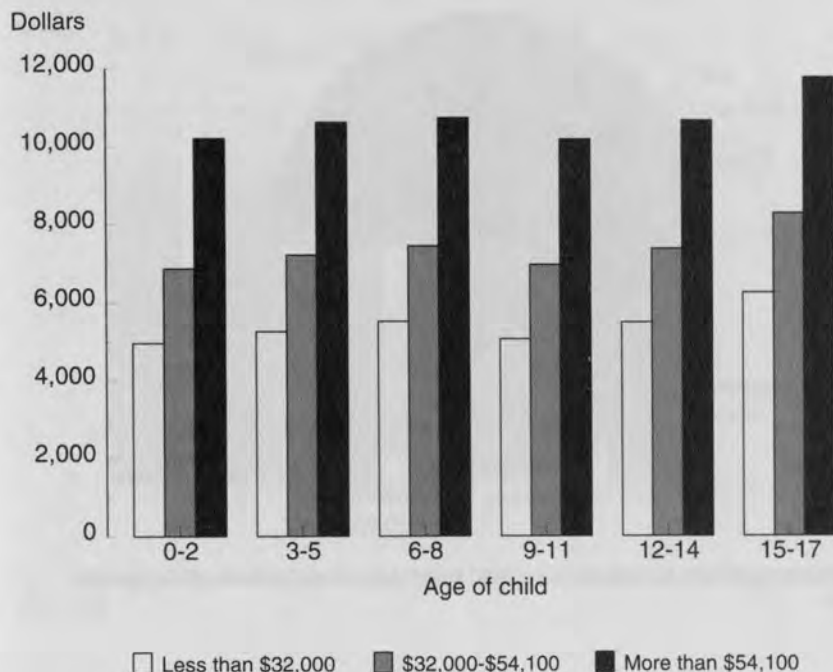
Estimated Expenditures on a Child

Estimates of family expenditures on the younger child in a husband-wife household with two children for the overall United States, urban regions of the country, and overall rural areas are presented in tables 3-9 on pp. 13-19. Income levels of households were updated to 1993 dollars using the all-items category of the CPI-U, and expenditures were updated using the CPI for the corresponding item (that is, the CPI's for housing, food, etc.). Regional estimates were updated to 1993 dollars using the regional CPI's. Given the large amount of information in the tables, the following subsections highlight the child-rearing expense estimates for the younger child in a two-child household for the overall United States by income level, budgetary component, and age of the child, as well as expense estimates by region.

Income Level

Estimated expenses on a child vary considerably by household income level (fig. 1). Depending on age of the child, the expenses range from \$4,960 to \$6,260 for families in the lowest income group (1993 before-tax income less than \$32,000), from \$6,870 to \$8,300 for families in the middle income group (1993 before-tax income between \$32,000 and \$54,100), and from \$10,210 to \$11,790 for families in the highest income group (1993 before-tax income more than \$54,100). On average, households in the lowest group spent 27 percent of their before-tax income on a child, those in the middle income group, 17 percent, and those in the highest income group, 13 percent. The range in these percentages would be narrower if after-tax income were considered, since a greater proportion of income in higher income households goes toward taxes.

Figure 1. Estimated 1993 annual family expenditures on a child, by before-tax income level and age of child¹



¹U.S. average for younger child in two-child family.

Although families in the highest income group spent slightly less than twice the amount that families in the lowest income group spent on a child, on average, the amount varied by budgetary component. In general, expenses on a child for goods and services considered to be necessities (such as food) did not vary as much as those considered to be discretionary (such as other miscellaneous expenses) among households in the three income levels. For example, food expenses on a child age 15-17 averaged \$1,490 in the lowest income group and \$2,140 in the highest income group, a 44-percent difference. Other miscellaneous expenses on the same age child averaged \$540 in the lowest income group and \$1,370 in the highest income group, a 154-percent difference.

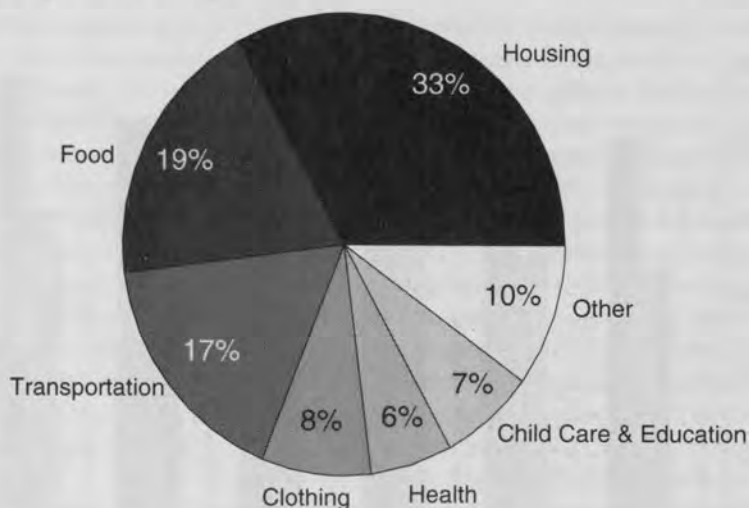
Budgetary Component

As a proportion of total child-rearing expenses, housing accounted for the largest share; figure 2 shows this for families in the middle income group. Based on an average for the six age groups, housing accounted for 31 percent of child-rearing expenses for a child in the lowest income group, 33 percent in the middle income group, and 36 percent in the highest income group. Food was the second largest average expense on a child for families regardless of income level, accounting for 20 percent of child-rearing expenses for a child in the lowest income group, 18 percent in the middle income group, and 16 percent in the highest income group. Transportation was the third largest child-rearing expense, making up 14 to 17 percent of child-rearing expenses across income levels.

In general, expenses on a child for goods and services considered to be necessities (such as food) did not vary as much as those considered to be discretionary (such as other miscellaneous expenses) ...

Expenditures on a child were lower in the younger age categories and higher in the older age categories. This held across income groups...

Figure 2. Estimated 1993 family expenditures on a child through age 17, by budgetary share¹



¹U.S. average for middle income families (1993 before-tax income between \$32,000 and \$54,100).

Clothing was the fourth largest expense on a child for families in the lowest income group (10 percent of child-rearing expenses), whereas other miscellaneous goods and services (personal care items, entertainment, and reading materials) made up the fourth largest expense on a child for families in the middle (10 percent of child-rearing expenses) and highest (12 percent) income groups. Clothing accounted for 8 and 7 percent of expenses on a child for families in the middle and highest income groups. These estimates of children's clothing expenses do not include clothing received in the form of gifts or hand-me-downs. Child care and education were 6 to 9 percent, and health care 5 to 7 percent of child-rearing expenses across income groups. For health care, these estimated expenditures include only out-of-pocket expenses and not that portion covered by health insurance.

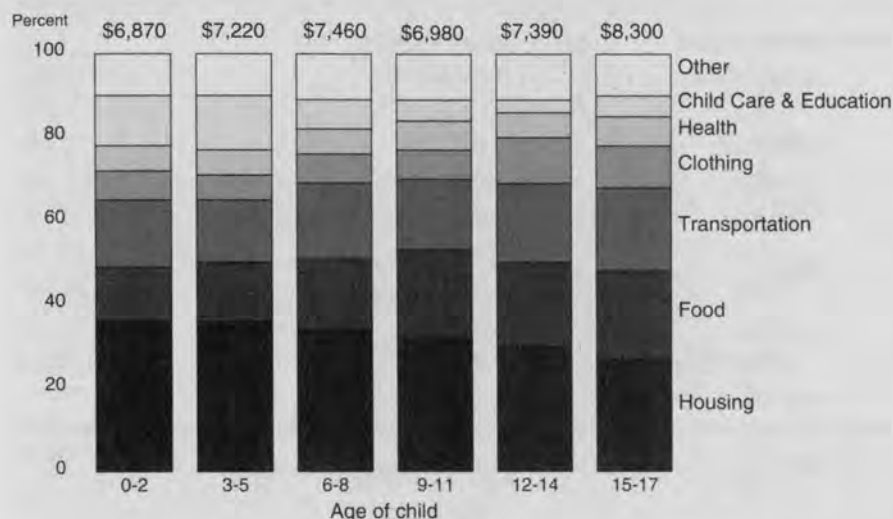
Age of Child

Expenditures on a child were lower in the younger age categories and higher in the older age categories. This held

across income groups (figure 3 depicts this for families in the middle income group) even though housing expenses, the highest child-rearing expenditure, generally declined as the child grew older. The decline in housing expenses reflects diminishing interest paid by homeowners over the life of a mortgage. Payments on principal are not considered part of housing costs in the CE.

Child-rearing food, transportation, clothing, and health care expenses generally increased over age of a child for all three income levels. Transportation expenses were highest for a child age 15-17, when he or she would start driving. Child care and education expenses were highest for a child under age 6. Most of this expense may be attributable to child care at this age. The estimated expenses for child care and education may seem low for those with the expense. However, as previously discussed, households with and without the expense are included in the estimates.

Figure 3. Estimated 1993 annual family expenditures on a child, by age and budgetary share¹



¹U.S. average for middle income families (1993 before-tax income between \$32,000 and \$54,100).

Region

Child-rearing expenses in the various regions of the country reflect patterns observed in the United States overall. In each region, expenses on a child increased with income level of the household and, generally, with age of the child. Overall child-rearing expenses were highest in the urban West, followed by the urban Northeast, urban South, and rural areas; figure 4 shows total child-rearing expenses by region and age of a child for middle income families. Child-rearing expenses were lowest in the urban Midwest; households in the urban Midwest had child-rearing expenses that averaged 2 to 3 percent below those of households in rural areas. This is contrary to previous estimates by the Family Economics Research Group where rural areas had the lowest child-rearing expense estimates and the urban Midwest the second lowest.

Much of the difference in expenses on a child among regions was related to housing costs. Total housing expenses on a child were highest in the urban West and lowest in rural areas. However, child-rearing transportation expenses were highest for families in rural areas. This likely reflects the longer distances that must be traveled and the lack of public transportation in these areas.

Adjustments for Older Children and Household Size

The expense estimates on a child represent expenditures on the younger child at various ages in a husband-wife household with two children. It cannot be assumed that expenses for the older child are the same at these various ages. Expenses may vary by birth order. To determine whether a difference exists, the extent of this difference, and how the expenditures may be adjusted to estimate expenses on an older child, the method described on pp. 3-4 was repeated, with the focus being on

the older child in each of the same age categories as used with the younger child. A family with two children was again used as the standard. Household income and region of residence were not held constant, so findings are applicable to all families.

It was found that, on average, husband-wife households with two children spent about the same amount on a younger and older child (except for differences caused by age). So, the figures in tables 3-9 reflect expenditures on either child in a two-child family. Thus, annual expenditures on children in a husband-wife, two-child family may be estimated by summing the expenses for the two appropriate age categories. For example, annual expenditures on children ages 9-11 and 15-17 in a husband-wife family in the middle income group for the over-all United States would be \$15,280 (\$6,980 + \$8,300).

The estimates should also be adjusted if a household has only one child or more than two children. Families will spend more or less on a child depending on the number of other children in the household and economies of scale. To derive these adjustments, multivariate analysis was used to estimate expenditures for each budgetary component controlling for household size and age of the younger child, but not household income level and region of the country, so the results are applicable to all families. These expenditures were then assigned to a child using the method previously described. Compared with expenditures for each child in a husband-wife, two-child family, husband-wife households with one child spent an average of 26 percent more on the single child, and those with three or more children spent an average of 22 percent less on each child.

Therefore, to adjust the figures in tables 3-9 to estimate annual overall expenditures on an only child, 26 percent should be added to the total expense for the child's age category. To estimate expenditures on three or more children, 22 percent should be subtracted from the total expense for each child's age category and these totals should be summed. As an example of adjustments needed for different numbers of children, the total expenses for a middle income family in the overall United States on a child age 15-17 with no siblings would be \$10,460 ($\$8,300 \times 1.26$) and the total expenses on three children ages 3-5, 12-14, and 15-17 would be \$17,870 ($(\$7,220 + \$7,390 + \$8,300) \times .78$).

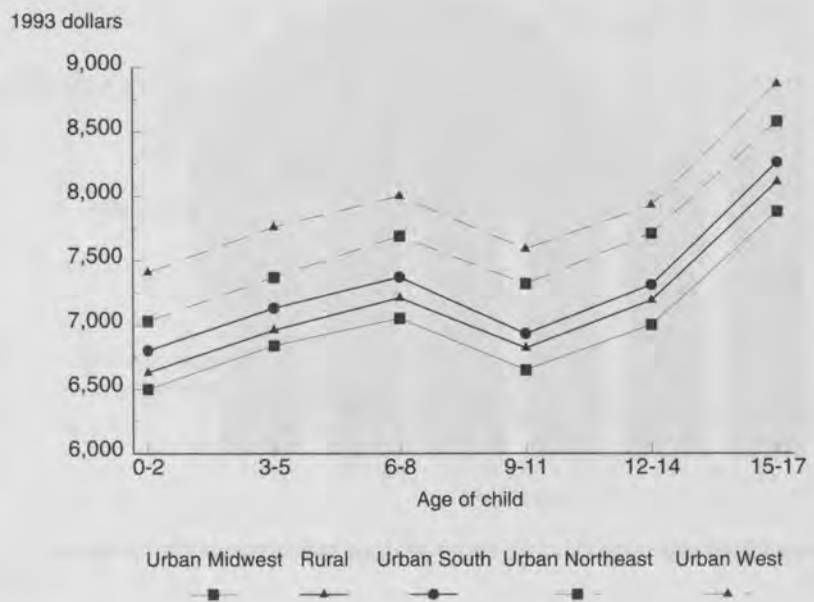
Expenditures by Single-Parent Families

The estimates of expenditures on a child by husband-wife families do not apply to single-parent families, which account for an increasing percentage of families with children. Therefore, separate estimates of child-rearing expenses in single-parent households were made using CE data. Most single-parent families in the survey (91 percent) were headed by a woman.

The method used in determining child-rearing expenses for two-parent households was followed. Multivariate analysis was used to estimate expenditures for each budgetary component, controlling for income level, household size (a single parent with two children was used as the standard), and age of the younger child (the same age categories as used with children in two-parent families).

Income groups of single-parent households (1990 before-tax income under \$28,900 and \$28,900 and over) were selected to correspond with the income groups used in estimating child-rearing expenditures in husband-wife households. This income includes child support payments. The two higher

Figure 4. Estimated 1993 annual family expenditures on a child, by region and age¹



¹U.S. average for middle income families in 1993.

income groups of two-parent families (1990 before-tax income between \$28,900 and \$48,900 and over \$48,900) were combined because only 16 percent of single-parent households had a 1990 before-tax income of \$28,900 and over. The sample was weighted to reflect the U.S. population.

Children's clothing and child care and education expenditures were divided between the two children in the one-parent household. For food and health care, household member shares were calculated for a three-member household (single parent and two children, with the younger child in one of the six age categories) using the USDA food plans and the 1987 National Medical Expenditure Survey findings. These shares for the younger child in a single-parent family were then applied to estimated food and health care expenditures to determine expenses on the younger child in each age category.

Housing, transportation, and other miscellaneous expenditures were allocated among household members on a per capita basis. Transportation expenses were adjusted to account for nonemployment-related activities in single-parent families. Income and expenses were updated to 1993 dollars.

Child-rearing expense estimates for single-parent families are in table 9. For the lower income group (1993 before-tax incomes less than \$32,000), a comparison of estimated expenditures on the younger child in a single-parent family with two children with those in a husband-wife family is presented in table 1; as previously discussed, 84 percent of single-parent families and 33 percent of husband-wife families were in this lower income group. More single-parent than husband-wife families fell in the bottom range of this lower income group. Average income for single-parent families in the lower

Table 1. A comparison of estimated 1993 expenditures on a child by single-parent and husband-wife families¹

Age of child	Single-parent households	Husband-wife households
0 - 2	\$4,310	\$4,960
3 - 5	4,970	5,260
6 - 8	5,710	5,520
9 - 11	4,980	5,070
12 - 14	5,350	5,500
15 - 17	6,400	6,260
Total (0 - 17)	\$95,160	\$97,710

¹Estimates are for the younger child in a two-child family in the overall United States with 1993 before-tax income less than \$32,000.

income group was \$13,700, compared with \$20,000 for husband-wife families in this income group. However, total expenditures on a child through age 17 were, on average, only 3 percent lower in single-parent households than in two-parent households.

Single-parent families in this lower income group, therefore, spend a larger proportion of their income on children. On average, housing and clothing expenses were higher, whereas transportation, health care, child care and education, and other miscellaneous expenditures on a child were lower in single-parent than in husband-wife households. Child-related food expenditures were similar, on average, in single-parent and in two-parent families.

For the higher income group of single-parent families (1993 before-tax income of \$32,000 or over), child-rearing expense estimates were about the same as those for two-parent households in the before-tax income group of \$54,100 or over: Total expenses for the younger child through age 17 were \$192,930 for single-parent families versus \$192,780 for husband-wife families. Therefore, child-rearing expenses for the higher income group of single-parent families

also consume a larger proportion of income than in husband-wife families. It appears that expenditures on children do not differ very much between single-parent and husband-wife households. What differs is household income levels. As single-parent families have one less potential earner (the absent partner), on average, their total household income is lower and child-rearing expenses are a greater percentage of this income.

