

Why Socioeconomic Status Affects the Health of Children

A Psychosocial Perspective

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ABSTRACT—*This article provides an overview of research on socioeconomic status (SES) and physical health in childhood. SES has a gradient relationship with children's health, such that for each incremental increase in SES, there is a comparable benefit in children's health. In this article, I discuss psychosocial mechanisms underlying this association and argue that it is important to utilize knowledge about how the relationship between SES and health changes with age to inform a developmentally plausible search for mediators of this relationship. Furthermore, SES at different points in a child's lifetime may have different effects on health. I advocate an interdisciplinary approach to searching for mediators that would allow researchers to understand how characteristics of society, the neighborhood, the family, and the individual child are involved in the processes linking SES and children's health.*

KEYWORDS—*socioeconomic status; children's health; psychosocial*

One of the most striking and profound findings in epidemiology is that individuals lower in socioeconomic status (SES) have poorer health than individuals higher in SES. This relationship holds true whether health is measured as the prevalence rate of illness, the severity of illness, or the likelihood of mortality, and it is true for most types of diseases, as well as for many risk factors for diseases. This finding has been reported for many countries, including those with and those without universal health care. And it has been demonstrated across the life span, from childhood to older adulthood (Adler et al., 1994; Anderson & Armstead, 1995; Chen, Matthews, & Boyce, 2002).

One of the most intriguing aspects of the relationship between SES and health is that it exists as a gradient. That is, it is not just that poor people have poorer health than rich people. Rather, each step increase in SES is accompanied by incremental benefits in health. This gradient makes the search for underlying mechanisms a challenge for researchers. Obvious mechanisms, such as inadequate nutrition, housing, or health insurance, cannot explain why upper-middle-class

individuals have slightly poorer health than upper-class individuals. In this article, I discuss psychosocial explanations for the SES-health relationship, with an emphasis on children's health. I focus here on physical health; however, other researchers have explored these issues for children's mental health and well-being (see Leventhal & Brooks-Gunn and McLoyd under Recommended Reading).

POSSIBLE PSYCHOSOCIAL PATHWAYS

Researchers have suggested many explanations for the effect of SES on health. For example, the effect may be due to genetic influences, environmental exposures to toxins, quality of medical care, and psychological-behavioral factors, just to name a few possibilities (Anderson & Armstead, 1995). Here I provide a brief overview of some of the primary psychological-behavioral factors. Research in this area has focused on individual characteristics that fall into four main categories: stress, psychological distress, personality factors, and health behaviors (Adler et al., 1994; Anderson & Armstead, 1995).

With respect to stress, lower-SES children and adults experience more negative life events (stressors) than higher-SES individuals; in addition, they perceive greater negative impact from any given event (stress appraisal). In turn, a large body of literature has linked stress to a wide variety of negative biological and health outcomes in both children and adults. Evidence has documented that stress is one plausible mediator linking SES to health (Cohen, Kaplan, & Salonen, 1999). Thus, one theory is that as one moves down in SES, the amount of stress one experiences increases, which in turn takes a physiological toll on the body, putting one at greater risk for a variety of diseases.

A second possibility is that psychological distress plays a role. Because of the social environments in which they grow up, lower-SES individuals may be more prone to experiencing negative emotional states than higher-SES individuals are, and if the experience of negative emotions has biological consequences, this could also lead to poorer health. Previous research has found support for the notion that lower-SES individuals are more likely to experience negative emotions such as depression and anxiety, and that these negative emotions are linked to illnesses, such as cardiovascular disease, as well as to mortality rates (Gallo & Matthews, 2003).

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A third hypothesis is that lower-SES individuals are likely to possess personality traits that are detrimental to health. That is, lower-SES individuals may be more likely than higher-SES individuals to possess certain dispositional traits that are adaptive in the social environments in which they live, but have negative health consequences. For example, living in a dangerous neighborhood may make lower-SES individuals likely to mistrust others and to hold cynical attitudes toward others. Thus, one might expect lower-SES individuals to be more hostile and less optimistic about their future than higher-SES individuals are. In turn, such personality traits have been found to place individuals at increased risk for illnesses (Adler et al., 1994).

