Effect of Child and Family Poverty on Child Health in the United States

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ABSTRACT. *The Issue.* **Poverty has been described as an economic state that does not allow for the provision of basic family and child needs, such as adequate food, clothing, and housing. However, the debate about the effects of poverty on the growth, development, and health of children is as much involved with the culture or general context of poverty as it is with the economics of poverty. This culture of poverty is in part mediated through environmental deprivations, such as failing schools, gangs, drugs, violence, and struggling families. Heclo[1] described this sociocultural and environmental dimension of poverty as "a condition of misery, hopelessness, and dependency." The subject of this article is to review the literature on the effects of poverty on US children as mediated through economic, ecologic, and family influences.** *Pediatrics* **2003;112:707–711;** ***poverty, child health, community-based advocacy, CATCH.***

ABBREVIATIONS. TANF, Temporary Assistance for Needy Families; AFDC, Aid to Families With Dependent Children; CATCH, Community Access to Child Health.

DEMOGRAPHICS OF FAMILY AND CHILD POVERTY IN THE UNITED STATES

The "child poverty rate" is the proportion of families with children who have incomes below the nationally established poverty line. In 2000, the poverty level for a family of 3 was an annual income of $13 874; for a family of 4 (2 children), the level was $17 603.[2] Using a comparable metric of 50% of the country's median income for defining the poverty level, 22% of children in the United States are poor, the highest child poverty rate among all developed countries. The countries with the next highest child poverty rates are Canada and Australia at 14%. In the United Kingdom and Israel, 10% of children are considered poor, whereas in Italy and Germany, only 7% of children live in poverty. Norway and Belgium have very low rates of child poverty at only 4% to 5%.[3]

With the use of the US census data and definition of poverty, 16.2% of people who were younger than 18 years in the United States in 2000 were considered poor, down from a high of 20.8% in 1995. Children 0 to 5 years of age have higher rates of poverty; in 1995, approximately 22% were poor. In other words, >1 in 5 children in the United States grow up poor and are frequently deprived of a supportive environment to grow and develop. Approximately 10% of children who are poor are extremely poor (<50% of poverty level), and approximately 6 million children who are extremely poor are younger than 6. Among children who are poor and younger than 6 years, the largest racial group is white children (1.9 million) followed by 1.4 million non-Hispanic blacks and 1.6 million Hispanics. Poverty is strongly correlated with the educational level of parent(s), which further contributes to the culture of deprivation that children who are poor experience.

The proportion of families that live in poverty varies greatly across the United States, from 30% in Louisiana to 7% in New Hampshire. States with high family poverty rates include some of the largest states in the country, such as California and New York, with 23% and 24%, respectively, of families living in poverty. The poverty rate for families that are headed by parents with less than a high school education is much higher (62%) than for families that are headed by parents with "some college" (15.2%). The rate is only 2.8% if a parent has a college degree. Parental education is the single best predictor of family income.

Significant changes have occurred in the rates of child poverty over the past 25 years in the United States, with child poverty ranging from a low of 14.4% in 1973 to a high of 20.8% in 1995. However, during this same period, the proportion of elderly who are poor has steadily decreased from 25% in the mid-1960s to 10% in 2000. Approximately 15% of children who are poor are chronically poor—that is, consistently poor over the previous 5 years. Chronic poverty is highly correlated with a confluence of the above factors, with the strongest factor being race: 6% of white children who are poor were poor for 5 years compared with 29% of black children who were poor for 10 years or more.[4]

In 1965, the poverty line was set at 3 times the cost of the basic food basket for a family by size or number of children. At that time, this amount was adequate for a family to afford food, housing, clothes, and other necessities. However, since the 1960s, the cost of housing, transportation, and other nonfood essential items have increased much faster than the cost of food. Other items not initially considered essential, such as child care, have become necessities and represent a significant portion of families' expenses, families who are poor in particular. As a result, 77% of households in the United States spend >50% of income on rent and 24% are overcrowded. There is a >200 000-unit shortage of affordable rental apartments, and only 1 in 9 Temporary Assistance

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for Needy Families (TANF)/Aid to Families With Dependent Children (AFDC) families receives public housing assistance. A family that lives at today's poverty level has only approximately 60% of the buying power of a family that lived at the poverty level in the 1960s. A family that is poor today is nearly twice as poor as in 1965.

Over the past several decades, the number, severity, and chronicity of poverty among families with children who are poor has increased, despite numerous public income-transfer programs, such as TANF/AFDC, food stamps, Medicaid, and the Special Supplemental Nutrition Program for Women, Infants, and Children. During this same period, public income-transfer programs for the elderly, primarily Social Security and Medicare, have successfully reduced the proportion of elderly who are poor by 60%—from 25% in the mid-1960s to 10% in 2000. These programs did this by providing enough support to raise an elderly person out of poverty and by adjusting the annual amount of aid to keep pace with inflation and increases in the cost of living.