Estimates only cover out-of-pocket child-rearing expenditures made by the parent with primary care of the child and do not include child-related expenditures made by the parent without primary care or others, such as grandparents. Such expenditures could not be estimated from the data. Overall expenses by both parents on a child in a single-parent household, therefore, are likely greater than this study's estimates.

To determine the extent of the difference in expenditures on an older child in single-parent households, the previous procedure was essentially repeated with the focus being on the older child. A family with two children was used as the standard. On average, single-parent households with two children spent about 8 percent less on the older than

It appears that expenditures on children do not differ very much between single-parent and husband-wife households. What differs is household income levels.

on the younger child (in addition to differences caused by age). This contrasts with husband-wife households that spent about the same amount on the older and younger child.

As with husband-wife households, more or less is spent if a single-parent household has only one child or three or more children. To determine these differences, multivariate analysis was used to estimate expenditures for each budgetary component controlling for household size and age of the younger child. These expenditures were then assigned to a child using the previous method. Compared with expenditures for the younger child in a single-parent, two-child family, single-parent households with one child spent about 37 percent more on the single child, and those with three or more children spent about 28 percent less on each child.

Comparisons With Past Estimates

The child-rearing expense estimates presented in this study are based on data from the 1990 CE updated to 1993 dollars. Previous expense estimates of the Family Economics Research Group were based on the 1987 CE updated to 1992 prices (9). Table 2 compares the 1992 and 1993 overall U.S. estimates of expenditures on the younger child in a two-child household for husband-wife and single-parent families.

The before-tax income of the bottom third income group was slightly lower in 1993 than in 1992. This represents a decline in real income for lower income families. For husband-wife households in the lower income group, although the real income of these families declined, estimated expenses on children increased by about 6 percent from 1992 to 1993. This increase was greater than the inflation rate of 3 percent over this period (10).

Table 2. Comparison of estimated 1992 and 1993 total (from birth to age 18) expenditures on a child by husband-wife and single-parent families, overall United States¹

1992		1993	
Before-tax income	Total expenditures	Before-tax income	Total expenditures
Husband-wife families			
Less than \$32,100	\$92,070	Less than \$32,000	\$97,710
\$32,100 to \$51,900	\$128,670	\$32,000 to \$54,100	\$132,660
More than \$51,900	\$180,690	More than \$54,100	\$192,780
Single-parent families			
Less than \$32,100	\$96,630	Less than \$32,000	\$95,160
\$32,100 or more	\$179,730	\$32,000 or more	\$192,930

¹ Estimates are for the younger child in a two-child family.

The middle income group of husband-wife families experienced a 3-percent increase in child-rearing expenses and the higher income group a 7-percent increase.

In addition to increases in expenditures by husband-wife families on the younger child in a two-child household, there have been changes in expenses on the older child and expenses on an only child or three or more children. Findings based on the 1987 CE showed that husband-wife households spent about 3 percent more on an older child than a younger child (in addition to differences caused by age). In contrast, when the 1990 CE and more current data for allocating various budgetary components were used, no difference in expenses between the older and younger child was found. Also, using the 1990 CE, husband-wife families spent 26 percent more on an only child than on a child in a two-child family, compared with 21 percent more using the 1987 CE. Husband-wife families with three or more children spent 22 percent less on each child using either the 1987 or the 1990 CE.

Based on the more recent expenditure data and more recent sources for allocating food, transportation, and health care expenses, single-parent families in the lower income group spent 2 percent less on a younger child in a two-child family in 1993 than in 1992, whereas those in the higher income group spent 7 percent more. Single-parent families spent 8 percent less on an older child using the 1990 CE, compared with 11 percent less using the 1987 CE. Using either the 1987 or the 1990 CE, single-parent households spent 37 percent more on an only child than on a child in a two-child family. In cases of three or more children, single-parent families spent 28 percent less on each child than in a two-child family using the 1990 CE, whereas they spent 26 percent less on each child using the 1987 CE.

These differences in child-rearing expense estimates show the need to update such estimates using the most recent expenditure data and the most recent studies to allocate various budgetary components among family members. Parental expenditures on children not only change with the general cost of living but with different economic and social conditions.

Estimating Future Costs

The estimates presented in this study represent household expenditures on a child of a certain age in 1993. To estimate these expenses for the first 17 years, future price changes need to be incorporated in the figures. To do this, a future cost formula is used such that:

$$C_f = C_p(1 + i)^n$$

where:

C_f = projected future annual dollar expenditure on a child of a particular age

C_p = present (1993) annual dollar expenditure on a child of a particular age

i = projected annual inflation (or deflation)

n = number of years from present until child will reach a particular age

An example of estimated future expenditures on the younger child in a husband-wife family with two children for each of the three income groups for the overall United States is presented. The example assumes a child is born in 1993, reaching age 17 in the year 2010, and the average annual inflation rate over this time is 6 percent (the average annual inflation rate over the past 20 years) (10). As can be seen, total family expenses on a child through age 17 would be \$170,920, \$231,140, and \$334,590 for households in the lowest, middle, and highest income groups, respectively. In 1993 dollar values, these figures would be \$97,710, \$132,660, and \$192,780.

Inflation rates other than 6 percent could be substituted into the formula if projections of these rates vary in the future. Also, it is somewhat unrealistic to assume that households remain in one income category as a child grows older. For most families, income rises over time. In addition, such projections assume child-rearing expenditures change only with inflation. Comparisons of the estimates using the 1987 CE and 1990 CE show that parental expenditure patterns change over time.

Estimated annual expenditures on a child born in 1993, by income group¹

Year	Age	Income group		
		Lowest	Middle	Highest
1993	<1	\$4,960	\$6,870	\$10,210
1994	1	5,260	7,280	10,820
1995	2	5,570	7,720	11,470
1996	3	6,260	8,600	12,660
1997	4	6,640	9,120	13,420
1998	5	7,040	9,660	14,230
1999	6	7,830	10,580	15,250
2000	7	8,300	11,220	16,160
2001	8	8,800	11,890	17,130
2002	9	8,570	11,790	17,230
2003	10	9,080	12,500	18,270
2004	11	9,620	13,250	19,360
2005	12	11,070	14,870	21,490
2006	13	11,730	15,760	22,780
2007	14	12,430	16,710	24,150
2008	15	15,000	19,890	28,260
2009	16	15,900	21,080	29,950
2010	17	16,860	22,350	31,750
Total		\$170,920	\$231,140	\$334,590

¹Estimates are for the younger child in a husband-wife family with two children for the overall United States.

Other Expenditures on Children

Expenditures on a child estimated in this study were composed of direct parental expenses made on a child through age 17 for seven major budgetary components. These direct expenditures excluded costs related to childbirth and prenatal health care. In 1991, these particular health care costs averaged \$4,720 for a normal delivery and \$7,826 for a cesarean delivery (3). These costs may be reduced by health insurance.

One of the largest expenses related to a child after age 17 is for a college education. The College Board (2) estimated that in 1993-94, average annual tuition and fees were \$2,240 at 4-year public colleges and \$9,516 at 4-year private colleges; annual room and board was \$3,566 at 4-year public colleges and \$4,226 at 4-year private colleges. For 2-year colleges in 1993-94, average annual tuition and fees were \$1,271 at public colleges and \$5,991 at private ones; annual room and board was \$3,820 at 2-year private colleges (no estimates were given for 2-year public colleges). Other parental expenses on a child after age 17 could include those associated with a child living at home and gifts and contributions to a child after this age.

Indirect costs involved in the rearing of children were also not included in the estimates. Although these costs are typically more difficult to measure than direct expenditures, they may be substantial. The time involved in rearing children is considerable. The dollar value of household work done by non-Black married women in 1988 was estimated to be between \$8,750 and \$10,830; that of non-Black males was estimated to be between \$3,200 and \$7,080 (1). In addition, earnings and

future career opportunities may be diminished because time in the labor force for one or both parents is reduced to care for children. For women who

gave birth, one study found that the earnings foregone in the year of birth and in the two subsequent years averaged \$14,400 in 1986 dollars (7).

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Table 3. Estimated annual expenditures on a child by husband-wife families, overall United States, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$32,000 (Average income=\$20,000)								
0 - 2	4,960	1,870	730	720	380	330	530	400
3 - 5	5,260	1,910	830	740	380	330	600	470
6 - 8	5,520	1,830	1,040	960	450	370	290	580
9 - 11	5,070	1,490	1,240	810	450	410	180	490
12 - 14	5,500	1,530	1,220	1,010	720	380	110	530
15 - 17	6,260	1,550	1,490	1,270	730	460	220	540
Total (0 - 17) . .	97,710	30,540	19,650	16,530	9,330	6,840	5,790	9,030
Income: \$32,000 to \$54,100 (Average income=\$42,600)								
0 - 2	6,870	2,560	870	1,080	450	410	840	660
3 - 5	7,220	2,600	1,020	1,100	440	400	930	730
6 - 8	7,460	2,520	1,270	1,320	530	470	510	840
9 - 11	6,980	2,190	1,500	1,170	520	510	340	750
12 - 14	7,390	2,220	1,490	1,370	830	470	220	790
15 - 17	8,300	2,250	1,750	1,650	850	560	440	800
Total (0 - 17) . .	132,660	43,020	23,700	23,070	10,860	8,460	9,840	13,710
Income: More than \$54,100 (Average income=\$79,400)								
0 - 2	10,210	4,050	1,200	1,330	600	480	1,320	1,230
3 - 5	10,630	4,090	1,370	1,360	600	480	1,430	1,300
6 - 8	10,750	4,010	1,620	1,580	700	560	870	1,410
9 - 11	10,200	3,670	1,870	1,430	690	600	620	1,320
12 - 14	10,680	3,710	1,890	1,630	1,090	570	430	1,360
15 - 17	11,790	3,730	2,140	1,920	1,110	660	860	1,370
Total (0 - 17) . .	192,780	69,780	30,270	27,750	14,370	10,050	16,590	23,970

¹ Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the CPI-U. The figures represent estimated expenses on the younger child in a two-child family. Estimates are about the same for the older child, so to calculate expenses for two children, figures should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.26. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.78. (For expenses on all children in a family, these totals should be summed.)

² Other miscellaneous expenses include personal care items, entertainment, and reading materials.

Table 4. Estimated annual expenditures on a child by husband-wife families, urban West, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$32,100 (Average income=\$20,200)								
0 - 2	5,470	2,230	770	820	380	290	550	430
3 - 5	5,730	2,250	870	850	370	280	610	500
6 - 8	6,030	2,200	1,090	1,060	450	320	300	610
9 - 11	5,650	1,920	1,300	910	440	360	190	530
12 - 14	6,000	1,900	1,270	1,120	700	330	110	570
15 - 17	6,800	1,960	1,540	1,380	710	400	230	580
Total (0 - 17) . .	107,040	37,380	20,520	18,420	9,150	5,940	5,970	9,660
Income: \$32,100 to \$54,400 (Average income=\$42,900)								
0 - 2	7,410	2,920	910	1,200	440	360	880	700
3 - 5	7,760	2,950	1,070	1,220	440	360	960	760
6 - 8	8,000	2,900	1,330	1,440	520	410	520	880
9 - 11	7,590	2,620	1,570	1,290	520	450	350	790
12 - 14	7,930	2,600	1,540	1,500	810	420	230	830
15 - 17	8,870	2,660	1,810	1,770	830	500	460	840
Total (0 - 17) . .	142,680	49,950	24,690	25,260	10,680	7,500	10,200	14,400
Income: More than \$54,400 (Average income=\$79,900)								
0 - 2	10,690	4,330	1,230	1,450	590	440	1,380	1,270
3 - 5	11,110	4,360	1,400	1,480	590	440	1,500	1,340
6 - 8	11,200	4,300	1,660	1,700	680	510	900	1,450
9 - 11	10,740	4,020	1,930	1,540	680	550	650	1,370
12 - 14	11,130	4,000	1,930	1,750	1,070	520	450	1,410
15 - 17	12,320	4,060	2,190	2,040	1,090	600	920	1,420
Total (0 - 17) . .	201,570	75,210	31,020	29,880	14,100	9,180	17,400	24,780

¹Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the regional CPI-U. The figures represent estimated expenses on the younger child in a two-child family. Estimates are about the same for the older child, so to calculate expenses for two children, figures should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.26. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.78. (For expenses on all children in a family, these totals should be summed.)

²Other miscellaneous expenses include personal care items, entertainment, and reading materials.

The Western region consists of the following States:

Alaska	Nevada
Arizona	New Mexico
California	Oregon
Colorado	Utah
Hawaii	Washington
Idaho	Wyoming
Montana	

Table 5. Estimated annual expenditures on a child by husband-wife families, urban Northeast, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$32,100 (Average income=\$20,100)								
0 - 2	5,130	2,070	830	700	380	320	420	410
3 - 5	5,390	2,100	930	730	380	310	470	470
6 - 8	5,770	2,040	1,160	950	450	360	220	590
9 - 11	5,400	1,760	1,380	790	450	390	130	500
12 - 14	5,820	1,750	1,350	1,010	720	370	80	540
15 - 17	6,550	1,800	1,620	1,260	730	430	160	550
Total (0 - 17) . .	102,180	34,560	21,810	16,320	9,330	6,540	4,440	9,180
Income: \$32,100 to \$54,300 (Average income=\$42,800)								
0 - 2	7,030	2,770	970	1,080	450	400	690	670
3 - 5	7,370	2,800	1,120	1,110	440	390	770	740
6 - 8	7,690	2,740	1,400	1,330	530	450	390	850
9 - 11	7,320	2,460	1,640	1,170	530	490	260	770
12 - 14	7,710	2,440	1,630	1,380	840	460	160	800
15 - 17	8,580	2,500	1,890	1,660	850	540	330	810
Total (0 - 17) . .	137,100	47,130	25,950	23,190	10,920	8,190	7,800	13,920
Income: More than \$54,300 (Average income=\$79,800)								
0 - 2	10,250	4,170	1,280	1,340	600	480	1,130	1,250
3 - 5	10,640	4,200	1,460	1,370	600	470	1,230	1,310
6 - 8	10,840	4,150	1,720	1,590	690	550	710	1,430
9 - 11	10,420	3,870	2,000	1,430	690	590	500	1,340
12 - 14	10,860	3,850	2,000	1,640	1,090	560	340	1,380
15 - 17	11,920	3,900	2,260	1,930	1,110	640	690	1,390
Total (0 - 17) . .	194,790	72,420	32,160	27,900	14,340	9,870	13,800	24,300

¹Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the regional CPI-U. The figures represent estimated expenses on the younger child in a two-child family. Estimates are about the same for the older child, so to calculate expenses for two children, figures should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.26. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.78. (For expenses on all children in a family, these totals should be summed.)

²Other miscellaneous expenses include personal care items, entertainment, and reading materials.

The Northeastern region consists of the following States:
 Connecticut New York
 Maine Pennsylvania
 Massachusetts Rhode Island
 New Hampshire Vermont
 New Jersey

Table 6. Estimated annual expenditures on a child by husband-wife families, urban South, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$31,800 (Average income=\$20,000)								
0 - 2.....	4,850	1,830	690	580	410	380	590	370
3 - 5.....	5,120	1,860	790	610	400	370	650	440
6 - 8.....	5,390	1,800	990	820	480	430	330	540
9 - 11.....	5,010	1,530	1,190	670	480	470	210	460
12 - 14.....	5,380	1,510	1,160	880	760	440	130	500
15 - 17.....	6,160	1,560	1,420	1,130	770	510	260	510
Total (0 - 17) ..	95,730	30,270	18,720	14,070	9,900	7,800	6,510	8,460
Income: \$31,800 to \$53,900 (Average income=\$42,400)								
0 - 2.....	6,800	2,520	840	950	480	460	920	630
3 - 5.....	7,130	2,540	980	980	480	460	1,000	690
6 - 8.....	7,370	2,490	1,230	1,200	560	530	560	800
9 - 11.....	6,930	2,210	1,450	1,040	560	570	380	720
12 - 14.....	7,310	2,200	1,430	1,250	880	540	250	760
15 - 17.....	8,260	2,250	1,690	1,520	900	620	510	770
Total (0 - 17) ..	131,400	42,630	22,860	20,820	11,580	9,540	10,860	13,110
Income: More than \$53,900 (Average income=\$79,100)								
0 - 2.....	10,050	3,900	1,150	1,210	640	550	1,410	1,190
3 - 5.....	10,440	3,930	1,310	1,240	640	550	1,520	1,250
6 - 8.....	10,560	3,880	1,550	1,450	740	640	940	1,360
9 - 11.....	10,090	3,600	1,810	1,300	730	680	690	1,280
12 - 14.....	10,500	3,580	1,810	1,510	1,150	640	490	1,320
15 - 17.....	11,710	3,640	2,060	1,780	1,180	730	990	1,330
Total (0 - 17) ..	190,050	67,590	29,070	25,470	15,240	11,370	18,120	23,190

¹Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the regional CPI-U. The figures represent estimated expenses on the younger child in a two-child family. Estimates are about the same for the older child, so to calculate expenses for two children, figures should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.26. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.78. (For expenses on all children in a family, these totals should be summed.)

