Intersecting Social and Cultural Determinants of Health and Well-Being

The close connection between health and SES, recognized throughout history and richly explored in literature, is also well established in research on health disparities. The concept of health disparities refers to diseases, disorders, and health conditions that disproportionately affect individuals who are members of racial and ethnic minority groups and certain other groups, such as the poor (National Institutes of Health, 2002). Studies have consistently shown that people on the lower end of the SES spectrum have significantly higher rates of mortality (death) and morbidity (disease), and are exposed to more risk factors for poor health than others within their racial/ethnic group with higher SES, even controlling for differences in access to and utilization of health care (National Center for Health Statistics, 2012). These findings have led to a wide-ranging search for other determinants beyond medical factors that may help explain disparities in health outcomes. Thus, the social determinants of health perspective have emerged as a means to understand disparities related to SES and other non-medical factors.

Social determinants influence health through a variety of mechanisms, including money, knowledge, power, prestige, social connections, physical environment, and social policies (Koh et al., 2010; Koh & Nowinski, 2010; Link & Phelan, 1995). Social determinants include behaviors such as parenting, substance use, and nutrition, as well as structural factors such as unemployment, work stress, discrimination, and socioeconomic opportunities and resources. Efforts to ameliorate health disparities require that the social determinants of health are addressed at both the individual and community levels (Koh et al., 2010). These determinants directly affect the ability of individuals and communities to avoid disease. Examining social determinants of health as fundamental causes of disease is a useful approach for understanding the existing vast socioeconomic and racial disparities in health, and is also a guide for improving the health of communities (Phelan & Link, 2005) (see figure 6.1).
Figure 6.1  Percent of Population Whose Self-Reported Health Status Is Not Excellent or Good

Source: Braveman et al. (2010).

Medical care is not excluded from the social determinants approach, but rather is considered in a much larger context. Some social determinants are described as upstream or major causal factors (i.e., poverty), while other are considered downstream or the result of the major causal factor (i.e., poor nutrition). Upstream and downstream determinants are illustrated in the following river metaphor: People in a village are getting sick because the river, their main source of drinking water, has been contaminated. In a downstream approach a person would distribute filters or teach the people to boil their water before consumption. In an upstream approach a person would work to shut down the chemical plant that is dumping pollutants into the water (Braveman, Egerter, & Williams, 2011). There are several key upstream and downstream social determinants of health: stress, early life, social exclusion, employment, social support and cohesion, addiction, food, transportation and neighborhoods (Marmot & Wilkinson, 2006; Wilkinson & Marmot, 2003). These social determinants do not occur in isolation but are inter-related, each affecting the other.

The social determinants of health perspective emphasize the social stressors and structural barriers that communities need to overcome in order to improve their well-being. The concept of social determinants as fundamental causes of disease can be expanded to address the role of other social statuses besides SES in
the creation and elimination of health disparities. Cultural background, ethnicity, immigration status, age/generation, gender, sexual orientation, and ability status may serve as sociocultural determinants that promote health, but may also threaten health in risky or unsupportive social environments. For example, cultural values promoting strong connections to family can be a protective factor for poor immigrant families, but cultural dislocation after migration may result in children being exposed to new risky behaviors against which the parents can no longer effectively protect them due to acculturative stresses that compromise effective family functioning and parental monitoring in the new environment (Szapocznik & Coatsworth, 1999).

This chapter introduces the cultural determinants of health as a complementary concept from a culturally grounded perspective. Cultural determinants are the assets present in communities that help prevent the onset of health disparities and that are a valuable resource for changing upstream and downstream social conditions. This chapter attempts to integrate a discussion of social and cultural determinants of health around previously discussed concepts of intersectionality and the need to consider all of the social positions and cultural identities that together play crucial roles in health and well-being.