WHY ARE SO MANY US CHILDREN POOR?

Child poverty increased in the past 35 years primarily because of the following national trends:

- Decreased real value of wages earned by lower educated workers
- Income-transfer programs (welfare/TANF) support has decreased in real value
- Increased numbers of single-parent, female-headed families

Those with 12 or fewer years of schooling have experienced the greatest decrease in the value of their earning power. Even workers with postsecondary schooling have had problems earning more than a poverty-level income in recent years.[5] The technology and information economy expansion has excluded people with low educational backgrounds. In addition, there has been an increasing downward pressure on manual labor wages from international competition as a result of the low wages paid in other countries and free trade zones (eg, North American Free Trade Agreement). This results in a decrease in the real value of the minimum wage. The number of "working poor"—those who are under the poverty line despite working full time—has increased by 35% from 1990 to 1998.[6]

Of money allocated to government income support programs (TANF/AFDC, Medicaid, Medicare, and Social Security), 20% goes to families that are poor and 80% goes to the elderly. The TANF/AFDC benefits vary widely across the United States. A family of 3 in 1996 would have received $120 in Mississippi in monthly support and $923 in Alaska. The median real value (adjusted for inflation) of the TANF/AFDC benefit fell 51% between 1970 and 1995. Thus, families that are dependent on TANF/AFDC are twice as poor as they were in 1970. When you combine the median state TANF/AFDC support level with that of food stamps, families reach an income of approximately 65% of the poverty level as it was initially established.

Trends in family structure and other social, environmental, and emotional issues that affect families also are contributing factors to family poverty. It is estimated that almost one third of children who are poor are poor because they live in a family headed by a single mother.[7] Sixty-five percent of children who are poor versus 25% of children who are not poor live in households that do not include their biological father.[8] Fifty-five percent of children who live in single-parent, mother-only families are poor compared with only 10% of children in 2-parent families. The loss of the wage-earning power of the absent parent, usually the father, compounded by the frequent failure of fathers to comply with child support judgments drive the majority of single-parent, female-headed families into poverty, regardless of whether the mother works.

Problems such as substance abuse or mental illness also work to drive families into poverty and worsen the deprivation experienced by children. According to a recent survey, 20% of female heads of households on TANF/AFDC (welfare) were abused in the previous year compared with only 1.5% of a comparable group of women who were not poor and not on welfare.[9] Twenty-eight percent of female parents who have low income are to some degree mentally impaired, primarily because of clinical depression rates 2 to 4 times that found in the general female population.[10,11] Poverty results from a complex interaction between the downward pressure on lower income wages, economic pressures, and social and emotional problems of families.

IMPACT OF POVERTY ON CHILD HEALTH

Confluence of Risks

Millions of children who are poor are particularly vulnerable to the effects of poverty because of the environment in which they live. Approximately half of families that are poor live in neighborhoods with concentrated poverty, such as neighborhoods in core inner cities.[12] "Many of our poorest families are struggling to survive in communities that often exacerbate rather than mitigate the disadvantages of poverty—communities where a lack of public resources, economic investment, and political power sometimes serve to separate and isolate families from mainstream society."[6] Inner-city communities more often lack opportunities for parents to build social networks, leading to increased stress and increased child abuse.[9] Families are isolated further by the violence and crime that are concentrated in neighborhoods of families with low income. The lack of safe places for children to congregate and play is a reality faced by many families that are poor throughout the United States. Kids who live in neighborhoods that are poor are less likely to participate in sports or after-school activities. Economic, social, health, and other factors converge in these settings to produce more severe, persistent poverty and deprivation that has a detrimental impact on the intellectual, emotional, and physical development of children (Fig 1).[12]

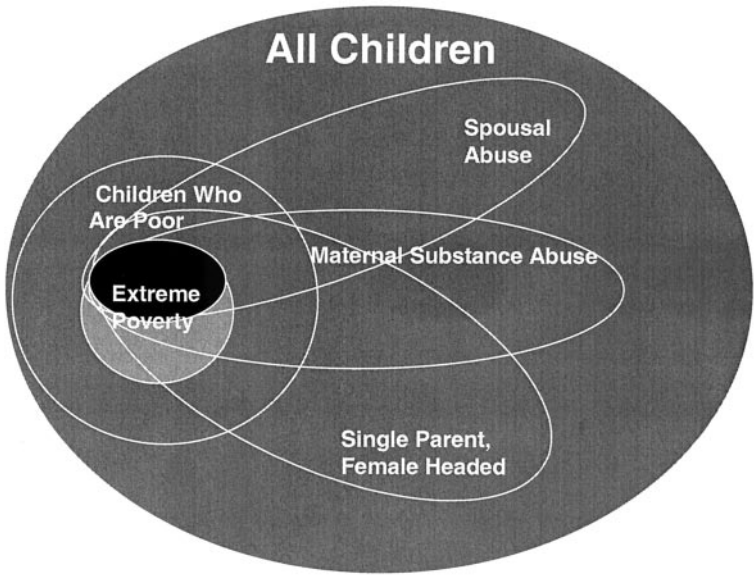

Fig 1. The ecology of child health and development.