²Other miscellaneous expenses include personal care items, entertainment, and reading materials.

The Southern region consists of the following States:

Alabama	Kentucky	South Carolina
Arkansas	Louisiana	Tennessee
Delaware	Maryland	Texas
District of Columbia	Mississippi	Virginia
Florida	North Carolina	West Virginia
Georgia	Oklahoma	

Table 7. Estimated annual expenditures on a child by husband-wife families, urban Midwest, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$31,800 (Average income=\$19,900)								
0 - 2.....	4,570	1,750	650	620	360	290	520	380
3 - 5.....	4,850	1,780	750	650	350	290	580	450
6 - 8.....	5,120	1,720	940	860	430	330	280	560
9 - 11.....	4,740	1,440	1,140	710	430	360	180	480
12 - 14.....	5,090	1,430	1,100	920	680	340	110	510
15 - 17.....	5,850	1,480	1,370	1,170	690	400	220	520
Total (0 - 17) ..	90,660	28,800	17,850	14,790	8,820	6,030	5,670	8,700
Income: \$31,800 to \$53,800 (Average income=\$42,400)								
0 - 2.....	6,500	2,440	800	990	430	370	830	640
3 - 5.....	6,840	2,470	940	1,020	420	370	910	710
6 - 8.....	7,050	2,410	1,180	1,230	500	420	490	820
9 - 11.....	6,650	2,140	1,400	1,080	500	460	330	740
12 - 14.....	7,000	2,120	1,380	1,290	800	430	210	770
15 - 17.....	7,880	2,170	1,640	1,550	810	500	430	780
Total (0 - 17) ..	125,760	41,250	22,020	21,480	10,380	7,650	9,600	13,380
Income: More than \$53,800 (Average income=\$79,000)								
0 - 2.....	9,720	3,830	1,110	1,250	570	450	1,300	1,210
3 - 5.....	10,110	3,860	1,270	1,270	570	450	1,410	1,280
6 - 8.....	10,200	3,800	1,510	1,480	660	510	850	1,390
9 - 11.....	9,760	3,530	1,770	1,330	660	560	610	1,300
12 - 14.....	10,150	3,510	1,760	1,540	1,050	520	430	1,340
15 - 17.....	11,280	3,560	2,020	1,810	1,070	610	860	1,350
Total (0 - 17) ..	183,660	66,270	28,320	26,040	13,740	9,300	16,380	23,610

¹Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the regional CPI-U. The figures represent estimated expenses on the younger child in a two-child family. Estimates are about the same for the older child, so to calculate expenses for two children, figures should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.26. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.78. (For expenses on all children in a family, these totals should be summed.)

²Other miscellaneous expenses include personal care items, entertainment, and reading materials.

The Midwestern region consists of the following States:

Illinois	Missouri
Indiana	Nebraska
Iowa	North Dakota
Kansas	Ohio
Michigan	South Dakota
Minnesota	Wisconsin

Table 8. Estimated annual expenditures on a child by husband-wife families, Rural, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$31,700 (Average income=\$19,900)								
0 - 2.....	4,700	1,480	740	840	380	340	520	400
3 - 5.....	4,960	1,510	830	860	370	340	580	470
6 - 8.....	5,270	1,460	1,040	1,080	450	390	280	570
9 - 11.....	4,910	1,180	1,250	930	450	430	180	490
12 - 14.....	5,290	1,170	1,220	1,130	730	400	110	530
15 - 17.....	6,060	1,220	1,480	1,390	740	470	220	540
Total (0 - 17) ..	93,570	24,060	19,680	18,690	9,360	7,110	5,670	9,000
Income: \$31,700 to \$53,700 (Average income=\$42,400)								
0 - 2.....	6,630	2,170	880	1,210	450	430	830	660
3 - 5.....	6,960	2,200	1,030	1,230	440	420	920	720
6 - 8.....	7,210	2,150	1,280	1,450	520	490	490	830
9 - 11.....	6,820	1,870	1,510	1,300	530	530	330	750
12 - 14.....	7,190	1,850	1,490	1,500	850	500	210	790
15 - 17.....	8,110	1,910	1,750	1,780	860	580	430	800
Total (0 - 17) ..	128,760	36,450	23,820	25,410	10,950	8,850	9,630	13,650
Income: More than \$53,700 (Average income=\$78,900)								
0 - 2.....	9,840	3,550	1,190	1,460	600	510	1,310	1,220
3 - 5.....	10,230	3,580	1,350	1,490	590	510	1,420	1,290
6 - 8.....	10,360	3,530	1,600	1,700	690	590	860	1,390
9 - 11.....	9,910	3,250	1,860	1,550	690	630	620	1,310
12 - 14.....	10,340	3,240	1,860	1,760	1,100	600	430	1,350
15 - 17.....	11,470	3,290	2,110	2,040	1,120	680	870	1,360
Total (0 - 17) ..	186,450	61,320	29,910	30,000	14,370	10,560	16,530	23,760

¹Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the regional CPI-U. The figures represent estimated expenses on the younger child in a two-child family. Estimates are about the same for the older child, so to calculate expenses for two children, figures should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.26. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.78. (For expenses on all children in a family, these totals should be summed.)

²Other miscellaneous expenses include personal care items, entertainment, and reading materials.

Rural areas throughout the United States are represented and are defined as places of less than 2,500 people outside a Metropolitan Statistical Area.

Table 9. Estimated annual expenditures on a child by single-parent families, overall United States, 1993¹

Age of child	Total	Housing	Food	Transportation	Clothing	Health care	Child care and education	Other ²
Income: Less than \$32,000 (Average income=\$13,700)								
0 - 2	4,310	1,570	830	690	450	190	380	200
3 - 5	4,970	1,870	860	760	430	270	490	290
6 - 8	5,710	2,090	1,060	630	550	390	530	460
9 - 11	4,980	1,910	1,170	580	530	420	120	250
12 - 14	5,350	1,830	1,200	670	750	420	160	320
15 - 17	6,400	2,130	1,420	820	1,010	530	150	340
Total (0 - 17) . .	95,160	34,200	19,620	12,450	11,160	6,660	5,490	5,580
Income: \$32,000 or more (Average income=\$47,900)								
0 - 2	9,600	3,630	1,350	1,570	600	330	950	1,170
3 - 5	10,370	3,920	1,420	1,630	570	440	1,140	1,250
6 - 8	11,320	4,140	1,730	1,500	720	600	1,200	1,430
9 - 11	10,310	3,960	1,930	1,450	690	650	420	1,210
12 - 14	10,860	3,890	1,940	1,550	960	640	600	1,280
15 - 17	11,850	4,180	2,150	1,590	1,260	790	580	1,300
Total (0 - 17) . .	192,930	71,160	31,560	27,870	14,400	10,350	14,670	22,920

¹Estimates are based on data from the 1990 Consumer Expenditure Survey updated to 1993 dollars using the CPI-U. The figures represent estimated expenses on the younger child in a two-child family. For estimated expenses on the older child, multiply the total expense for the appropriate age category by 0.92. To estimate expenses for two children, the expenses on the younger child and older child—after adjusting the expense on the older child downward—should be summed for the appropriate age categories. To estimate expenses for an only child, multiply the total expense for the appropriate age category by 1.37. To estimate expenses for each child in a family with three or more children, multiply the total expense for each appropriate age category by 0.72—after adjusting the expenses on the older children downward. (For expenses on all children in a family, these totals should be summed.)

²Other miscellaneous expenses include personal care items, entertainment, and reading materials.

Income and Consumer Expenditures of Rural Elders

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Poverty statistics indicate that nonmetro elderly are more likely to be poor than metro elderly. This study provides additional information on differences in the economic status of rural and urban elderly households. The Consumer Expenditure Interview Survey data for 1990 and 1991 were used to provide income and expenditure information on rural and urban elderly households. Findings show that rural elders had 84 percent as much income and spent 85 percent as much as urban elders. Rural elderly women living alone had 69 percent as much income and spent 79 percent as much as urban elderly women living alone. Rural elderly women living alone are particularly at risk economically. Policy planners and service providers may need to be especially aware of their needs.

One of four Americans who are 65 years or older lives in a nonmetropolitan area¹ (4). Thus, nonmetro elders are an important segment of the elderly population. Various studies have reported that these elders tend to fare less well than metro elders.

A recent publication (5) of the Inter-agency Forum on Aging-Related Statistics reports data on nonmetro elders from several national surveys. These data on poverty, housing, health, and other measures of well-being indicate that nonmetro elderly may be less well-off than urban elderly. The report states that "a higher percent of non-metro elderly than metro elderly are impoverished; one-half of nonmetro

elderly are in poor, near-poor, or low income families." Although nonmetro elderly are more likely to own their home, the homes are of lower value and in poorer physical condition than homes owned by metropolitan elders. The report indicates that nonmetro elderly are not healthier nor more active than metro elderly persons. There is no difference in the percentage who smoke heavily, drink heavily, eat healthful diets, or are overweight. And, although the social support network may be a little larger, there is little evidence that nonmetropolitan elderly have a more closely knit community than metropolitan elderly.

"Aging," a publication of the U.S. Department of Health and Human Services' Administration on Aging, had a special issue on rural elderly, which also challenged the image of rural America as a "happy, healthy, and tranquil place to live" (1). It reported that the rural elderly have a greater incidence of chronic health

¹"Nonmetropolitan" refers to counties outside a metropolitan area. A metropolitan area is a county (or counties) containing a place or urbanized area of 50,000 people or more with a total population of at least 100,000, including adjacent counties that have a high degree of economic and social integration with the central county.

conditions (arthritis, cardiovascular disease, hypertension, and diabetes) than urban elderly. Also, the 1990 U.S. poverty rate for elders was 8 percent in the suburbs, 15 percent in central cities, and 16 percent in nonmetropolitan areas (1). Another study (3) that used five separate indicators of poverty to compare the economic status of metro and nonmetro elders documented that nonmetro elderly are more likely than metro elderly to be poor. This was the case even when age, sex, race, marital status, and living arrangements were controlled by statistical procedures.

Since previous studies and national poverty rates have shown that nonmetro elders experience a lower level of economic security than do metro elders, this study was designed to provide additional information on these differences. The measures of economic status are average income and expenditures, rather than poverty measures. The measure of population density is rural/urban rather than nonmetro/metro. The rural households in this study are a subset of the nonmetro population that live in areas with less than 2,500 population.² In addition, a particularly vulnerable subgroup of rural elders is analyzed. Because elderly women who live alone tend to have fewer financial resources than married couples or men who live alone, this study describes both the economic status of elderly rural households and the economic status of elderly women who live alone in rural areas.

²Urban households in this study include any rural households that are within metro areas.

Sample and Data

Data for the study are from the Consumer Expenditure (CE) Interview Surveys for 1990 and 1991. The CE is an ongoing survey that collects data on household expenditures, income, and major socioeconomic and demographic characteristics. A national sample of consumer units³ is interviewed once each quarter for five consecutive quarters; the first interview is used only for bounding purposes. Using a rotating sample design, about one-fifth of the sample is replaced each quarter. Each year of CE data contains information from about 20,000 quarterly interviews. Income data are annual, and quarterly expenditure data are multiplied by four to provide estimates of annual expenditures. The data are weighted to represent the U.S. noninstitutionalized population.

Consumer units with a reference person⁴ 65 years or older were selected. There were 8,600 consumer units in the sample; for the analysis of women living alone, there were 3,022 reference persons. Using the weighted numbers, 16 percent of the elderly units lived in rural areas; 13 percent of the elderly women living alone were in rural areas.

³A consumer unit consists of either: (1) all members of a particular housing unit who are related by blood, marriage, adoption, or other legal arrangements; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent. In this paper, the term household refers to consumer unit.

⁴Reference person is the first member mentioned when the respondent was asked to "start with the name of the person or one of the persons who owns or rents the home."

Characteristics of Rural Elderly

Household Type

Rural elderly consumer units were more likely than urban units to consist of married couples (table 1, p. 22). Over half of rural households were husband and wife, compared with 43 percent of urban households. A smaller percentage of rural households were women living alone—27 percent of rural, compared with 36 percent of urban households. Some rural women move to county-seat towns or other urban areas (2,500 or more population) when they are widowed to be nearer services and to find housing suitable to their needs. It is the women who live alone and remain in rural areas that are highlighted in table 1.

Income

Rural units had lower income than urban units. Table 1 shows the distribution among income categories. Thirty-eight percent of rural units and 30 percent of urban units had income under \$10,000. For women living alone, 68 percent of rural and 52 percent of urban households had income less than \$10,000.

Age

For consumer units with a reference person age 65 or older, the age of the reference person in rural households was not much different than that in urban households, as shown in table 1. The average age was 74.4 years, compared with 74.1 years for urban reference persons. However, for women living alone, rural women were older than urban women. On average, rural women were 77.3 years old, compared with urban women's average of 76.2 years old. Forty-two percent of rural women living alone were 80 years or older, compared with 33 percent of urban women. This has implications for programs that serve rural households. People who are 80 years or older and living alone are likely to have needs for transportation, health, and other services.

Race

There was less race diversity in rural areas than in urban areas. Among elderly units (and the subset of women living alone), a lower percentage of rural household heads were non-White.

Education

Rural reference persons were less likely than their urban counterparts to have a high school education. Three of five rural elders had not completed high school. For rural women living alone, the percentage who had not completed high school was slightly higher (62 percent).

Work Status

As expected, most elders reported that they were retired or not working. Less than one of five reported an occupation. Rural women living alone were even more likely to be retired or not working (91 percent).

Housing

Eighty-eight percent of rural elders and 75 percent of urban elders owned their home. Women living alone were less likely than other elders to own their homes, but still the majority were owners (78 percent of rural women and 61 percent of urban women).

Usually, these homes were detached, single-family dwellings. In rural areas, 79 percent of elders lived in a detached home. Rural elders were more likely than their urban counterparts to live in detached homes or mobile homes and were much less likely to live in multiple units. The pattern held true for rural women who lived alone. Three-quarters of rural women living alone lived in detached, single-family dwellings, whereas only half of urban women did.

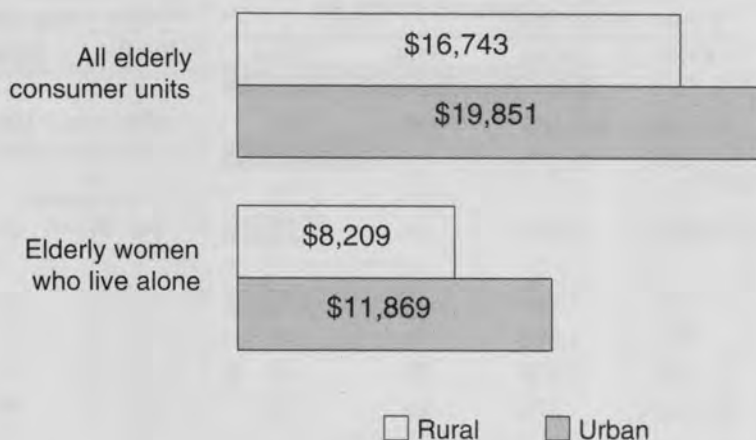
Owning a detached, single-family home affects the financial decisions of elders. The equity of home ownership provides financial security. Yet, the expense and effort associated with a single-family

Table 1. Characteristics of rural and urban elderly¹ consumer units, 1990-91

Characteristic	All elderly		Women living alone	
	Rural	Urban	Rural	Urban
Sample size	1,069	7,531	284	2,738
	<i>Percent</i>			
Household type				
Husband and wife	52	43		
Female living alone	27	36	100	100
Male living alone	12	10		
Other	9	11		
Household income				
<\$5,000	10	5	22	10
\$5,000 - \$9,999	28	25	46	42
\$10,000 - \$14,999	17	17	14	19
\$15,000 - \$19,999	11	11	1	7
\$20,000 - \$29,999	15	14	5	7
\$30,000 - \$39,999	5	7	—	2
\$40,000 - \$49,999	2	3	—	1
\$50,000 or more	3	5	—	1
Incomplete income reporters	9	13	12	11
Reference person				
Age (years)				
65 - 69	29	30	20	21
70 - 74	28	27	20	23
75 - 79	20	21	18	23
80+	23	22	42	33
Race				
White	93	86	90	88
Black	6	9	10	9
Other	1	5	0	3
Education				
Not high school graduate	59	43	62	43
High school graduate	23	30	23	32
Some college	18	27	15	25
Work status				
Reports occupation	18	18	9	13
Retired, not working	82	82	91	87
Housing				
Housing tenure				
Own	88	75	78	61
Rent	12	25	22	39
Type of home				
Single family, detached	79	66	76	51
Multiple unit	12	29	15	44
Mobile home	14	5	9	5

¹Reference person 65 years or older.

Figure 1. Income¹ of all elderly consumer units and elderly women who live alone, 1990-91



...among women who lived alone[,] Rural women had an average income of...only 69 percent as much as...urban women.