HEALTH DISPARITIES, HEALTH EQUITY, AND THE SOCIAL GRADIENT

A first step in advancing this integration of social and cultural determinants of health is to further define and distinguish health disparities and health equity. Health disparities have historically been defined as documented differences in mortality and morbidity between social groups, a lack of equality in opportunity, treatment or status, and an inequality that is unfair, unjust, unnecessary, and avoidable (Frieden, 2011). Disparities in health and well-being occur by SES, race/ethnicity, gender, sexual orientation, ability status, immigration status, geography/environment, and age. More often they occur at the intersection of two or more statuses. For example, children (age) from low-income families (SES) of ethnic/racial minority (ethnicity) backgrounds living in rural (geography) communities are more susceptible to infectious diseases and injuries from accidents in unsafe environments (Cohen, Tiesman, Bossarte, & Furbee, 2009). Sustained poverty and racial inequality in rural America has been linked to multiple co-occurring physical and/or mental health problems within families (Burton, Lichter, Baker, & Eason, 2013; Sano & Richards, 2011). Child health is a very important concern in rural America; a large number (81%) of the counties with persistent child poverty are located in rural areas (Mattingly, Johnson, & Schaefer, 2011). As in many other instances where health disparities are pronounced, it is not possible to isolate one social determinant of health as the root cause of a
single health disparity affecting poor rural children. Social determinants and related disparities seem to be grouped in clusters.

The term “health inequality” refers to the differences in health outcomes between populations and can be seen in operation both between countries and within countries. Although some have argued that health inequalities and inequities are synonyms terms that can be used interchangeably, others argue that there are important differences in meaning that have a potentially large impact (Braveman & Gruskin, 2003). From this perspective, not all inequalities are inequities.

Some health inequalities are cause by biological variations. For example, Latinos, Native Americans, and Filipinos are more vulnerable to Valley Fever—a disease commonly found in the desert areas of the Southwest—than are people of other ethnic backgrounds (CDC, 2012a). Other health disparities are attributable to the external environment and conditions mainly outside the control of the individuals’ concerned. For example, the high rates of cancer found among people living in neighborhoods with highly contaminated soil and water are manifestations of externally caused health inequities (Liu-Mares et al., 2013). In the first case it may be impossible or unethical to change the health determinants and so the health inequalities are unavoidable. In the second, the uneven distribution of people across residential areas and housing segregation may be unnecessary, unjust, and unfair, making the health inequality also an inequity.

Until the middle of the twentieth century, health inequalities among some ethnic and socioeconomic groups were often assumed to be genetic and therefore not modifiable. Certain groups were thought to be inherently at higher risk of diseases and death. Subsequent research has shown that this is not the case in all but a very few circumstances (Cooper, Kaufman, & Ward, 2003; Krieger, 1987). There is, however, some debate about which determinants of health can be attributed to the unfair distribution of resources and which are inherent and therefore not modifiable. At what point does a health inequality become an inequity? For instance, cigarette smoking is a choice that people make that has significant impact on their health. Some would argue that this is health inequality and not a health inequity because individuals are making a choice about their behavior. Others may argue that smoking is not entirely a free choice but is instead directly linked to the number of chronic stressors in a person’s environment, the amount of advertising that takes place in their neighborhood, and the number of outlets that are willing to sell cigarettes to children under the legal age, which starts the tobacco addiction process. From the latter perspective, cigarette smoking is a health inequity, the result of social determinants that lead to an uneven distribution of risk factors for smoking.

Variations in health are considered health inequities when there is a pattern of differences that are systematic, socially produced, unfair, and unavoidable by reasonable action (Blas & Kurup, 2010). A large body of evidence has accumulated that suggests that disparities in health outcomes are not biological but are rather
a result of environmental, behavioral, and psychosocial factors that are influenced by SES. This perspective advocates for a preventive approach that addresses the underlying social determinants of health inequality (Marmot & Wilkinson, 2006). A consideration of cultural determinants can be added to this approach as a means to include cultural assets in any prevention effort.

The counterpart of health disparities is health equity or equal opportunities to achieve and maintain well-being and equal access to quality care (including behavioral health) for all. Achieving health equity has been the World Health Organization’s primary goal since its inception, in 1946. In its constitution, the World Health Organization stated that “the highest standards of health should be within reach of all, without distinction of race, religion, political belief, economic or social condition,” outlining for the first time on an international scale the goal that everyone regardless of SES, nationality, and/or ethnicity should have a fair opportunity to be healthy (World Health Organization quoted in Whitehead & Dahlgren, 2006, p. 5).