Cognitive and Educational Effect of Poverty on Children

Many studies have compared children who are poor with children who are not poor on a number of aspects of development, intellect, and educational attainment. In Table 1, Brooks-Gunn and Duncan summarize the literature on the effects of poverty on children's development and educational performance.[13] The National Longitudinal Study on Youth and the Infant Health and Development Project have followed children who are poor and children who are not poor over years and provide a rich data source to examine the impact of poverty on cognitive ability and educational attainment while controlling for a number of confounding factors such as family characteristics. Scores on IQ tests seem to vary with the level of poverty, whereas educational attainment seems to be related to poverty early in a child's life and duration of family poverty. Poverty during a child's early years has a more powerful influence on grade completed than poverty during school years. The high school dropout rate for central cities is 14% compared with 7% for adolescents in the suburbs. In areas with high poverty, graduation rates approach only 50% of those who started high school. It is estimated that an increase in mean family income of $10 000 during the child's first 5 years of life results in almost 1 full year more of schooling.

IQ scores among children who live in poor families are 6 to 13 points lower Controlled for maternal age, marital status, education, and ethnicity, there is a "dose effect" as families move from very poor to poor to not poor. Various studies show similar effects on IQ across age groups of children, although in adolescence, the effect is dampened.

Impact of Poverty on Physical Health of Children

Numerous studies have demonstrated that poverty is associated with higher rates of poor health and chronic health conditions in children (Table 2). National surveys find that compared with parents who are not poor, parents who are poor more often rate their children's health as "fair" or "poor" and are less likely to rate their children's health as "excellent."[14] Children who are poor have higher rates of hospital admissions, disability days, and death rates. They have inadequate access to preventive, curative, and emergency care and are affected more frequently by poor nutrition, single-parent families, dysfunctional families, and poor housing.

Exposure to lead hazards is an example of how poverty directly impacts child health. Four to 5 million children, the vast majority of whom are poor, reside in older homes with lead levels exceeding the accepted threshold for safety. More than 1.5 million of these children (younger than 6 years) have elevated blood lead levels.[15]

Pregnancy Outcomes Associated With Poverty

Pregnancy outcomes are an important predictor of ultimate child and adult health outcomes, and poverty is strongly associated with low birth weight and other poor pregnancy outcomes (Table 3). Black women are twice as likely to have low birth weight

TABLE 1. Cognitive and Educational Effects of Poverty on Children

Indicator	Children Who Are Poor	Children Who Are Not Poor	Ratio Poor/ Nonpoor
Developmental delay	5.0%	3.8%	1.3
Learning disability	8.3%	6.1%	1.4
Grade retention	28.8%	14.1%	2.0
Ever expelled or suspended	12.1%	6.1%	2.0
High school dropout rate in 1994	21.0%	9.6%	2.2
Not employed or in school at age 24	15.9%	8.3%	1.9

TABLE 2. Impact of Poverty on the Physical Health of Children*

Indicator	Children Who Are Poor	Children Who Are Not Poor	Ratio Poor/ Nonpoor
In fair or poor health	11.7%	6.5%	1.8
In excellent health	37.4%	55.2%	0.7
Days spent in bed in past year	5.3	3.8	1.4
Number of short-stay hospital episodes/ year/1000 children	81.3	41.2	2.0
Deaths during 0 to 14 years of age	1.2%	0.8%	1.5
% with blood lead levels ≥10 μ/dL†	16.3%	4.7%	3.5

* Adapted from Dawson.[14]
† Third National Health and Nutrition Examination Survey (NHANES III), 1988–1991

TABLE 3. Pregnancy and Birth Outcomes

Indicator	Children Who Are Poor	Children Who Are Not Poor	Ratio Poor/ Nonpoor
Low birth weight rate (<2500 g)	10/1000 births	6/1000 births	1.7
Infant mortality	14/1000 births	8/1000 births	1.7
Female adolescent has newborn out of wedlock	11.0%	3.6%	2.1

newborns as white women, regardless of socioeconomic status. Although rates are much higher among the poor, after adjusting for other confounding factors, white women who are poor have an 80% greater chance of having a low birth weight newborn than white women who are not poor. White women who are poor for 5 to 10 years are 3 times more likely to deliver a low birth weight newborn than white women who are not poor.[16] Adolescents who are poor are 3 times as likely to have a newborn out of wedlock than adolescents who are not poor. These births are associated with increased rates of low birth weight and perinatal and postnatal complications.