¹For the 88 percent of consumer units that report their income.

dwelling may strain the resources of some elders. The houses of rural elders are often of lower market value than those of urban elders. Also, they are more likely to need repairs, and they are larger—thus more expensive to heat and maintain. In some rural communities, the option of multiple units is not available. Personal preferences likely play a part in housing decisions also.

Income of Rural Elderly Households

Income

The income of elderly households in rural areas was less than that of their urban counterparts (fig. 1). Rural household income reporters had an average annual income of \$16,743 or 84 percent as much as the \$19,851 reported by urban households. This pattern was more pronounced among women who lived alone. Rural women had an average income of \$8,209, only 69 percent as much as the \$11,869 income of urban women.

If income needs are similar in rural and urban areas, rural elderly households were disadvantaged relative to urban households. It is not clear whether needs are similar. Urban needs for income may be greater than rural needs if the cost of living is higher in urban areas. It is widely believed that urban housing costs are higher—at least in some areas. However, differences in prices of such commodities and services as health care, automobiles, or food cannot be easily verified.⁵ Rural families may have greater transportation needs since they travel greater distances to markets and services. Also, rural families may have fewer options available for housing, health services, vehicles, or clothing and so need to pay whatever locally available products and services cost, whereas urban families may have a wider range of prices from which to choose.

⁵The Federal Government does not publish statistics that compare prices among cities, regions, or rural areas; the Consumer Price Index measures changes in prices since the base period for each selected city, not differences among cities.

Table 2. Sources of income of rural and urban elderly units, 1990-91

Income source	Average income ¹				Percent receiving income			
	All		Women living alone		All		Women living alone	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Before-tax income	\$16,743	\$19,851	\$8,209	\$11,869	100	100	100	100
After-tax income	15,844	18,426	8,103	11,279				
Social Security and Railroad Retirement	8,601	8,608	5,812	6,615	94	95	96	95
Pensions and annuities	2,182	3,566	855	1,910	34	42	21	34
Interest and dividends	1,776	2,444	867	1,861	38	40	27	35
Earnings	3,859	4,770	404	1,108	25	29	5	15
Other	325	462	270	376	16	15	21	16

¹For the 88 percent of consumer units that reported their income.

Sources of Income

Social Security

There was little difference between rural and urban elderly households in the amount of Social Security they received (table 2). About 95 percent of each group had Social Security income that averaged about \$8,600 per household. This represented over half (51 percent) of rural household income and about 43 percent of urban household income (fig. 2).

For elderly rural women living alone, Social Security was an especially important source of income. About 95 percent of both rural and urban women received Social Security; rural women averaged \$5,812 in Social Security income, and urban women averaged \$6,615. For rural women, Social Security provided 71 percent of their total income. For urban women, it was a smaller, though still important, share of total income (56 percent). Thus, policy decisions regarding Social Security profoundly affect the economic well-being of elderly women, especially elderly rural women.

Pensions and Annuities

Rural elders were less likely than urban elders to receive pension or annuity income. Thirty-four percent of rural families received such income, compared with 42 percent of urban families. The average income from pensions or annuities was \$2,182 for rural elderly and \$3,566 for urban elderly. This difference between rural and urban families was expected since the work histories differ. Rural elders were more likely to have been farmers, self-employed, or employed in small businesses where pensions and retirement plans are less prevalent than in larger businesses, which are usually located in urban areas. As expected, women living alone were less likely than other households to receive pension and annuity income. Only one-fifth of rural women received such income, which provided an annual average of \$855.

Pensions and annuities provided 13 percent of rural and 18 percent of urban household income. For elderly women living alone, these sources provided 10 percent of rural and 16 percent of urban women's income.

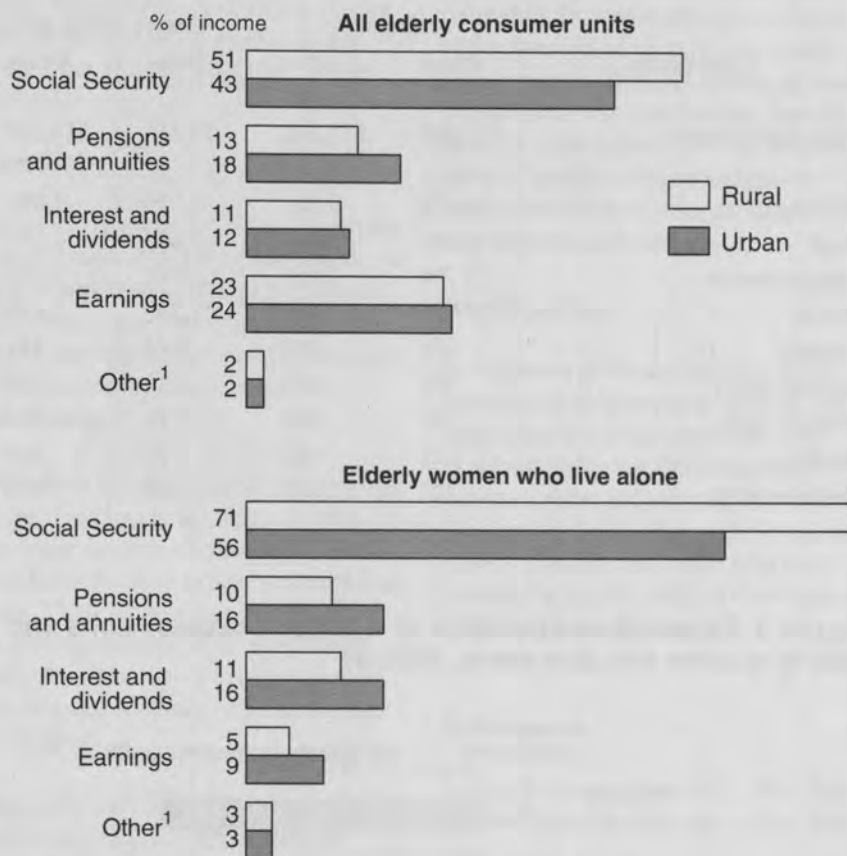
Interest and Dividends

Interest and dividends from investments were received by similar percentages of rural and urban households, but the average dollar amount was less for rural households (\$1,776 for rural and \$2,444 for urban households). These sources provided 11 and 12 percent, respectively, of the annual income of rural and urban households.

Again, rural women living alone were different from other rural elders or urban women living alone. Only 27 percent received interest or dividend income, and it averaged only \$867, providing 11 percent of their income.

Besides the income implications, the levels of interest and dividend income reflect the level of assets owned by households. The low interest and dividend income for rural households (and especially rural women living alone) indicate that rural households had fewer assets than urban households in saving accounts, bonds, stocks, and other investments.

Figure 2. Sources of income of elderly consumer units and elderly women who live alone, 1990-91



Elderly households in rural areas spent 85 percent as much as their urban counterparts

¹Other sources include public funds and regular contributions from others.

Earnings

Earnings from employment, farm income, business income, and rental units were received by 25 percent of rural and 29 percent of urban elders. Such earnings provided almost one-fourth of elders' income (23 percent for rural and 24 percent for urban households).

For women living alone, earnings made a more modest contribution. Only 5 percent of rural and 15 percent of urban women had earnings. These earnings provided only 5 percent of rural women's income and 9 percent of urban women's income.

Expenditures

Expenditures may be a better measure than income of economic well-being, especially for retired people (2). When elders draw on retirement savings to provide for their needs and desires, expenditures reflect this. Elderly households in rural areas spent 85 percent as much as their urban counterparts (table 3, p. 26). Rural elderly households spent an average of \$15,005 per year, compared with \$17,745 spent by urban households. Rural women living alone spent \$9,215 or 79 percent as much as their urban counterparts.

In rural and urban households, expenditures were less than after-tax income. However, women living alone spent more than their income, which suggests they are using savings to meet their needs. Rural women's expenditures totaled \$9,215, somewhat more than their \$8,103 after-tax income. Urban women spent \$11,629, a little more than their after-tax income of \$11,279.

In every expenditure category except health care, rural households spent less than urban households. Similarly, among women who live alone, rural women spent less than urban women in every expenditure group except health care. For women living alone, out-of-pocket expenditures for health care may be higher because the average age of rural women was older—so their health needs may have been greater.

Figure 3 shows the allocation of expenditures among categories. Urban households spent a larger share of their budget on housing than did their rural counterparts. This probably reflects higher housing prices in urban areas. Urban homes had fewer rooms than rural homes (5.3 rooms in urban homes; 5.8 in rural). Household size was about the same in urban and rural households (1.72 people in urban households; 1.77 in rural), so utilities and other expenses related to household size did not explain the higher expenditures of urban households.

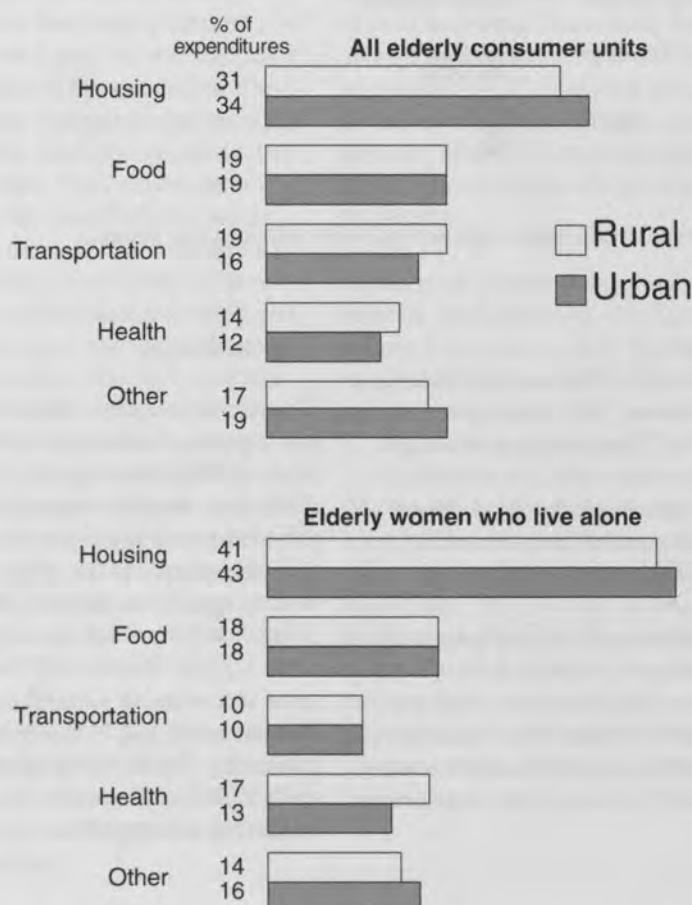
Rural households spent a larger share of their budget on transportation than did urban households. They owned more vehicles (1.9 vehicles in rural households; 1.4 in urban) and probably drove more miles because of greater distances to town, friends, or services.

Elderly women who lived alone had different budgetary patterns than elderly households as a whole. Both rural and urban women spent a much larger proportion on housing and a much smaller share for transportation. Elderly women owned 0.6 vehicles per household.

Table 3. Mean expenditures of rural and urban elderly consumer units, 1990-91

Expenditure	All elderly		Women living alone	
	Rural	Urban	Rural	Urban
Total expenditures	\$15,005	\$17,745	\$9,215	\$11,629
Housing	4,624	5,961	3,779	5,001
Food	2,883	3,307	1,626	2,037
Transportation	2,794	2,919	914	1,154
Health	2,151	2,118	1,549	1,484
Apparel	471	669	342	441
Entertainment	481	677	185	337
Personal care	156	249	98	194
Reading	122	143	74	103
Miscellaneous	1,323	1,702	648	878

Figure 3. Expenditure allocation of elderly consumer units and elderly women who live alone, 1990-91



There were no budget share differences between rural and urban households for food expenditures. Rural and urban elderly households spent 19 percent for food. Rural and urban women living alone spent 18 percent of their budget for food.

Summary

Rural elderly households had 84 percent as much income as urban households. A smaller percentage of rural households than urban households received each type of income: Social Security, pensions and annuities, interest and dividends, and earnings.

Particularly of note was that rural women living alone had much lower income and fewer sources of income than other rural households or urban women living alone. Their income was less than half the average income of all rural households. Rural women's average income was 69 percent of that of urban women living alone.

Compared with other elderly groups (rural households or urban females living alone), rural women living alone were far less likely to receive income from any of the major sources other than Social Security. Only 27 percent received interest and dividends, 21 percent had pensions or annuities, and 5 percent had earnings from employment or farms/businesses they owned. Social Security accounted for 71 percent of their income, averaging about \$5,800 a year.

Expenditures of rural elderly are 85 percent as much as those of urban elderly households. Compared with urban households, rural households spent a larger proportion of expenditures on transportation and health and a smaller share for housing.

To reiterate, rural women living alone were particularly vulnerable. Both rural and urban women living alone spent more than their after-tax income, indicating they relied on savings to meet their expenses. Over 40 percent of their expenditures were on housing, leaving little for other expenses. Rural women spent 17 percent of their budget on health expenditures, a larger share than other households.

Implications

Government policies regarding Social Security, health care plans, housing, and other programs affecting elders need to acknowledge the differences in income sources and expenditure patterns between rural and urban elderly households. Certainly, they must take into account the special needs of rural women who live alone.

Also, findings indicate a need for pre-retirement education for rural households. The pension and annuity income of rural elders was less than that of urban elders, perhaps reflecting less access to company-sponsored retirement plans. Also, income from interest and dividends was much lower, indicating less in savings and investments.

Rural people retiring in the future may be different from the group reported here. People in this study were born in the first quarter of the century. The inclusion of farmers in Social Security, the growth of company-sponsored retirement programs, and similar events occurred fairly late in their work life. Future groups may receive more pre-retirement guidance and become more conscious of the need for retirement planning and saving.

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Trends in Tobacco Use

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Scientific knowledge regarding the medical consequences of smoking is constantly expanding and over time, a significant reduction in U.S. smoking prevalence and consumption has occurred. Findings from recent Federal surveys are used to describe trends in tobacco use. Among U.S. adults, per capita consumption of cigarettes has declined by 38 percent since 1960. As measured in the Consumer Expenditure Surveys, mean annual household expenditure for tobacco products and smoking supplies, in 1992 dollars, decreased by 49 percent between 1980 (\$534) and 1992 (\$275). Nevertheless, one in four Americans 12 years old and older and one in three young adults, ages 18 to 34, were current smokers in 1992. Smoking prevalence decreases as educational level increases. People with a college education were more likely than those with less education to quit smoking. Programs designed to reduce smoking should focus on adolescents and those less educated. Regulations restricting smoking in public places and added excise taxes have proven effective in curtailing smoking.

Cigarette smoking is the leading cause of preventable illness and death in the United States (3,11,12).

Smoking has been recognized as a serious public health problem for over 30 years, particularly since the Surgeon General's first report on smoking and health in 1964 (12,25). Since then, research has expanded our knowledge about the consequences of smoking. Prevention programs and regulatory policies that inhibit smoking have focused public attention so that smoking is no longer widely tolerated and smokers are increasingly isolated in public places.

In this time of rising health care costs, it seems illogical to ignore the medical facts concerning tobacco use. The reality, however, is that millions of Americans do ignore them to smoke billions of cigarettes each year. Their own health is compromised, and the well-being of those around them is at risk.

This article presents findings from various Federal sources and national surveys that describe trends in (1) tobacco consumption; (2) characteristics of people who smoke, formerly smoked, or use smokeless tobacco; and (3) prices and expenditures for tobacco. The consequences of passive or environmental smoke are examined, together with health costs related to smoking.

Consumption of Tobacco and Tobacco Products

The Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA) estimates total and adult per capita consumption of cigarettes based on data from the U.S. Department of Treasury—Bureau of Alcohol, Tobacco, and Firearms, the U.S. Department of Commerce, the Tobacco Institute, and other private and industry sources. Adult per capita consumption in the United States is calculated by dividing

total estimated consumption by the total estimated population 18 years of age and older.

According to ERS, adult per capita consumption of cigarettes in the United States has declined by 38 percent since 1960. Peak consumption during this period occurred in 1963 at 4,345 cigarettes per annum (fig. 1) (16,25). Per capita consumption in 1993 was estimated to be 2,576 cigarettes, the lowest since 1941 (4,16). U.S. consumption of cigarettes in 1993 was estimated at 489 billion cigarettes, a 19-percent decrease from the 600.4 billion smoked in 1984 (15).

Other forms of tobacco are used in lesser quantities and, with the exception of snuff, are declining in use. ERS consumption data show that consumption of snuff (a type of smokeless tobacco) increased by 11 percent between 1984 and 1993 (16). For some consumers, snuff may be a substitute for smoking and reflect the restrictions placed on smoking in public places (4). Consumption of other tobacco products, however, has declined over the 10-year period: large cigars and cigarillos, by 43 percent; smoking tobacco, by 54 percent; and chewing tobacco, by 34 percent (16).

Characteristics of Tobacco Users

Current Smokers

Prevalence of tobacco use is usually expressed in terms of current use. The National Household Survey on Drug Abuse (NHSDA) conducted by the Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services defines smoking as any use in the past month. The National Health Interview Survey (NHIS), Health Promotion and Disease Prevention (HPDP) supplement conducted by the National Center for Health Statistics, U.S. Department of Health and Human Services defines

Figure 1. Annual per capita consumption¹ of cigarettes, 1960-93



¹For those 18 years and over, including Armed Forces abroad.