Finally, compared with individuals of higher SES, those of lower SES may be less likely to engage in healthy behaviors, such as exercising, eating a healthy diet, and not smoking. In part, this may be because of available resources. For example, the availability of healthy products in grocery stores varies by the SES of neighborhoods (Williams & Collins, 2001); people with reduced access to healthy products in their neighborhood grocery stores will have increased difficulty maintaining a healthy diet. Lower-SES neighborhoods also are more dangerous than higher-SES neighborhoods, and less likely to have public parks and venues for exercise (Williams & Collins, 2001); thus, decreases in SES increase the barriers to engaging in regular exercise.

These factors are promising possibilities for clarifying the psychosocial reasons why decreases in SES are associated with decreases in health. However, most of these factors focus on the individual. In trying to understand the health of children, it is particularly important to consider the role of factors in the family and the larger environment. In addition, given the vast social, cognitive, emotional, and biological differences between young children and older adolescents, it is important to consider whether the relevance of the various factors depends on the individual's age.

DEVELOPMENTAL TRAJECTORIES

Exploring the strength of the SES-health relationship during different periods of childhood may provide insight into pathways linking SES with health. My colleagues and I have argued that the relationship between SES and health may be stronger in certain periods of childhood than others. In trying to understand why this is so, one should consider developmental factors that are important during each period of childhood.

Previously, we proposed three models of how the relationship between SES and health may change across childhood (Chen et al., 2002). The childhood-limited model states that relationships between SES and health are strongest in early childhood, and weaken with age. This suggests that factors that are particularly important during early childhood may play a role in explaining health outcomes. For example, the quality of child care, attachment to parents, and housing conditions may be important factors during this period. Research has shown, for example, that injuries are strongly correlated with SES early in childhood, but not during adolescence (West, 1997). It may be the case that unsafe housing conditions are most relevant to young children, who do not have the ability to recognize and avoid danger in their homes, but that as children age and improve in cognitive abilities, they more easily recognize and avoid dangers at home, so the strength of the relationship between SES and injury decreases.

The adolescent-emergent model states that relationships between SES and health are weak early in life, but strengthen with age. According to this model, factors that become important during adolescence, such as peer influence or certain personality characteristics, may play a role in the SES-health relationship. For example, physical activity is more strongly correlated with SES during adolescence than earlier in childhood (Chen et al., 2002). One explanation may be that earlier in life, health behaviors are shaped strongly by parents as role models, but as a child ages, peers begin to exert influence on his or her health behaviors. The combination of parent plus peer influence may lead to stronger relationships between SES and health behaviors during adolescence than earlier in childhood.

Finally, the persistence model states that relationships between SES and health are similar throughout childhood and adolescence. In such cases, factors that would not be expected to change with children's age may be important. For example, the correlation between severity of asthma and SES is similar across childhood and adolescence (Chen et al., 2002). One possible explanation for this correlation is that asthma severity is in part determined by a family's trust in their health care provider. Compared with higher-SES families, lower-SES families may have greater mistrust of the medical community, which in turn may lead to poorer adherence to instructions and advice regarding medications and behaviors for managing asthma. If this psychosocial factor does not change significantly as a child ages, then one would expect to see the relationship between SES and asthma severity follow a persistence model.

LONGITUDINAL RELATIONSHIPS

In addition to considering the relationship between SES and health at different points during childhood, it is important to understand how SES may change over children's lives, and what impact these changes have on children's health. Family SES can fluctuate dramatically from year to year, and a child's history of SES may affect health differently than current SES does. For example, current SES may affect the quality of health care a family has access to, as well as how they are treated in medical settings. In contrast, history of SES may play a role in the development of health problems.

For example, SES effects may accumulate over time. Previous research has shown that amount of time spent in low SES is an important predictor of adult mortality rates (McDonough, Duncan, Williams, & House, 1997), young adults' self-reported health (Power, Manor, & Matthews, 1999), and cognitive development and behavioral problems in children (Duncan, Brooks-Gunn, & Klebanov, 1994). These findings suggest that it takes time for SES to have effects on health.