Although the World Health Organization goals for health equity have not yet been achieved, significant progress has been made in some areas during the half century since the World Health Organization was founded. A consistent inverse relationship, however, continues to exist between SES and life expectancy such that the more income an individual has the longer he or she is expected to live (see figure 6.2). This trend is seen nationally and internationally and has been constant over time. For example, in the United States the gap in life expectancy between men living in Washington, DC, and men living in Maryland, a contiguous state, is seventeen years; the poverty rate in Washington is more than double the rate in Maryland (Banks, Marmot, Oldfield, & Smith, 2006). In Estonia the gap in life expectancy between groups with different levels of education is as high as thirteen years (Leinsalu, Vägerö, & Kunst, 2003). The gap in life expectancies is also observed between countries. In Sierra Leone the average life expectancy is forty-seven years of age, compared to Japan where it is nearly double, eighty-three years (World Health Organization, 2013).

The more economic inequality observed within a country, the greater the disparities in health outcomes (Wilkinson, 1992; Wilkinson & Pickett, 2006). In the United States, the income differences between the rich and poor have been widening since 1975, with two major spikes in the widening gap during economic recession in the administrations of George Bush senior and George Bush junior (Wilkinson & Pickett, 2009). In 1979 annual incomes for the top five percent of income earners were eleven times larger than the bottom twenty-five percent of income earners, but by 2005 this ratio nearly doubled to twenty-one times more (Mishel, Bernstein, & Allegretto, 2007).

Despite being one of the richest nations in the world, considering average per capita income, the United States displays the largest gaps in SES and the largest disparities in health outcomes in the developed world (Organisation for Economic
Co-operation and Development [OECD], 2011; Wilkinson & Pickett, 2009). Health is not the only social problem that is exacerbated with growing inequality: income inequality within a country is also linked to higher rates of violence, homicide, imprisonment, poor education outcomes, teenage birth, mental illness, drug abuse, child violence, racism, drug overdose mortality, and low levels of social trust, social capital, and social mobility (Kaplan, Pamuk, Lynch, Cohen, & Balfour, 1996; Wilkinson & Pickett, 2007, 2009).

It was long thought that the relationship between income and health (and mental health) was simple and direct: those at the bottom fare worse than those at the top. However, recent evidence suggests that the relationship between income and health is gradual (see figures 6.1, 6.2, and 6.3). For example, 33 percent of adults who live below the poverty line have two or more chronic health conditions, compared to 30 percent of individuals with incomes just above the poverty line, 21 percent of those earning between 200 percent and 399 percent above the poverty line, and 16 percent of individuals who earn more than 400 percent above the poverty line (National Center for Health Statistics, 2012). This social gradient, where there is a gradual decline in health as levels of income, education, prestige, and status decrease, is consistently observed across countries.
Variations in outcomes by SES are one of the clearest patterns in health inequality. However, intersecting statuses complicate the picture. In the United States health inequalities are also seen across races, even among those at the same rungs of the socioeconomic ladder. Life expectancy for white females is eighty-one years, for black females is seventy-seven years, for white males is seventy-six years, and for black males is seventy years (National Center for Health Statistics, 2012). Not only are African Americans more likely to be in the lowest SES brackets, but they also experience the social gradient in health outcomes (Williams, Mohammed, Leavell, & Collins, 2010). A black man with an income in the lowest quartile has on average a lower life expectancy than does a white person in the same income group (Lin, Rogot, Johnson, Sorlie, & Arias, 2003). Life expectancy for a black man in the highest quintile of the SES distribution is higher than it is for a black man in the lower SES bracket, but is still lower than it is a white man in the same group. Pronounced racial disparities in health appear even among people with very high SES. African American physicians have earlier onset and higher rates of cardiovascular disease than do white physicians, and infant mortality and poor maternal health outcomes are much more common among highly educated African American women than among their white counterparts (Thomas, Thomas, Pearson, Klag, & Mead, 1997).
Although African Americans have lower life expectancy than whites, Latinos have the highest among all three racial groups: eighty-three years for females and seventy-eight years for males (National Center for Health Statistics, 2012). Despite higher rates of life expectancy, the social gradient is still observed among Hispanics for some health outcomes such as self-reported health (see figure 6.4) and the amount of activities that are limited due to chronic disease (Braveman, Cubbin, Egerter, Williams, & Pamuk, 2010). Because of immigration and circular migration (repeated movement between host and origin countries), the Latino case needs to be considered with care; several explanations can account for the relatively higher life expectancy of Latinos. The “healthy migrant” or “migrant selection” hypothesis suggests that healthier individuals migrate due to the demands connected with the process; in effect, migration selects or favors healthier people. The Latino lifestyle hypothesis focuses on Hispanics’ strong social ties and better health behaviors, which can be attributed to cultural factors. The reverse migration argument suggests that the Latino morbidity profile in the United States is affected by the fact that many older Latinos return to their country of birth when they are ill or after retirement, before their health declines (Crimmins, Soldo, Kim, & Alley, 2005; Vega, Rodrigues, & Gruskin, 2009). The many factors that contribute to the relatively high life expectancy of Latinos in the United States are an excellent example of intersecting social and cultural determinants of health.
ACCESS TO HEALTH CARE AND THE MEDICAL POVERTY TRAP