Note: For 1992, figures are subject to revision; for 1993, figures are estimated.

Source: U.S. Department of Agriculture, Economic Research Service, Tobacco Situation and Outlook Report.

current smokers as those who have smoked over 100 cigarettes in their lifetime and answer that they currently smoke.

According to the 1992 NHSDA, 26 percent of the population age 12 and over or about 54 million people smoked tobacco in the past month (table 1, p. 30). This was a decline from 1988 when 29 percent of the population or 57 million people identified themselves as current smokers. Young adults, ages 18 to 34, had the highest rates of smoking: 34 percent of the 26- to 34-year-olds and 32 percent of the 18- to 24-year-olds smoked in the past month (19).

The higher the educational level, the less likely that a person was currently smoking cigarettes (19). Educational status has replaced gender as the demographic variable most likely to predict differences in smoking prevalence (3). Those who were unemployed were more likely to be current smokers (43 percent) than any other demographic segment of

the population (19). Hispanics were less likely to be current smokers (22 percent) than non-Hispanics (27 percent). People living in nonmetro areas were more likely than those in metro areas to have smoked cigarettes in the past month. Decreases in the proportion of current smokers since 1988 were evident except among people in the Western region and those with some college education.

Most States have set the minimum age to purchase cigarettes at 18 years. Nevertheless, more than 3,000 American teenagers start smoking each day (25), and according to the 1989 Teenage Attitudes and Practices Survey, 57.5 percent of those 12 to 17 years old report buying their own cigarettes (22). Female adolescents are as likely as males to smoke cigarettes (1,7,11). According to McDermott et al. (11), cigarette smoking may be the most practical and visible means females have to rebel.

An annual survey of high school seniors, college students, and young adults—called Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth—is conducted by the University of Michigan Institute for Social Research and sponsored by the National Institute on Drug Abuse (NIDA), U.S. Department of Health and Human Services. Findings from the 1990 survey determined that 29 percent of high school seniors in 1990 smoked in the past month (7,8). There is little indication that the overall percentage of high school seniors who smoke is decreasing. During the period 1980-90, 29 to 30 percent of these students each year reported smoking in the past month (fig. 2). Of seniors surveyed, 19 percent were daily smokers in 1990, 64 percent had smoked cigarettes at one time, and 41 percent had tried smoking before the ninth grade (7).

Another analysis of teenage cigarette consumption, using National Health and Nutrition Survey II data, determined that cigarette smoking was negatively related to both family income and parental education (30). However, because parental smoking behavior was also negatively related to these variables, children of poorly educated adults may be more likely to smoke because their parents were more likely to smoke—not because of parents' socioeconomic status.

According to the 1990 Monitoring the Future survey, 25 percent of seniors planning to attend college for 4 years were current smokers, compared with 38 percent of those with no such plans (7). Students already attending college were less likely to be current smokers; 22 percent reported smoking in the past month. This was a decline from 1980 when 26 percent reported smoking (8). Of college students, 12 percent were daily smokers, compared with 27 percent of high school graduates of similar age who were not in college full time. College women were more likely to smoke than college men (8).

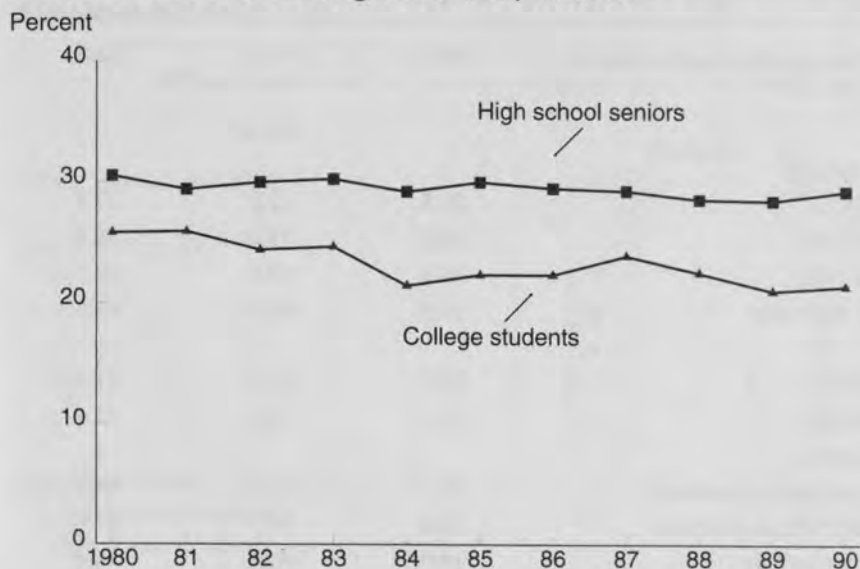
Table 1. Use of cigarettes in the past month by demographic characteristics, 1988 and 1992

Demographic characteristic	1988	1992
	<i>Percent</i>	
Total, 12 years and older	28.8	26.2
Age (years)		
12 - 17	11.8	9.6
18 - 25	35.2	31.9
26 - 34	37.1	33.7
35 and older	27.3	25.3
Sex		
Male	32.2	27.9
Female	25.6	24.6
Education		
Less than high school	38.4	35.1
High school graduate	33.9	30.2
Some college	27.3	28.5
College graduate	17.4	16.3
Race and ethnicity		
Non-Hispanic White	28.7	26.9
Non-Hispanic Black	30.3	26.7
Hispanic	26.3	21.5
Population density		
Large metro	28.2	25.0
Small metro	28.1	26.6
Nonmetro	30.8	27.8
Region		
Northeast	29.3	24.8
North Central	29.6	25.5
South	31.1	28.5
West	22.9	24.4
Current employment		
Full time	33.0	29.7
Part time	29.1	27.3
Unemployed	50.5	43.3
Other ¹	24.8	22.4

¹Retired, disabled, homemaker, student, or other.

Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, National Household Survey on Drug Abuse.

Figure 2. Prevalence of smoking cigarettes in last 30 days, high school seniors and college students, 1980-90



Source: Johnston, L.D., O'Malley, P.M., and Bachman, J.G., 1991, *Drug Use Among American High School Seniors, College Students and Young Adults, 1975-1990, Volume I High School Seniors and Volume II College Students and Young Adults*, The University of Michigan Institute for Social Research and U.S. Department of Health and Human Services, National Institute on Drug Abuse.

Educational status has replaced gender as the demographic variable most likely to predict differences in smoking prevalence.

Former Smokers

Although it is sometimes difficult for an individual to be certain he or she has permanently stopped smoking, survey data may be used to ascertain trends in "quitting" for various segments of the population. According to findings from the 1991 NHIS-HPDP, an estimated 89.8 million adults (49.8 percent of all adults) in the United States have smoked at one time (21). About 43.5 million people (48.5 percent of those who have ever smoked) had quit smoking. A higher proportion of men (51.6 percent) than women (44.7 percent) had stopped smoking. Quit ratios (the proportion of former smokers among those who have ever smoked) increased as education increased from 41.8 percent for those with less than 12 years to 66.1 percent for those with 16 or more years of education (21). A separate analysis of the 1990 NHIS-HPDP found highest rates of former smokers among those employed in executive or professional occupations (12).

Table 2, p. 32, shows the percentages of former smokers among those who have ever smoked have increased since 1970 (25). Highest quit ratios were reported by people 45 years and older, Whites, and college graduates. Young people exhibit a relatively low quit ratio. Among high school seniors surveyed in 1990, only 18 percent of those who ever smoked regularly had stopped smoking (7).

Smokeless Tobacco Users

The NHSDA estimated that 7.5 million Americans or 3.7 percent of the population were current (in past month) users of smokeless tobacco in 1992 (table 3, p. 32). People with the highest rates of smokeless tobacco use were White, living in the South, and men (19). In fact, 90 percent of smokeless tobacco users were men (19,20). Although the prevalence of cigarette smoking among the U.S. population 12 years and older declined somewhat between 1988 and 1992, use of smokeless tobacco has remained fairly constant (19).

The 1991 NHIS-HPDP also collected data concerning snuff and chewing-tobacco use. Current users of smokeless tobacco are defined in the NHIS-HPDP as those who reported snuff or chewing-tobacco use at least 20 times and who reported using snuff or chewing tobacco at the time of the interview. In 1991, men (5.6 percent) were much more likely to use smokeless tobacco than women (0.6 percent) (table 4) (20). For men, prevalence was highest among those who lived in rural areas (11.2 percent), who lived in the South (8.4 percent), who were 18 to 24 years old (8.2 percent), were American Indian/Alaskan Native (8.1 percent), or who had less than 12 years of schooling (7.7 percent). For women, prevalence was highest among those who were American Indian/Alaskan Native (2.5 percent), Black (2.3 percent), age 75 and older (2.3 percent), or had less than 12 years of schooling (2.0 percent).

Prices and Expenditures

Prices for tobacco and smoking products, as measured by the Consumer Price Index (CPI), have risen faster than prices for all items, increasing at an average annual rate of 9 percent since 1980 (fig. 3, p. 34) (27). In August 1993, cigarette manufacturers reduced prices of premium-branded cigarettes by about one-fourth. Prices for discount brands (about 36 percent of the domestic market) were already relatively low, selling for about half what premium brands formerly cost (16,17).

Federal and State taxes on tobacco continue to rise. The Federal excise tax increased by 4 cents a pack in 1993 after having increased by 4 cents in 1991. In 1993, the Federal excise tax on cigarettes was 24 cents per pack and the weighted average State tax was 25.9 cents (16). Since 1968, every State and D.C. has taxed cigarettes (25). As a percentage of the total cost of cigarettes, however, taxes have declined (23).

Table 2. The quit ratio: Percentage of people who have smoked at one time but no longer do so, by demographic characteristics, selected years

Demographic characteristics	1970	1980	1988
	<i>Percent</i>		
Age (years)			
20 - 24	20.8	22.2	27.5
25 - 44	29.8	33.0	36.8
45 - 64	36.1	40.9	52.8
65 and older	56.9	61.0	69.8
Sex			
Male	37.9	41.5	47.3
Female	29.2	34.0	43.4
Education			
Less than high school	38.1	39.4	46.3
High school graduate	33.6	36.5	41.6
Some college	34.9	40.6	46.4
College graduate	48.2	48.7	60.6
Race			
White	36.7	40.4	48.0
Black	23.2	27.7	32.8

Source: U.S. Department of Commerce, Bureau of the Census, 1992, *Statistical Abstract of the United States, 1992*, [112th ed.]

Table 3. Use of cigarettes and smokeless tobacco in the U.S. population 12 years and older: Past month, past year, and lifetime, 1988 and 1992

Period	Substance			
	Cigarettes		Smokeless tobacco	
	1988	1992	1988	1992
	<i>Percent</i>			
Past month	28.8	26.2	3.6	3.7
Past year	34.2	31.2	5.0	5.0
Lifetime	75.1	71.0	14.9	14.7

Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, *National Household Survey on Drug Abuse*.

Table 4. Current use¹ of smokeless tobacco, 1991 National Health Interview Survey—Health Promotion and Disease Prevention Supplement, 1991

Characteristic	Men	Women
	<i>Percent</i>	
Total, 18 years and older	5.6	0.6
Age group (years)		
18 - 24	8.2	0.2
25 - 44	5.8	.1
45 - 64	3.6	.6
65 - 74	5.4	1.3
≥75	5.8	2.3
Education (years)		
Less than high school	7.7	2.0
High school graduate	6.6	.3
Some college	5.2	.1
College graduate	2.5	0
Race		
White	6.2	.3
Black	2.2	2.3
Asian/Pacific Islander	1.4	0
American Indian/Alaskan Native ²	8.1	2.5
Ethnic origin		
Hispanic	1.5	.2
Non-Hispanic	5.9	.6
Type of area		
Urban	4.0	.3
Rural	11.2	1.5
Region		
Northeast	2.7	0
Midwest	5.7	.2
South	8.4	1.4
West	4.0	.2
Poverty status ³		
At/above poverty level	5.4	.3
Below poverty level	6.6	1.9
Unknown	6.4	1.5

¹Snuff or chewing-tobacco use at least 20 times and use at time of interview.

²Estimates should be interpreted with caution because of the small number (n=339) of cases.

³Poverty statistics are based on definitions developed by the Social Security Administration that include a set of income thresholds that vary by family size and composition.

Source: U.S. Department of Health and Human Services, Public Health Service, 1993, *Use of smokeless tobacco among adults—United States, 1991*, *Morbidity Mortality Weekly Report* 42(14):263-266.

It has been shown (10,13,25,30) that the demand for cigarettes is somewhat responsive to price changes. Additional taxes on cigarettes could benefit State and Federal treasuries while reducing demand. The larger the increase in price as the result of taxes, the larger the decrease in consumption (13); a relatively small increase in price through taxing would be ineffective in substantially reducing cigarette consumption (30). Price changes have a stronger effect on smoking prevalence than on consumption by smokers. Teenagers are particularly responsive to changes in cigarette prices; therefore, excise tax increases may help impede the onset of teenage smoking (25).

Since 1980, when the average annual expenditure for tobacco products and smoking supplies was \$534 (in 1992 dollars), spending on tobacco by households has declined by 49 percent (fig. 4, p. 34) (26). Data from the 1992 Consumer Expenditure Survey show that the mean annual expenditure for tobacco products and smoking supplies was \$275 (table 5, p. 36).

For 1992, tobacco products and smoking supplies accounted for about 1 percent of total expenditures for all households (26). Households with incomes between \$30,000 and \$70,000 spent more on tobacco than did those with lower or higher incomes. However, the percentage of total expenditures spent on tobacco was higher in lower income households than in those earning higher incomes. Households reporting the highest expenditures for tobacco were headed by someone working as an operator, fabricator, or laborer; in construction or mechanics; in a service occupation; 35 to 54 years old; were husband-and-wife households with children; and located in a rural area. Some of these same households spent the highest percentage of total annual expenditures on tobacco: Those headed by someone employed as an operator, fabricator, or laborer; in construction or mechanics; in a service

occupation; and those located in a rural area. Also, households that rented their homes or had a reference person under 25 years old spent a higher proportion of total expenditures on tobacco than did other households.

Passive Smoking

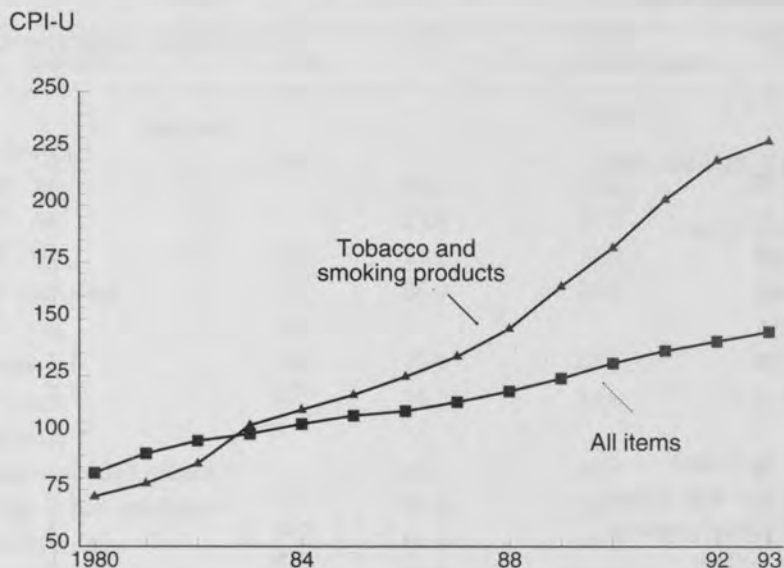
Passive smoking has been defined as the exposure of nonsmokers to tobacco combustion products in the indoor environment and is also known as ETS—environmental tobacco smoke. Passive smoking is the third leading preventable cause of death in the United States, after smoking and alcohol (9). Secondhand smoke kills 53,000 nonsmokers every year (9); the nonsmoker's risk for lung cancer resulting from chronic ETS exposure is 100 times greater than the risk associated with 20 years' exposure to asbestos in a building containing asbestos (14). ETS is a major cause of indoor air pollution.

Secondhand smoke is designated as either mainstream (drawn through a cigarette, filtered by a smoker's lungs, and exhaled into the air) or sidestream (circulates directly in air from smoldering end of cigarettes between puffs; also, all ETS from cigars and pipes) (9). About 80 percent of ETS is sidestream (31). The Environmental Protection Agency has classified sidestream smoke a Class A (cancer causing, very hazardous) carcinogen (9). The Surgeon General has determined that ETS is a cause of lung cancer (31).

Exposure to ETS contributes to decreased pulmonary function, decreased heart function, eye and throat irritation, respiratory illness, lung and other cancers, and aggravated allergies (9,31).