Some researchers have suggested that there may be critical periods in childhood when SES has its biggest effect. For example, early childhood experiences may program a pattern of biological and behavioral responses that has prolonged effects across the life span. Research has demonstrated that SES early in life is a predictor of adult health behaviors (Lynch, Kaplan, & Salonen, 1997), and that early childhood environments predict adult cardiovascular disease (Barker, 1992). In addition, these relationships persist even after accounting for the effect of adult SES. These findings suggest that it may be important to understand the characteristics of a child's environment during critical windows in order to understand health consequences later in life.

LEVELS OF EXPLANATIONS

Explanations for how SES affects children's health are not likely to be limited to pathways involving individual psychological characteristics. For example, there could be SES differences in societal-level factors, neighborhood-level factors, and family factors that also contribute to health disparities in children.

Societal factors could include social policies, such as ones that affect how access to and quality of health care vary across SES. Also, some researchers have argued that different societies have different levels of trust and cohesion among community members, and of investment in the community (social capital). Those communities that have low levels of social capital may have access to fewer public goods (such as community-organized group transportation) and find day-to-day life more stressful (e.g., difficulty getting to health care clinics) than those that have high levels of social capital. The communities of lower-SES families are likely to have lower levels of social capital than the communities of higher-SES families, and, in turn, social capital has been found to mediate the relationship between SES and health (Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997).

At the neighborhood level, there are several factors that may contribute to the SES-health relationship. A neighborhood that is dangerous creates barriers to engaging in positive health behaviors such as participating in sports or exercising. Lower-SES neighborhoods also are characterized by more toxic environments (greater pollution, more lead paint, etc.) than higher-SES neighborhoods. Finally, neighborhoods vary in terms of their degree of segregation. Neighborhoods that are segregated tend to receive less investment in public services than integrated neighborhoods do. More segregated neighborhoods tend to be lower in SES and to have higher mortality rates (Williams & Collins, 2001).

In addition, when studying children's health, it is important to consider the role of the family. Factors at this level include the quality of relationships within the family, such as whether they are characterized by conflict and aggression, as well as the degree of supportiveness in the home. Researchers have documented that families with high levels of conflict and with cold, unsupportive relationships are more likely than other families to have children who experience health problems throughout life, and have dysregulated biological systems (Repetti, Taylor, & Seeman, 2002).

At the individual level, as I have already described, factors such as stress, psychological distress, personality traits, and health behaviors are likely to play a role. In addition, certain psychological factors may buffer low-SES individuals from poor health outcomes. For example, one study found that individuals who were low in SES but believed they had a high degree of control over their lives had health profiles that were more similar to those of high-SES individuals than to those of low-SES individuals who did not believe that they had control over their lives (Lachman & Weaver, 1998).

CONCLUSIONS

Research has documented an intriguing gradient relationship between SES and children's health. Future research that addresses two main themes is needed. First, the field will achieve a more integrated understanding of the mechanisms behind the SES-health relationship by utilizing interdisciplinary collaborations to determine the extent to which societal-level variables (e.g., social capital), neighborhood-level

variables (e.g., residential segregation), family-level variables (e.g., relationship quality), and individual-child factors (e.g., stress) contribute to this relationship. Methods from epidemiology, sociology, psychology, and medicine, among other disciplines, could be used not only to develop state-of-the-art assessments of factors at each of these levels, but also to determine how factors at one level interact with factors at another level to influence health. For example, thus far, studies have rarely examined the extent to which the neighborhood environment affects an individual child's personality development, or, conversely, the extent to which the personality of an individual child or adult contributes to the characteristics of a whole neighborhood; neither have many studies investigated how individual and neighborhood factors synergistically combine to affect health. Studies that take a broad view and consider factors at multiple levels would provide researchers and the public with greater knowledge about important contributors to health, and help society learn to effectively implement health-enhancing interventions.

The second important theme for future research is to more extensively explore dynamic effects of SES on physical health. It is important to understand whether each type of health outcome is more strongly shaped by early childhood SES, fluctuations in SES, or current SES. An understanding such as this would be critical for determining the timing of health interventions. That is, interventions should be targeted toward early childhood if SES early in life turns out to be critical; in contrast, if cumulative SES turns out to be important, intervention at any stage in life (to reduce the total amount of time spent in low SES) would be beneficial. Such effective targeting of health interventions could help tremendously in maximizing the long-term health of society.

Recommended Reading

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