Historically, many efforts to eradicate health inequities were focused on improving access to health care (Adler & Stewart, 2010). And indeed access to health care seems to follow the social gradient, and can be influenced by location, cost, and cultural barriers (Larson & Halfon, 2010). About 20 percent of the U.S. population is affected by barriers to health-care utilization related to the distance they must travel to health-care facilities. The sparse distribution of hospitals in rural counties can be blamed for large disparities in health (U.S. Department of Health and Human Services [DHHS], 2004). In Canada, this problem is similar to the United States: people requiring specialized health services sometimes travel two hundred kilometers to the nearest hospital; in the northern Canadian regions, harsh weather conditions make road and air travel dangerous and sometimes impossible for days at a time (Grzybowski, Stoll, & Kornelsen, 2011).

Often health care is available within a reasonable distance but many patients in the United States are not able to access it because the cost is prohibitive. In the absence of universal health-care coverage, people with lower incomes and/or jobs that do not provide insurance are less likely to have health insurance. Notes from the field 6.1 illustrate a family’s struggle to afford treatment and day care for their son. Due to the rising cost of health care, uninsured individuals frequently delay seeking both preventive and urgent medical care because they cannot afford it (Ayanian, Weissman, Schneider, Ginsburg, & Zaslavsky, 2000). When people use

NOTES FROM THE FIELD 6.1
Finding the Funds

The Chens, a second-generation Chinese American family, are struggling to pay for their autistic son’s treatment and day care. They own a small grocery store and work long hours but are not able to pay the high premiums for their son’s preexisting condition. Because they make more than 200 percent of the poverty level, they do not qualify for state health insurance. They are going through the process of having their son assessed for disability insurance, but have encountered several barriers that have delayed receiving services. The added financial stress of paying for specialized child care is putting a strain on the family. They are considering having their other son take a year off from high school so that he can help his father in the store and his mother can stay home with his brother. The son is willing to do it for his family, but is concerned that once he quits he will not go back to complete his education.
health care and are not able to afford it they run the risk of going into debt. This is demonstrated in notes from the field 6.2. Impoverishment caused by paying for medical care is referred to as the “medical poverty trap” (Whitehead, Dahlgren, & Evans, 2001). In both the developing and developed worlds the medical poverty trap is prevalent. An appreciable proportion of households in fifty-nine countries face catastrophic out-of-pocket health expenses: 5 percent of households in Ukraine, 6 percent in Argentina, 10 percent in Brazil, and 11 percent in Vietnam are in substantial debt due to unpaid medical bills (Xu et al., 2003). In the United States 62 percent of all bankruptcies in 2007 were caused by inability to pay medical bills, and, in a revelation of the limits of health insurance, 78 percent of the individuals whose illness led to bankruptcy had health insurance at the onset of the illness (Himmelstein, Thorne, Warren, & Woolhandler, 2009).