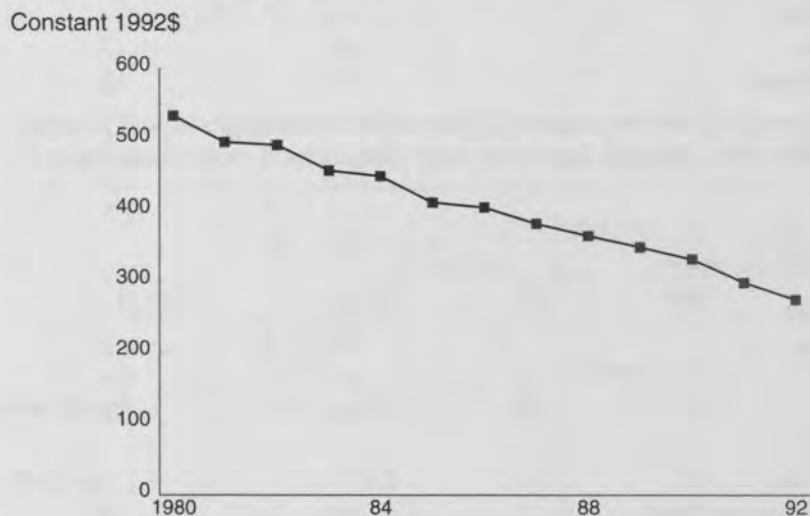
Regulations restricting smoking in public places have had a significant negative effect on cigarette demand (30). These regulations limit opportunities to smoke, thereby ensuring nonsmokers protection against passive smoking (see box).

Figure 3. Changes in consumer prices for tobacco and smoking products



Source: U.S. Department of Labor, Bureau of Labor Statistics, CPI Detailed Report.

Figure 4. Average annual household expenditure for tobacco products and smoking supplies, 1980-92



Source: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey.

Legislation and Regulations Related to Smoking and Health (5,16,25,29)

- 1965** - Congress passes the Federal Cigarette Labeling and Advertising Act, requiring health warning on all cigarette packages: "Caution: Cigarette Smoking May be Hazardous to Your Health."
- 1970** - Congress enacts the Public Health Cigarette Smoking Act of 1969 (passed in 1970 and effective January 2, 1971), banning cigarette advertising on television and radio and requiring a stronger health warning on cigarette packages: "Warning: The Surgeon General Has Determined that Cigarette Smoking is Dangerous to Your Health."
- 1973** - Civil Aeronautics Board requires no-smoking sections on all commercial airline flights.
 - Arizona becomes the first State to restrict smoking in a number of public places and the first to do so explicitly because environmental tobacco smoke exposure is a public health hazard.
- 1974** - Connecticut passes the first State law to apply smoking restrictions to restaurants.
- 1975** - Minnesota passes landmark comprehensive statewide clean indoor air law.
- 1976** - Interstate Commerce Commission prohibits smoking in railroad dining cars and requires separate smoking and nonsmoking passenger cars.
- 1978** - Utah enacts the first State law banning tobacco advertisements on any billboard, streetcar sign, streetcar, or bus.
- 1982** - Congress temporarily doubles the Federal excise tax on cigarettes to 16 cents per pack, to be in effect January 1, 1983, to October 1, 1985. First increase since 1951.
- 1984** - Congress enacts the Comprehensive Smoking Education Act, requiring rotational health warnings on cigarette packages and advertisements.
- 1986** - Congress enacts the Comprehensive Smokeless Tobacco Health Education Act of 1986. Requires rotation of three health warnings on smokeless tobacco packages and advertisements and bans smokeless tobacco advertising on broadcast media.
 - Congress extends permanently the 16 cents per pack Federal excise tax on cigarettes.
 - Congress imposes a Federal excise tax on smokeless tobacco products.
- 1988** - Congressionally mandated smoking ban takes effect on domestic airline flights scheduled for 2 hours or less.
- 1990** - Interstate Commerce Commission bans smoking on all regularly scheduled interstate buses in the United States.
 - Congressionally mandated smoking ban extended to flights of 6 hours or less, effectively eliminating smoking on flights within the 48 contiguous States.
- 1991** - Congress increases Federal excise tax on a pack of cigarettes to 20 cents.
- 1993** - Congress increases Federal excise tax on a pack of cigarettes to 24 cents.
- 1994** - U.S. Department of Defense bans smoking in all military workplaces, effective April 8, 1994.

**Since 1980, ...
spending on tobacco
by households has
declined by 49 percent.**

Table 5. Average annual expenditures for tobacco products and smoking supplies, by demographic characteristics, 1992

Characteristic	Mean dollars	Percentage of total annual expenditures
All households	\$275	0.9
Income		
<\$10,000	209	1.7
\$10,000 - \$19,999	263	1.4
\$20,000 - \$29,999	297	1.1
\$30,000 - \$39,999	322	1.0
\$40,000 - \$49,999	322	.8
\$50,000 - \$69,999	342	.7
\$70,000 and over	253	.4
Composition of household		
Husband and wife only	253	.8
Husband, wife with children	322	.8
Single parent (at least one child under age 18)	245	1.2
Housing tenure		
Homeowner	274	.8
Renter	277	1.3
Type of area		
Urban	268	.9
Rural	319	1.3
Head of household		
Age (years)		
<25	220	1.3
25 - 34	278	.9
35 - 44	326	.9
45 - 54	376	1.0
55 - 64	310	1.0
65 - 74	205	.9
75 and over	77	.4
Race		
White and other	282	.9
Black	219	1.1
Occupation		
Self employed	270	.7
Managers and professionals	216	.5
Technical, sales, and clerical	287	.9
Service	320	1.4
Construction/mechanics	415	1.4
Operators, fabricators, laborers	419	1.5
Retired	154	.8

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1992 Consumer Expenditure Survey, unpublished data.

Also, restrictive regulations have reinforced the concept that smoking in public is a health hazard for nonsmokers and that involuntarily exposing others is socially unacceptable.

Restrictions on smoking in the workplace are especially important because employed people spend more time at work than in other public places (28). Therefore, a smoke-free work environment can provide more protection to nonsmokers than any other smoking restrictions or regulations. There are potential health benefits for smokers as well. A ban on smoking at a person's usual workstation reduces workday cigarette consumption, compared with non-workday consumption. With no ban on smoking at the usual workstation, an Australian study found no difference between workday and non-workday cigarette consumption (28).

Health Costs Related to Smoking

One in five deaths in the United States—435,000 annually—are caused by smoking (3). Over 80 percent of all U.S. lung cancer deaths and 30 percent of all deaths from cancer can be attributed to smoking (12,25). Also, over 20 percent of cardiovascular deaths result from smoking, accounting for an even greater number of deaths than those from lung and other cancers caused by smoking (25).

Smokers have higher death rates than never-smokers at all ages over 35 years (6). Health costs for smokers are higher than those for never-smokers at every age. Over a 95-year lifetime, male smokers average \$8,638 in additional lifetime medical expenditures or 32 percent more than never-smokers, and female smokers average an additional \$10,119 or 24 percent more (1990 dollars) (table 6). Heavy smokers (more than 25 cigarettes per day) average 47 percent higher expenditures than never-smokers if male and 41 percent higher if female (6).

Manning et al. estimated societal costs related to smoking (but not including the value of lives lost to passive smoking and to fires caused by smoking) and concluded that nonsmokers subsidize smokers' medical care and group life insurance, but smokers subsidize nonsmokers' pensions and nursing home payments—because nonsmokers can expect to live longer (10). For smokers, loss in life expectancy was estimated at 28 minutes per pack of cigarettes. Thus, people who smoke a pack a day shorten their lives by 7 days for every year they continue smoking at this rate.

Implications

Recent trends in smoking prevalence indicate men are more likely than women to quit smoking, as are Whites compared with Blacks, and college graduates compared with those with less education. Cigarette smoking is becoming a behavior observed most frequently among the poorly educated and socioeconomically disadvantaged segments of society (3).

Data from the NHIS were used by the Office on Smoking and Health in the U.S. Department of Health and Human Services to project smoking rates among adults age 20 and over for the year 2000 (table 7) (3). Although smoking rates are projected to decline for most segments of our society, the percentage of female smokers will decrease more slowly than the percentage of male smokers, and the prevalence rate among people with a high school education or less is projected to decline only slightly.

Each year, a million young people take up smoking and commit the health care system to \$8.2 billion in extra medical costs over their lifetimes (6). Both regulatory actions and increased excise taxes have been shown to be effective in curtailing prevalence and consumption of cigarettes, especially among teenagers.

Because teenagers experience little difficulty in buying cigarettes—even though in most States it is illegal until age 18, more active surveillance of retailers and substantial penalties for noncompliance

Table 7. Projected smoking rates among adults 20 years and older for the year 2000

Characteristics	Smoking prevalence rate
Overall	21.7
Women	22.7
Men	19.9
Black	24.5
White	21.5
College graduate	5.0
Some college	16.0
High school graduate	30.0
High school dropout	31.0

Source: Fiore, M.C., 1992, *Trends in cigarette smoking in the United States, the epidemiology of tobacco use, The Medical Clinics of North America* 76(2):289-303.

would be needed to achieve more effective control (22). One of the national health objectives for the year 2000 sets a nationwide goal to enact and enforce State laws prohibiting the sale and distribution of tobacco products to youth less than 19 years old (22,24). Another objective targets special population groups for the reduction of smoking prevalence including Blacks, Hispanics, American Indians/Alaskan Natives, and Southeast Asian men (21,24).

The greatest impact from interventions could be achieved by focusing on adolescents and those less educated (2,3). School systems throughout the Nation would need to integrate programs into their health curricula that educate students about the hazards of smoking and the addictive properties of tobacco.

Table 6. Lifetime medical expenditures¹ by sex and smoking status

Sex	Neversmokers	All smokers	Heavy smokers
Males			
Lifetime expenditures	\$27,276	\$35,914	\$40,187
Excess ² expenditures	\$0	\$8,638	\$12,911
Ratio to neversmokers	1.00	1.32	1.47
Females			
Lifetime expenditures	\$42,783	\$52,902	\$60,347
Excess ² expenditures	\$0	\$10,119	\$17,564
Ratio to neversmokers	1.00	1.24	1.41

¹Values are in 1990 dollars.

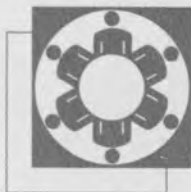
²Medical expenditures incurred by smokers in addition to those incurred by neversmokers.

Source: Hodgson, T.A., 1992, *Cigarette smoking and lifetime medical expenditures, The Milbank Quarterly* 70(1):81-125.

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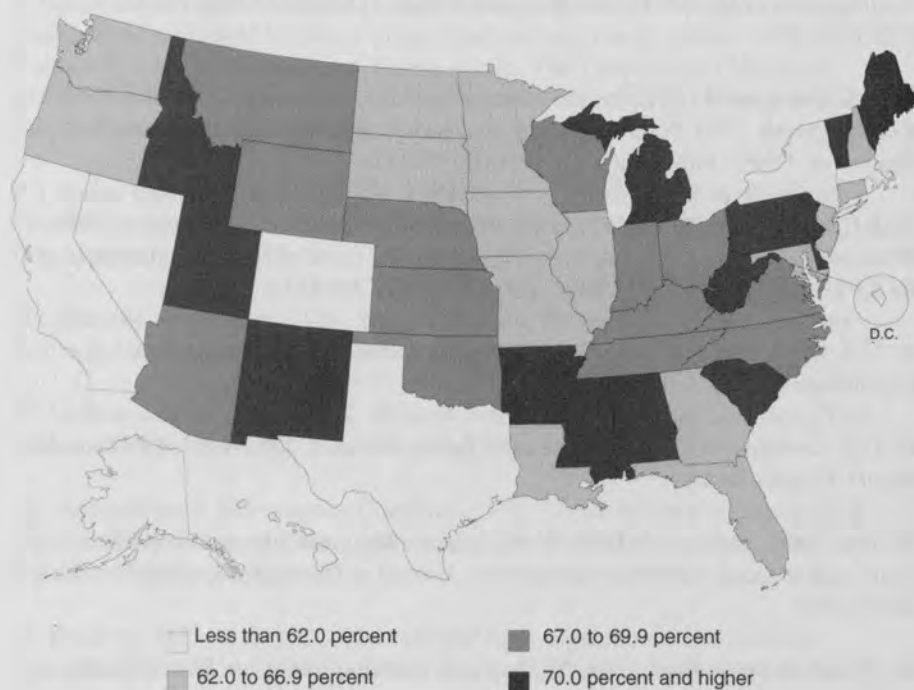
Housing Vacancies and Home Ownership

The monthly Current Population Survey/Housing Vacancy Survey, conducted by the Bureau of the Census, U.S. Department of Commerce, provides estimates and characteristics of occupied and vacant housing units. A housing unit (house, apartment, group of rooms, or single room occupied or intended for occupancy as separate living quarters) is classified as occupied if a person or group of people is living in it at the time of the interview or if the occupants are only temporarily absent; otherwise the housing unit is classified as vacant.

Housing Vacancies

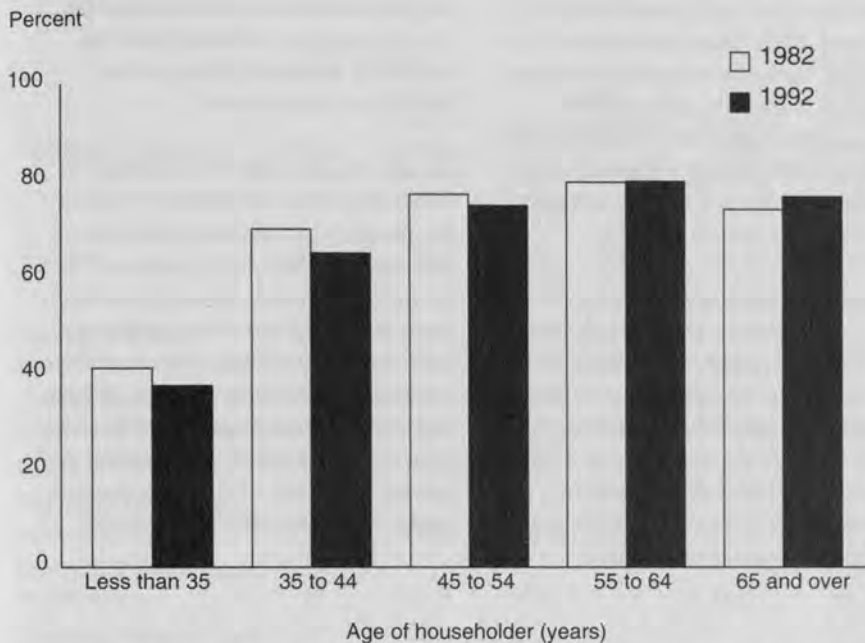
In 1992, national vacancy rates were 7.4 percent for rental housing and 1.5 percent for homeowner housing. The homeowner vacancy rate was lower than the 1991 rate of 1.7 percent, while the rental vacancy rate did not change. The vacancy rate was highest in central cities (8.3 percent for rental housing and 1.8 percent for homeowner housing) and lowest in suburbs (6.4 percent for rental housing and 1.4 percent for homeowner housing). By region of the country, the South had the highest rental vacancy rate (8.2 percent) and the Midwest had the lowest (6.7 percent). The homeowner vacancy rate was highest in the West (1.9 percent) and lowest in the Midwest (1.2 percent).

Figure 1. Home ownership rates, by State: 1992



Source: Callis, R.R., 1993, *Housing Vacancies and Homeownership Annual Statistics: 1992*, Current Housing Reports, Series H111/92-A, U.S. Department of Commerce, Bureau of the Census.

Figure 2. U.S. home ownership rates, by age of householder: 1982 and 1992



Source: Callis, R.R., 1993, *Housing Vacancies and Homeownership Annual Statistics: 1992*, Current Housing Reports, Series H111/92-A, U.S. Department of Commerce, Bureau of the Census.

The size of housing units influenced vacancy rates in 1992. Units with three rooms or less had a rental vacancy rate of 11.0 percent, compared with 3.1 percent for units with six rooms or more. Similarly, the homeowner housing vacancy rate for units with three rooms or less was 8.4 percent, compared with 1.1 percent for units with six rooms or more.

The rental vacancy rate in 1992 for single-family homes was 3.9 percent, compared with 9.3 percent for apartments in buildings with two or more units. For homeowner housing, single-family homes had a vacancy rate of 1.3 percent, compared with 5.9 percent for units in multiunit structures.

States with highest rental vacancy rates in 1992 were Utah (14.6 percent), Maine (10.7 percent), and South Carolina (10.0 percent). States with highest home-

owner vacancy rates in 1992 were Florida (3.0 percent), Hawaii (2.5 percent), and Maine and Nevada (2.3 percent each). The rate for the District of Columbia was 3.3 percent.

In 1992, 89.0 percent of all U.S. housing units were occupied units, 8.2 percent were year-round vacant units, and 2.8 percent were seasonal vacant units. These figures were higher outside metropolitan areas and lower inside metropolitan areas. The South had the highest year-round vacancy rate (10.0 percent) and the Midwest had the lowest (6.7 percent).

In 1992, most vacant for-rent units were located in structures of five housing units or more and were vacant for less than 4 months. In contrast, most vacant for-sale units were located in structures of one unit and were vacant 4 months or more.