HOW CAN PEDIATRICIANS ADVOCATE FOR CHILDREN WHO ARE POOR?

Pediatricians can advocate for children and families who are poor at multiple levels (Fig 2). Advocacy can occur within office practices, 1 family at a time, or outside offices through involvement in community issues or at higher levels of government.

Among the most effective approaches to advocacy for the poor, in which all pediatricians can participate, is to receive and welcome families that are poor, both those on Medicaid and those without insurance, into their practices. Pediatricians that do not practice in areas that are poor (and relatively few do) can reach out to families that are poor by accepting Medicaid and participating in the Vaccine for Children program, which supplies free vaccines to physicians for children who are poor. They can offer formal sliding-scale payment programs for families that lack insurance or whose insurance does not cover preventive or other needed care.

Pediatricians also can support families that are poor in their practices by connecting them with the services for which they qualify or need in the community. Pediatricians can use materials supplied by community programs to screen their patients and families for social and economic risk factors, adding this screening approach to their regular child development and family social screening. In this way, the pediatrician can assess whether the child or family qualifies or could benefit from the social and income support programs available to poor families. Pediatricians should be knowledgeable about Head Start; Special Supplemental Nutrition Program for Women, Infants, and Children; food stamps; housing support services; and other income and social support programs in their communities and know how to refer families to them. Links to local health departments also can provide access to resources that are

Fig 2. The advocacy pyramid.

relevant to the care of families with multiple needs. Community support services should be viewed by pediatricians as important interventions for families that can have a positive effect on child health and development. Just as with any "specialty" referral, pediatricians should request feedback on the progress of their patients from the agencies to which they are referred. Pediatricians also should follow-up with families to assess the impact of the intervention and the need for additional services.

Community-Based Advocacy

Pediatricians also can advocate for children who are poor outside their offices. Many pediatricians have started their community advocacy careers by applying for American Academy of Pediatrics Community Access to Child Health (CATCH) Planning Funds grants. The planning process and funds that the CATCH Program provides can enable pediatricians to identify and address important issues for children's communities that are poor and underserved. CATCH grants can be used to plan new clinics in communities that are poor, where access to high-quality pediatric care often is lacking. CATCH Program resources also can be used to perform community assets and needs assessments and to identify important political and social issues that affect children.

The use of CATCH funds by pediatricians to advocate and plan for lead abatement in housing in communities with low income is a good example of the capacity of the CATCH Program to effect social and environmental changes. Improved intellectual development among children who are exposed to lead supports this expensive intervention. In almost all US communities, public health departments have local lead poisoning prevention programs, and pediatricians can be very effective advocates in how these programs use their funds to intervene for children.

Another example is the role that pediatricians can play in mitigating the effects of poverty on the cognitive and intellectual development of children. An impoverished home environment with a paucity of stimulating challenges to help children learn and grow may have a significant effect on early brain development and later educational success. Pediatricians can become involved in advocacy in this area, both inside and outside their offices. First, pediatricians can assess their patients' families for high-risk home environments using standardized tools. They can become knowledgeable of and refer children to community-based early childhood development services and implement Reach Out and Read programs in their offices (www.reachoutandread.org). At the community level, pediatricians can advocate for sufficient early childhood developmental support programs. Is the local Early Intervention program adequate to meet the community's needs? If not, then pediatricians could help to organize the community to create additional programs.

Finally, pediatricians can be very effective advocates for children at the local, state, and national levels of government. The American Academy of Pediatrics has materials that describe key policy issues that face children who are poor today, such as lack of health insurance. Pediatricians can lobby at the local, state, and national levels for important child health issues that affect all children but may disproportionately affect children who are poor.[17] Pediatricians across the country have been successful at promoting legislation that supports the health and development of children, especially at the local and state levels.

CONCLUSIONS

Poverty is prevalent in the United States and disproportionately affects children. Economic and demographic trends indicate that rates of child poverty and deprivation are not declining but actually are worsening in many parts of the country. Poverty and the culture surrounding it have a significant and pervasive impact on the health and development of children. Multiple risk factors converge in families that are extremely poor, greatly increasing children's risk for chronic health problems, school failure, births out of wedlock to adolescents, and other poor outcomes. Without economic and other supportive interventions, many of these children will be caught in a cycle of poverty and despair, perpetuating and perhaps growing the size of an underclass in the richest nation on earth.

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