NOTES FROM THE FIELD 6.2
Hard Choices

Maria was diagnosed with breast cancer last May. She was terrified. Her grandmother had passed away from breast cancer when she was only fifty-eight, and Maria was fifty-two at her diagnosis. She knew that treatment options have progressed since that time and, depending on the type and stage of cancer, the prognoses are getting better, but she also knew that it was expensive and she did not have insurance. Maria's husband was employed and making enough money to disqualify him and his wife from the state health insurance program. He was given the option of adding his wife to his insurance but the $500-a-month price tag was beyond his reach. Before the diagnosis they had both been healthy. Raul was fifty-six, and although relatively young, they felt their age from time to time but they had not had any serious illnesses. After a discussion with her doctor Maria decided that she wanted to take the most aggressive course of action, a double mastectomy. Maria has young grandchildren and wanted to do everything that she could to ensure that she would be around for their marriages and graduations. The medical bills for a double mastectomy could reach as high as $50,000, a bill that they could not afford to pay. After days of discussion about possible solutions Maria and her husband decided that the only way to get her the insurance that she would need to cover this expensive but potentially life-saving treatment was to divorce her husband and have Maria apply for Medicaid. The thought of divorcing her husband of thirty years broke her heart, but the thought of leaving her family was even more painful. In order to have a fighting chance at survival she would need to legally divorce her husband.
In the United States there are disparities in access to health insurance by race and SES. Although Medicaid is designed to provide insurance to individuals living in poverty, 61 percent of Hispanics who live below the poverty line do not have insurance, a rate that is substantially higher than whites (35%) and African Americans (37%) (National Center for Health Statistics, 2012). Some of this disparity can be attributed to undocumented or recent immigrant status, a lack of knowledge about the health-care system, and lack of language and cultural competence to navigate successfully within the system (Derose, Escarce, & Lurie, 2007; Ku & Matani, 2001). Many American believe that immigrants’ use of health services strains the health-care system, when in fact average per capita health expenditures for immigrants are half of those born in the United States (Ku, 2009). Despite evidence to the contrary, these beliefs have led to increased restrictions on state-provided health insurance for low income-families. Undocumented immigrants have never had access to Medicaid but aggressive federal laws passed in 1996 also prohibited documented immigrants from obtaining state health insurance during their first five years of legal residency in the United States (Espenshade, Baraka, & Huber, 1997). Among Latinos, even those who are eligible for state health insurance face significant barriers when applying for benefits. Barriers include the complexity of application, misunderstanding of eligibility rules and verification, administrative errors, transportation and logistics, and climates of fear and mistrust perpetuated by anti-immigrant legislation (Perreira et al., 2012). As a result of these barriers, many eligible Latinos go without coverage. A lack of insurance translates directly to unmet medical needs in this population. Uninsured immigrants were four times more likely to have unmet medical needs and seventeen times more likely to not have a primary care physician (Siddiqi, Zuberi, & Nguyen, 2009). The likelihood of having unmet medical needs was much greater for both uninsured and insured immigrants living in the United States when compared to immigrants living in Canada, where immigrants are covered under that country’s universal health-care system (Siddiqi et al., 2009).

There are also cultural barriers to accessing health services (Whitehead et al., 2001). Access to culturally relevant health services requires not only linguistically appropriate services, but also culturally appropriate services. Providers who receive federal funds in the United States are mandated to adhere to fourteen standards for culturally and linguistically appropriate services. These standards, among other things, require providers to hire culturally diverse staff, attend training in culturally and linguistically appropriate services, ensure the language competence of translators, and provide reading materials in the language of the patients (Office of Minority Health, 2013). Despite these regulations, in focus groups ethnic minority patients commonly reported negative experiences with health-care providers (Barr & Wanat, 2005). African Americans reported that they felt that doctors did not have an understanding of the discrimination they regularly faced and that they experienced rude and unhelpful office staff. Native Americans reported feeling offended by their doctors’ stereotypes and therefore ignored
prevention messages about diet, obesity, alcohol, and drugs. Native American elders also conveyed that they had been cut off by health-care providers when they were describing symptoms or asked questions of the providers, which they interpreted as a sign of disrespect. Latinos reported experiencing major language barriers and perceived doctors as rude and insensitive. Pacific Islanders stated that they experienced long waits, followed by rushed encounters with their doctors, difficulty understanding the physicians, and poor translation services (Barr & Wanat, 2005). Cultural barriers to access can be overcome by utilizing relatively simple and cost-effective interventions that increase the medical staff’s competence in working with the client and increases the client’s ability to insist on quality care (Alegría et al., 2008; Marsiglia, Bermudez-Parsai, & Coonrod, 2010). Notes from the field 6.3 demonstrate how cultural barriers to health care may affect health outcomes.