Home Ownership

The home ownership rate is computed by dividing the number of owner-occupied households by the total number of households. The U.S. home ownership rate in 1992 was 64.1 percent and has remained at about 64 percent since 1985. Among regions of the country, the highest rate was in the Midwest (67.2 percent), and the lowest rate was in the West (59.3 percent). The home ownership rate was highest outside metropolitan areas (72.8 percent) and lowest in central cities (49.3 percent).

Delaware had the highest home ownership rate in 1992 (73.8 percent), and New York had the lowest (53.3 percent). The rate for the District of Columbia was 35.0 percent. Six States in the South had home ownership rates of 70 percent or higher, whereas five States in the West had home ownership rates below 62 percent (fig. 1).

Home ownership rates were highest among those householders age 55-64 (80.2 percent). Householders under age 35 had the lowest home ownership rate (37.6 percent). During the period 1982 to 1992, the home ownership rate declined for householders age 54 and younger and increased for householders age 65 and older (fig. 2).

Among household types, married-couple families had the highest home ownership rate in 1992 (78.7 percent). The rate was 53.6 percent for male householder families, 43.6 percent for female householder families, 43.5 percent for single males, and 54.1 percent for single females. Between 1982 and 1992, the home ownership rate increased for married-couple families, single males, and single females but decreased for both male and female householder families.

Source: Callis, R.R., 1993, *Housing Vacancies and Homeownership Annual Statistics: 1992*, Current Housing Reports, Series H111/92-A, U.S. Department of Commerce, Bureau of the Census.

Job-Related Education and Training

During the 1970's and 1980's, the educational attainment of U.S. workers increased markedly. The proportion of workers ages 25 to 64 who had completed 4 or more years of college rose from 14 percent in 1970 to 27 percent in 1991. In contrast, the proportion who had completed fewer than 4 years of high school decreased from 36 percent to 13 percent during the same period. Also, there was a significant increase in the percentage of high school graduates who enrolled directly in college after high school, from 47 percent in 1973 to 60 percent in 1990. Continued public support for the U.S. education system is reflected in increased expenditures (in constant dollars). Between 1974 and 1990, per pupil expenditures increased 43 percent in public elementary and secondary schools and 13 percent in public institutions of higher learning.

Recent improvements in educational measures have not been accompanied by higher real income for many workers, however. Median annual income for full-time workers (in 1991 dollars) declined between 1972 and 1990 for men at every education level and for women with fewer than 4 years of high school (table 1). During this period, real income increased slightly for women with 1 or more years of college.

The Bureau of Labor Statistics Occupational Outlook Program compares the number of people completing education and training programs with the number of job openings caused by employment growth and replacement needs in related occupations. Nearly 2.9 million awards and degrees were granted during

the 1989-90 academic year. This compares with an estimated 4.4 million job openings, on average, for new entrants to the labor force each year between 1990 and 2005. Thus, the number of individuals currently completing training programs is about 65 percent of the average annual number of job openings anticipated through the 1990's. It should be noted that many jobs do not require postsecondary school training.

For some occupations, such as engineers, optometrists, dental hygienists and assistants, emergency medical technicians, landscape architects, and aircraft mechanics, there is a close match between the needs of the workplace over the next decade and the current number of awards and degrees in related education and training

programs. On the other hand, many occupations had substantially more individuals trained during 1989-90 than the projected annual average number of job openings, including physical scientists, social scientists, writers, artists, and entertainers.

In contrast, there are many fields for which the output of institutional training programs is much less than the projected number of job openings. These occupations include management support; marketing and sales; administrative support, including clerical; service operators; agriculture, forestry, fishing, and related workers; precision production, craft, and repair; and machine operators. For many of these occupations, again, formal training is not needed.

Table 1. Median annual income¹ for full-time workers,² by education level and sex, selected years

Gender and year	Fewer than 4 years of high school	4 years of high school	1-3 years of college	4 or more years of college
Men				
1972	\$26,462	\$33,961	\$38,117	\$48,299
1975	25,630	32,812	36,318	44,704
1980	24,380	32,202	34,583	42,754
1985	22,657	30,174	34,104	45,454
1990	20,306	27,629	32,892	44,310
Women				
1972	15,117	18,911	21,530	28,971
1975	14,548	18,844	22,112	27,523
1980	15,103	19,082	21,393	27,063
1985	14,443	19,583	22,756	29,246
1990	14,338	19,093	23,161	31,668

¹In 1991 dollars.

²Workers age 25 years and older, working year round.

Source: Eck, A., 1993. *Job-related education and training: Their impact on earnings*, *Monthly Labor Review* 116(10):21-38.

Table 2. Selected information on employment, education, training, and earnings for full-time workers, by major occupation groups, 1983 and 1991

Occupation group	Employment ¹		Percent college graduates ²		Percent using training ²	Percent change in real earnings, 1983-91
	Share, 1991	Percent change in share, 1983-91	1983	1991		
Total	100.0	0.0	24.1	26.4	70.9	0.9
Managerial and professional specialty	25.6	12.5	62.2	61.4	90.6	5.3
Technical, sales, and administrative support	19.5	-1.3	17.7	20.9	71.8	2.9
Service	9.4	3.4	6.9	7.1	51.7	.3
Precision production, craft, and repair	20.4	-9.2	5.6	6.4	74.4	-5.9
Operators, fabricators, and laborers	22.5	-9.9	2.9	3.8	45.0	-6.3
Farming, forestry, and fishing	2.6	-7.3	9.2	9.1	34.9	-1.5

¹1983 and 1991 Current Population Survey annual averages.

²January 1983 and January 1991 Current Population Survey data.

Source: Eck, A., 1993, *Job-related education and training: Their impact on earnings*, *Monthly Labor Review* 116(10):21-38.

In the January 1991 Current Population Survey, respondents were asked whether they needed specific skills or training to get their current jobs and whether or not they took training to improve their skills in their current jobs.¹ Analyses were done to assess the impact of the various sources of training. Two-thirds of respondents indicated that specific skills or training were needed to obtain their current job or that they had taken training to improve their skills. This group also had higher earnings than those at the same education level who said they did not need specific skills or training to get their jobs.

In 1991, 57 percent of workers reported needing training to qualify for their current job, and 41 percent reported having taken training to improve their job skills since obtaining their job. Between 1983 and 1991, the number of workers who had taken training to improve their job skills increased 39 percent (compared with a 19-percent growth in employment). The incidence of training to improve skills increased with educational attainment. For all education levels, earnings are higher in jobs that generally require qualifying training or that require training to improve skills.

Median earnings of full-time workers increase with increases in educational attainment—about \$80 weekly for each

higher level of attainment. For all education levels, workers who reported formal company training as the source of their training to improve skills had the highest earnings.

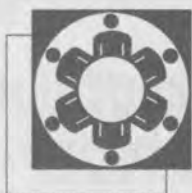
Between 1983 and 1991, managerial and professional specialty occupations experienced the highest growth rate and the greatest increase in employment share. This group also had the highest proportion of college graduates, the highest proportion that took training, and the greatest increase in real earnings since 1983 (table 2). In contrast, operators, fabricators, and laborers ranked lowest both in growth rate and increase in employment share between the 2 years. This group also had the lowest proportion of college graduates, the second lowest proportion that took training, and the greatest drop in real earnings between 1983 and 1991.

Education alone does not guarantee high income. Many workers with college degrees indicate that they are employed in jobs that do not require special skills or education and that their earnings are lower than the earnings of college graduates in jobs that require specialized education or skills. Workers with less education who are employed in jobs that require special skills or training earn as much as college graduates who do not require training to get their jobs.

Demands of the job market are changing. High-paying production jobs that require unskilled workers to repeat simple tasks have been greatly reduced in number, and more jobs now require reading, math, and communication skills. To have a major impact on earnings, the educational and skill requirements of jobs, as well as the education and skills of workers, must be increased.

Source: Eck, A., 1993, *Job-related education and training: Their impact on earnings*, *Monthly Labor Review* 116(10):21-38.

¹For further information, see *Family Economics Review* 6(2):17-19.



Recent Legislation Affecting Families

Public Law 103-173 (enacted December 2, 1993)—the International Parental Kidnapping Crime Act of 1993 amends Title 18, U.S. Code, making it a Federal offense for any person (including a non-custodial parent) to kidnap a child under the age of 16 and retain him or her in a foreign jurisdiction.

Public Law 103-182 (enacted December 8, 1993)—implements the North American Free Trade Agreement by changing existing Federal laws governing trade and other matters to correspond with the terms of the agreement. The agreement, which went into effect January 1, 1994, will eliminate trade and investment barriers between the United States and Mexico over the next 15 years. Also, the agreement makes changes to the United States-Canada free trade accord that has been in effect since January 1, 1989. Eventually all tariffs on goods produced and sold in North America will be eliminated.

Public Law 103-183 (enacted December 14, 1993)—amends the Public Health Service Act to revise and extend the program of grants relating to preventive health measures with respect to breast and cervical cancer, tuberculosis, and sexually transmitted diseases. The law attempts to reduce injuries by curbing interpersonal violence within families and among acquaintances and reauthorizes trauma care centers. The law also revises and extends programs of the National Center for Health Statistics.

Public Law 103-185 (enacted December 14, 1993)—provides increased flexibility to States in carrying out the Low-Income Home Energy Assistance Program. A State may now take into consideration the amount of the heating

and cooling component of a utility allowance received by a tenant of federally assisted housing.

Public Law 103-204 (enacted December 17, 1993)—the Resolution Trust Corporation Completion Act appropriates \$18.3 billion for the Resolution Trust Corporation (RTC), the agency responsible for completing the resolution of failed thrift institutions. Under the law, the RTC must maintain a comprehensive business plan for the rest of its existence, establish a Division of Minorities and Women, and establish client responsiveness units in each regional office. When selling nonresidential property, the RTC must give preference to transactions that will provide shelter to homeless persons.

Public Law 103-209 (enacted December 20, 1993)—the National Child Protection Act of 1993 establishes procedures for national criminal background checks for child-care providers. Each State will furnish information on arrests and convictions for child abuse crimes to the national criminal history record system, maintained by the Federal Bureau of Investigation (FBI). Thereafter, the Federal Government will encourage each State to adopt legislation requiring background checks for child-care providers through the record system maintained by the FBI.

Public Law 103-210 (enacted December 20, 1993)—amends Title 38, U.S. Code, to provide additional authority for the Secretary of Veterans Affairs to provide health care for veterans of the Persian Gulf War for conditions that resulted from exposure to a toxic substance or environmental hazard.

Data Sources

National Child Care Survey (NCCS)

Sponsoring agency: U.S. Department of Health and Human Services, Administration for Children, Youth, and Families, and the National Association for the Education of Young Children

Population covered: Parents with children under age 13.

Sample size: 4,392 parents of 7,575 children

Geographic distribution: Nationwide

Years data collected: Once, between October 1989 and May 1990

Method of data collection: Random-digit-dial telephone survey

Future surveys planned: None

Major variables: Type of care (day care center; nursery school; kindergarten; regular school; relative care; lessons, clubs, sports, or similar activities), location, sponsorship, cost, payment schedule, factors considered in choosing an arrangement, satisfaction. Also, the education and training of child care providers, size of group and staff, distance and availability of different types of arrangements. Data about the parents included the employment history and schedule of both parents, whether they received employer-sponsored children's benefits, family income, and other demographic characteristics.

Sources for further information and data: A public data tape is available from:

Sociometrics Corporation
170 State Street, Suite 260
Los Altos, CA 94022
(1-800) 846-3475

For other information contact:

The Urban Institute
2100 M Street, NW
Washington, DC 20037
(202) 857-8617

For published reports contact:

University Press of America
4720 Boston Way
Lanham, MD 20706
(1-800) 462-6420

Monitoring the Future: A Continuing Study of the Life-styles and Values of Youth

Sponsoring agency: The Survey Research Center, Institute for Social Research, University of Michigan and U.S. Department of Health and Human Services, National Institute on Drug Abuse.

Population covered: From 1975 to present, high school seniors; from 1980 to present, college students; from 1991 to present, 8th and 10th grade students.

Sample size: 16,000 to 17,000 seniors from 125 to 135 public and private high schools; 15,000 to 16,000 students in the 10th grade from 125 to 130 schools; and 18,000 to 19,000 students in the 8th grade from 160 schools. Two matched panels of 1,200 seniors each are selected from each graduating class and followed longitudinally.

Geographic distribution: Coterminous United States

Years data collected: Annually since 1975; panels are surveyed on alternate years.

Method of data collection: Self-administered questionnaires in high school classroom setting; those selected for inclusion in the follow-up panels are sent questionnaires by certified mail.

Future surveys planned: Annually

Major variables: Prevalence and trends in drug use; grade of first use; trends in use at lower grade levels; intensity of drug use; attitudes, beliefs, and perceptions related drug to use; other delinquent behaviors; victimization experiences; and demographic variables. For young adults in the longitudinal study, data about college, military service, employment, marriage, and parenthood were collected.

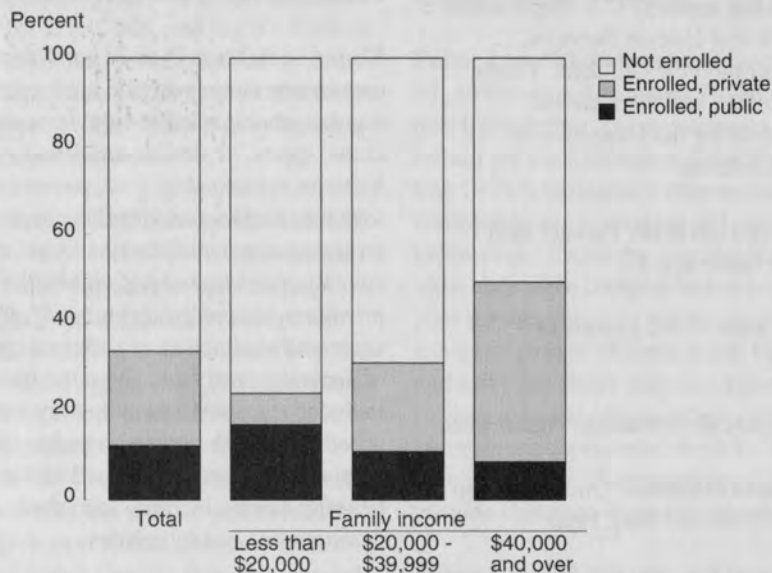
Publications: The Survey Research Center publishes descriptive results annually. Trend data on drug use and related attitudes are available from the National Institute on Drug Abuse. Results from the longitudinal follow-ups are published in papers and monographs.

Source for further information and data: Data tapes are available from:

Inter-University Consortium for
Political and Social Research
Institute of Survey Research
University of Michigan
Ann Arbor, MI 48106-1248
(313) 763-5010

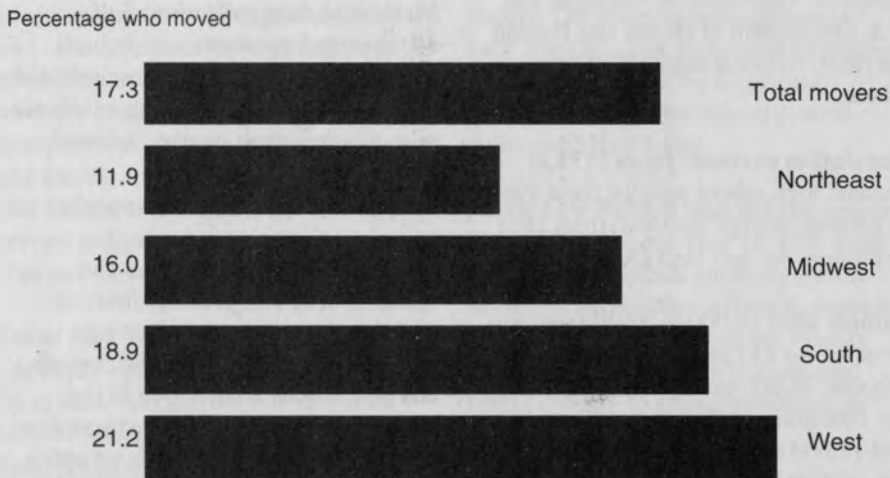
Charts From Federal Data Sources

Enrollment of children 3 and 4 years old in nursery school, by family income: October 1992



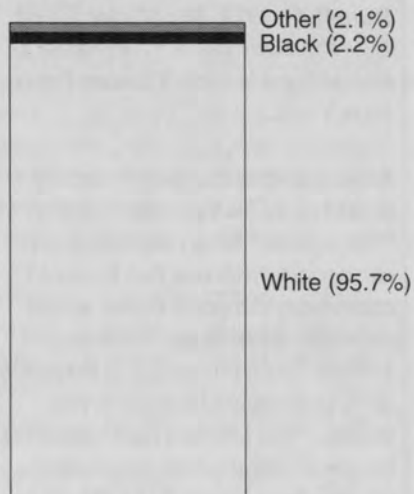
Source: Kominski, R. and Adams, A., 1993, *School Enrollment—Social and Economic Characteristics of Students: October 1992, Current Population Reports, Population Characteristics, P20-474*, U.S. Department of Commerce, Bureau of the Census.