Although a lack of access to culturally competent care may explain unattended medical needs and therefore some of the social gradient observed in mortality, morbidity, and life expectancy, it does not explain the disproportionality in the occurrence of health issues or the Latino health paradox. The Latino health paradox is used to explain trends in Latino health that do not follow the social

NOTES FROM THE FIELD 6.3

Revolving Door

Vlad, a recent Russian immigrant living in a rural community, has had to take his son Sasha into the emergency room (ER) five times in the past two months for breathing problems. The ER doctor prescribed a rescue inhaler for Sasha for emergencies but does nothing to address the frequency of his attacks. Vlad is told that he needs to take his son to a primary care physician for preventative care but Vlad is not able to understand the doctor’s reasoning, is unfamiliar with the American health-care system, and is concerned about the cost. Finally understanding that part of the frequent readmittance is lack of understanding of the nature of the medical problem and the American health-care system, the medical center assigns Vlad a case manager that is fluent in Russian. While discussing the possible reason for Sasha’s frequent attacks she discovers that Vlad lives two blocks away from a chemical plant that releases large amounts of toxic fumes, a by-product of their manufacturing. In addition to helping Sasha get an appointment with a primary care physician, she also is able to help Vlad obtain an air purifying system for his home and puts him in touch with a group of parents who are working with a lawyer to address the problem of chemical fumes in the area.
gradient; first-generation Latinos consistently display superior health outcomes than do their second- and third-generation counterparts despite the latter having lower SES (Acevedo-Garcia & Bates, 2007; Braveman et al., 2010). This trend exists despite the fact that Latinos in the United States are the least insured ethnic group (DeNavas-Walt, Proctor, & Smith, 2013). Cultural determinants and social explanations for the Latino health paradox may suggest possible protective factors in the relationship between SES and health outcomes; these explanations include high levels of social support, strong family orientation, a healthy diet, and fewer risk behaviors such as substance use (Hayes-Bautista, 2002). The paradox observed among Latinos in some health outcomes lends support to the importance of cultural determinants of health as the communities' cultural assets counteract or compensate for barriers to health-care access and utilization. This is not to say that Latinos do not need to have access to quality health care: on the contrary, the cultural determinants perspective call attention to the need for culturally grounded resources on which to build strategies to close the access gap.

SOCIAL DETERMINANTS OF HEALTH: SOCIETAL RISKS AND PROTECTIVE FACTORS

Stress

The idea that psychosocial factors work through chronic stress to affect health is one of the most important findings advancing our knowledge of social determinants of health (Brunner & Marmot, 2005). Stress is the subjective state that occurs when individuals experience a threat that they believe exceeds their ability to cope (Lazarus & Folkman, 1984). Stress can be positive in situations where a person is able to address the sources of the stress resulting in a feeling of mastery and success, as when an effective head administrator of a hospital is under great stress during a natural disaster in the community and is able to mobilize the hospital staff to meet the crisis. In situations where an individual is not able to modify the source of stress but has substantial social support, the stress may not be toxic or affect health. But in situations where the stress is chronic, where the individual feels powerless and lacks resources to modify the source of stress, and where the individual has inadequate social support, stress may become toxic and damaging to a person’s health (Adler & Stewart, 2010).

The distinction between chronic and acute stressors is important when talking about the link between stress and health inequality. Chronic stressors can be defined as stress that continues abnormally and lasts for a significant amount of time because it is continuous, episodic, or poses a threat that cannot be easily changed (Baum, Garofalo, & Yali, 1999). Baum and colleagues (1999) suggest that these are the stressors that exist in the background and are “embedded in the living or working environments” (p. 132). Acute stressors, including a one-time
stressful event such as a car accident or burglary, seldom result in negative health outcomes or long-term psychological distress (Aneshensel, 1992; Thoits, 1983). However chronic stressors are linked to negative health outcomes (Grippo et al., 2007; Williams & Jackson, 2005).