Geographic mobility rates, by regions of the United States: 1992

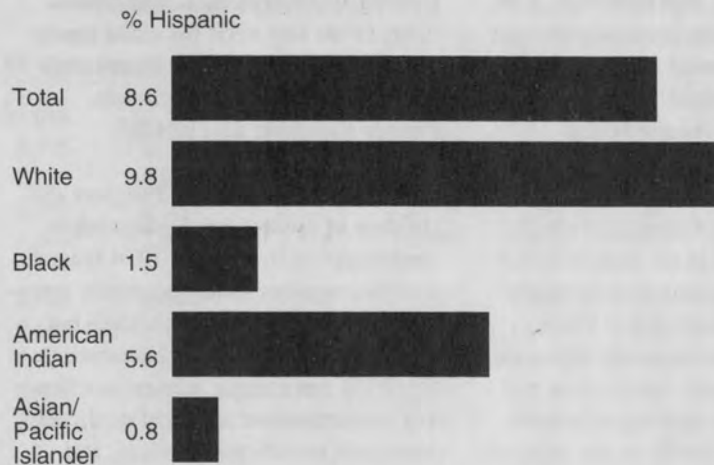


Source: Hansen, K.A., 1993, *Geographical Mobility: March 1991 to March 1992, Current Population Reports, Population Characteristics, P20-473*, U.S. Department of Commerce, Bureau of the Census.

**U.S. Hispanic population,
by race: March 1991**

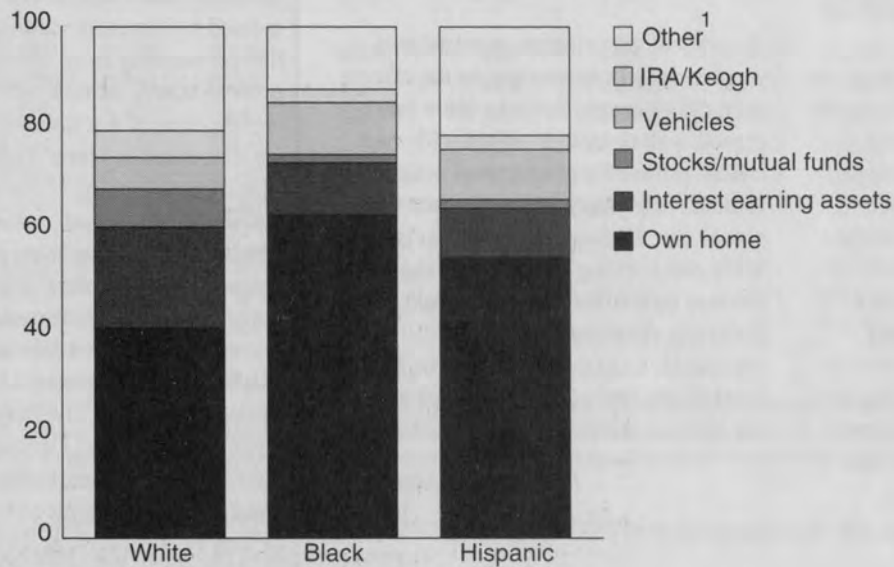


U.S. population, by Hispanic origin: March 1991



Source: delPinal, J.H., 1992, *Exploring Alternative Race—Ethnic Comparison Groups in Current Population Surveys*, Current Population Reports, Special Studies, Series P23-182, U.S. Department of Commerce, Bureau of the Census.

Distribution of net worth, selected asset types, by race and Hispanic origin of householder: 1991



¹Other assets less unsecured liabilities.

Source: Eller, T.J., 1994, *Household Wealth and Asset Ownership: 1991*, Current Population Reports, Household Economic Studies, P70-34, U.S. Department of Commerce, Bureau of the Census.

Journal Abstracts and Book Summary

The following abstracts are reprinted verbatim as they appear in the cited source.

Abdel-Ghany, M. and Schwenk, F.N. 1993. Differences in consumption patterns of single-parent and two-parent families in the United States. *Journal of Family and Economic Issues* 14(4):299-316.

Different patterns of single-parent and two-parent families in six major expenditure categories are examined using the 1989 Consumer Expenditure Survey. Comparisons are made of the influence of permanent income, family size, region, race, gender, age, and education of the head of the family on the expenditure categories. The results show that with the exception of expenditures on shelter, the two groups differ significantly in their consumption patterns.

Dwyer, J.W., Lee, G.R., and Jankowski, T.B. 1994. Reciprocity, elder satisfaction, and caregiver stress and burden: The exchange of aid in the family caregiving relationship. *Journal of Marriage and the Family* 56(1):35-43.

In this exploratory research we propose a theoretical model and estimate a system of equations in which an impaired mother's reciprocation of assistance provided by a caregiving daughter simultaneously influences the satisfaction of the elder and the stress and burden of the caregiver. The results indicate that, consistent with some previous research, reciprocity does not directly or indirectly affect the satisfaction of older women. Conversely, reciprocity does significantly reduce the stress and burden experienced by caregiving daughters.

Dziuba-Leatherman, J. and Dolan, E.M. 1994. The need for child representation reform: Policy issues and new roles for family specialists. *Family Relations* 43(1):81-85.

Victims of child abuse and neglect and children of divorce need independent representation in court. A 1974 federal mandate requires states to provide representatives for all eligible children but many do not. A review of literature identified three major barriers to effective representation: a lack of qualified personnel, insufficient funding, and time and compensation constraints. This paper considers possible solutions to these problems and identifies ways for family specialists to become involved in the reform process.

Folkes, V.S., Martin, I.M., and Gupta, K. 1993. When to say when: Effects of supply on usage. *Journal of Consumer Research* 20(3):467-477.

A series of experiments manipulated product supply to investigate the effects on product usage. Subjects were presented with containers filled with various amounts of a product and asked to indicate how much of the product they would use. Consumers tended to conserve diminishing resources so that the amount they indicated they would use generally decreased as the supply decreased. Container size and the fill level of the container did not influence the amount used.

Russell, C. 1993. *The Master Trend: How the Baby Boom Generation Is Remaking America*. Plenum Press, New York.

Russell asserts that baby boomers, described as the first generation of "free agents," have changed American society from one that focuses on community demands to one whose members relate to the world as individuals. From this premise, Russell's book is developed around seven themes. "The Master Trend" describes boomers' influence on perceptions of America's future. "The First Free Agents" develops a profile of boomers as individualists and includes the influence of free agency on cooperation, the next generation, and American and world societies. "Free Agents and the Personalized Economy" characterizes the culture of an economy focused on the individual and the key resource needed—information. The paradox created by boomers valuing family life yet wanting to be free of obligations to others, as well as the rise and significance of matriarchal families are discussed in "Free Agents and the Matriarchal Family." "Free Agents and the Ethics of Individualism" continues the theme from a different perspective—boomers' self-interests are at the core of their moral values. Russell believes that this individualism has created a generation that is more accepting of diversity. "Free Agents and the 21st Century" highlights the economic, health, lifestyle, and spiritual issues faced by boomers as they near retirement. In the final section, "Free Agents, for Better or Worse," Russell concludes that boomers' self-interests must be redirected toward the public interest.

Poverty Thresholds

Weighted average poverty thresholds¹ for nonfarm families of specified size, 1965–93

Calendar year	Unrelated individuals			Families of 2 persons or more							Annual average CPI, all items (1982–84 = 100)
				2 persons			3 persons	4 persons	5 persons	6 persons	
		Householder	Householder								
	All ages	Under age 65	Age 65 or older	All ages	under age 65	age 65 or older					
1965	\$1,582	\$1,626	\$1,512	\$2,048	\$2,114	\$1,906	\$2,514	\$3,223	\$3,797	\$4,264	31.5
1966	1,635	1,685	1,565	2,115	2,185	1,970	2,600	3,335	3,930	4,410	32.5
1967	1,675	1,722	1,600	2,168	2,238	2,017	2,661	3,410	4,019	4,516	33.4
1968	1,748	1,797	1,667	2,262	2,333	2,102	2,774	3,553	4,188	4,706	34.8
1969	1,840	1,893	1,757	2,383	2,458	2,215	2,924	3,743	4,415	4,958	36.7
1970	1,954	2,010	1,861	2,525	2,604	2,348	3,099	3,968	4,680	5,260	38.8
1971	2,040	2,098	1,940	2,633	2,716	2,448	3,229	4,137	4,880	5,489	40.5
1972	2,109	2,168	2,005	2,724	2,808	2,530	3,339	4,275	5,044	5,673	41.8
1973	2,247	2,307	2,130	2,895	2,984	2,688	3,548	4,540	5,358	6,028	44.4
1974	2,495	2,562	2,364	3,211	3,312	2,982	3,936	5,038	5,950	6,699	49.3
1975	2,724	2,797	2,581	3,506	3,617	3,257	4,293	5,500	6,499	7,316	53.8
1976	2,884	2,959	2,730	3,711	3,826	3,445	4,540	5,815	6,876	7,760	56.9
1977	3,075	3,152	2,906	3,951	4,072	3,666	4,833	6,191	7,320	8,261	60.6
1978	3,311	3,392	3,127	4,249	4,383	3,944	5,201	6,662	7,880	8,891	65.2
1979	3,689	3,778	3,479	4,725	4,878	4,390	5,784	7,412	8,775	9,914	72.6
1980	4,190	4,290	3,949	5,363	5,537	4,983	6,565	8,414	9,966	11,269	82.4
1981	4,620	4,729	4,359	5,917	6,111	5,498	7,250	9,287	11,007	12,449	90.9
1982	4,901	5,019	4,626	6,281	6,487	5,836	7,693	9,862	11,684	13,207	96.5
1983	5,061	5,180	4,775	6,483	6,697	6,023	7,938	10,178	12,049	13,630	99.6
1984	5,278	5,400	4,979	6,762	6,983	6,282	8,277	10,609	12,566	14,207	103.9
1985	5,469	5,593	5,156	6,998	7,231	6,503	8,573	10,989	13,007	14,696	107.6
1986	5,572	5,701	5,255	7,138	7,372	6,630	8,737	11,203	13,259	14,986	109.6
1987	5,778	5,909	5,447	7,397	7,641	6,872	9,056	11,611	13,737	15,509	113.6
1988	6,024	6,155	5,674	7,704	7,958	7,158	9,435	12,092	14,305	16,149	118.3
1989	6,311	6,451	5,947	8,076	8,343	7,501	9,885	12,675	14,990	16,921	124.0
1990	6,652	6,800	6,268	8,512	8,794	7,906	10,419	13,360	15,800	17,835	130.7
1991	6,932	7,086	6,532	8,867	9,164	8,238	10,857	13,921	16,457	18,590	136.2
1992	7,141	7,299	6,729	9,132	9,441	8,489	11,187	14,343	16,951	19,146	140.3
1993 ²	7,357	7,517	6,930	9,410	9,726	8,741	11,521	14,764	17,459	19,710	144.5

¹The **poverty thresholds** are used by the Bureau of the Census to prepare its statistical estimates of the number of individuals and families in poverty. The **poverty guidelines** are a simplified version of these poverty thresholds and are issued by the Department of Health and Human Services for administrative purposes. The poverty guidelines are used to determine whether a person or family is financially eligible for assistance or services under a particular Federal program.

²Preliminary data: 1992 weighted average poverty levels raised by 3.0 percent to correspond with the 1993 increase from the 1992 Consumer Price Index (CPI-U) for all urban consumers.

Cost of Food at Home

Cost of food at home estimated for food plans at four cost levels, May 1994, U.S. average¹

Sex-age group	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
FAMILIES								
Family of 2: ²								
20 - 50 years	\$51.70	\$65.20	\$80.30	\$99.80	\$224.00	\$282.50	\$347.60	\$432.30
51 years and over	48.80	62.60	77.10	92.30	211.90	271.40	334.10	400.00
Family of 4:								
Couple, 20 - 50 years and children—								
1 - 2 and 3 - 5 years	75.40	94.20	114.90	141.20	326.90	407.90	497.50	611.80
6 - 8 and 9 - 11 years	86.40	110.70	138.20	166.30	374.40	479.60	598.30	720.60
INDIVIDUALS³								
Child:								
1 - 2 years	13.70	16.70	19.50	23.70	59.40	72.40	84.50	102.50
3 - 5 years	14.70	18.20	22.40	26.80	63.90	78.70	97.00	116.30
6 - 8 years	18.00	24.10	30.10	35.00	78.00	104.30	130.30	151.70
9 - 11 years	21.40	27.30	35.10	40.60	92.80	118.50	152.00	175.90
Male:								
12 - 14 years	22.20	31.00	38.60	45.30	96.40	134.10	167.10	196.20
15 - 19 years	23.10	31.90	39.70	46.00	100.00	138.40	172.00	199.40
20 - 50 years	24.70	31.60	39.40	47.70	107.10	137.00	170.60	206.90
51 years and over	22.40	30.00	36.90	44.20	97.10	130.10	159.90	191.70
Female:								
12 - 19 years	22.40	26.70	32.40	39.20	96.90	115.70	140.40	169.70
20 - 50 years	22.30	27.70	33.60	43.00	96.50	119.80	145.40	186.10
51 years and over	22.00	26.90	33.20	39.70	95.50	116.60	143.80	171.90

¹ Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in *Family Economics Review* 1984(1). Estimates for the other plans were computed from quantities of foods published in *Family Economics Review* 1983(2). The costs of the food plans are estimated by updating prices paid by households surveyed in 1977-78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics, *CPI Detailed Report*, table 4, to estimate the costs for the food plans.

² Ten percent added for family size adjustment. See footnote 3.

³ The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person—add 20 percent; 2-person—add 10 percent; 3-person—add 5 percent; 5- or 6-person—subtract 5 percent; 7- or more-person—subtract 10 percent.

Consumer Prices

Consumer Price Index for all urban consumers [1982-84 = 100]

Group	Unadjusted indexes			
	May 1994	March 1994	April 1994	May 1993
All items.....	147.5	147.2	147.4	144.2
Food.....	143.5	143.2	143.4	141.1
Food at home.....	143.0	142.8	143.0	140.7
Food away from home.....	145.3	144.8	145.1	142.9
Housing.....	144.1	144.1	143.9	140.5
Shelter.....	159.6	159.8	159.6	154.9
Renters' costs ¹	168.5	170.1	169.1	164.2
Homeowners' costs ¹	164.5	164.1	164.2	159.4
Household insurance ¹	150.8	150.0	150.1	145.5
Maintenance and repairs.....	131.0	129.3	130.2	131.6
Maintenance and repair services.....	135.0	131.8	133.3	135.4
Maintenance and repair commodities.....	125.7	126.1	126.3	126.6
Fuel and other utilities.....	122.2	122.4	121.6	120.5
Fuel oil and other household fuel commodities.....	88.7	92.5	90.2	91.3
Gas (piped) and electricity.....	118.0	118.1	116.9	117.3
Household furnishings and operation.....	121.1	120.6	120.6	119.1
Housefurnishings.....	111.4	110.5	110.7	109.3
Housekeeping supplies.....	131.9	132.3	131.5	131.3
Housekeeping services.....	138.1	137.8	137.9	135.1
Apparel and upkeep.....	135.6	136.1	136.4	135.0
Apparel commodities.....	132.8	133.4	133.7	132.5
Men's and boys' apparel.....	127.4	125.6	126.9	128.5
Women's and girls' apparel.....	135.1	137.2	137.4	134.4
Infants' and toddlers' apparel.....	125.2	125.8	128.0	127.7
Footwear.....	128.5	127.0	128.0	127.8
Apparel services.....	155.0	154.2	154.8	150.9
Transportation.....	132.8	132.2	132.6	130.2
Private transportation.....	130.0	128.6	129.2	127.5
New vehicles.....	137.2	136.8	136.9	132.4
Used cars.....	137.9	133.6	135.3	131.5
Motor fuel.....	96.0	93.3	94.8	99.7
Automobile maintenance and repair.....	149.7	149.0	149.4	145.4
Other private transportation.....	160.8	160.2	160.4	156.1
Other private transportation commodities.....	103.4	103.5	103.4	103.5
Other private transportation services.....	174.0	173.3	173.6	168.2
Public transportation.....	169.9	178.5	176.5	165.5
Medical care.....	209.7	208.3	209.2	200.5
Medical care commodities.....	200.1	199.1	199.7	194.2
Medical care services.....	212.0	210.4	211.4	202.0
Professional medical services.....	191.7	190.3	191.4	184.4
Entertainment.....	149.9	149.6	149.7	145.0
Entertainment commodities.....	136.2	135.2	135.7	133.0
Entertainment services.....	166.2	166.6	166.5	159.6
Other goods and services.....	197.1	195.5	196.4	193.2
Personal care.....	144.4	143.0	144.2	141.0
Toilet goods and personal care appliances.....	141.7	139.7	141.4	138.7
Personal care services.....	147.2	146.6	147.1	143.4
Personal and educational expenses.....	220.4	219.1	220.1	207.7
School books and supplies.....	204.1	204.0	204.0	196.1
Personal and educational services.....	221.9	220.4	221.6	208.8

¹Indexes on a December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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