Experiencing chronic stress influences health physiologically. The physical stress response that releases cortisol, cytokines, and other substances can damage immune responses, increase inflammation, and damage organs, which can lead to chronic illness and may accelerate aging (McEwen, 2008; McEwen & Gianaros, 2010; Steptoe & Marmot, 2002). The chronicity and severity of a stressor are strong predictors of its eventual impact on health (Segerstrom & Miller, 2004). The stress response diverts energy away from the body’s normal functions. When the stress event and response are short or acute, a person is able to reestablish equilibrium quickly, but when stress hormones are elevated for more than an hour, immunity is affected. When stress is experienced for weeks, months, or years the damage that results puts a person at risk for poor health (Wilkinson & Pickett, 2009). Chronic levels of stress have been found to predict high blood pressure, susceptibility to infection, fat build-up in the blood vessels and in the abdomen, and atrophy of brain cells (Bobak & Marmot, 1996; Epel et al., 2004; Ferrie, Shipley, Stansfeld, & Marmot, 2002; Gianaros et al., 2007; Larsson et al., 1989).

Several biological studies have firmly established the relationship between psychosocial factors, stress, and biological processes. In an experiment with non-human primates, low social status caused higher stress hormones and more-rapid build-up of fatty material in arteries, a process that reversed when social statuses were changed or switched (Shively & Clarkson, 1994). Additionally, two biological markers have been associated with both stress and SES: allostatic load and telomere length (Adler & Stewart, 2010). Allostasis is the process that a healthy body goes through when they have experienced a stressful situation in order to maintain balance or homeostasis. Allostatic load is a marker of how quickly a person’s physiology, cardiovascular, metabolic, nervous, hormonal, and immune systems are able to regain normal functioning after a stress response has been triggered (McEwen, 1998a). When individuals experiences chronic or frequent stressors, their stress response process is strained and their body takes longer to recover from stressful experiences, resulting in higher allosteric loads. Individuals with low SES are more likely to have high allostatic loads, which have been associated with higher rates of cardiovascular disease and mortality (Seeman et al., 2004). Telomeres, another biological marker, are found at the end of DNA strands in cells. Shorter telomeres are associated with aging and mortality (Blackburn, Greider, & Szostak, 2006; Cawthon, Smith, O’Brien, Sivatchenko, & Kerber, 2003). Objective and subjective stress and income levels have been associated with shorter telomeres, providing a biological explanation for the relationship among SES, stress, and health outcomes (Cherkas et al., 2006; Epel et al., 2004). This
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research has created a strong link between stress and health, potentially explaining much of the social gradient observed in health outcomes.

**Early Life**

An argument has been made for taking a life-course approach to social determinants of health. A life-course approach proposes that circumstances, both social and physical, in early life affect health across the life course. From the time of conception, the mother’s experiences and decisions during the pregnancy will have an impact on the health of the child she carries (Braveman & Barclay, 2009). Lack of nutrition during prenatal growth and low birth weight increases the risk of adult cardiovascular disease, type 2 diabetes, stroke, and hypertension (Al Salmi et al., 2008; Barker, 2003; Barker, Eriksson, Forsen, & Osmond, 2002; Rich-Edwards et al., 2005).

Early childhood is also a crucial developmental period in the life course when discussing health outcomes. Early experiences affect children’s cognitive, behavioral, and physical development (Bradley & Corwyn, 2002; Cohen, Janicki-Deverts, Chen, & Matthews, 2010; Hertzman, 1999). Slow physical growth and a lack of emotional support in childhood leads to disrupted cognitive and emotional functioning in adulthood (Wilkinson & Marmot, 2003). Exposure to high levels of stressors in early childhood can also alter biological structures and psychosocial functioning, increasing the risk of disease in adulthood (Shonkoff, Boyce, & McEwen, 2009). When children are raised in environments with high levels of conflict and low levels of warmth, they show greater physical reactivity to stress, elevated blood pressure, and activation of the sympathetic nervous system (Repetti, Taylor, & Seeman, 2002; Taylor, Lerner, Sage, Lehman, & Seeman, 2004). Extreme stress in childhood also puts adults at risk for negative health outcomes by increasing their likelihood of using negative coping strategies that harm health. Childhood trauma and abuse are linked to poor mental health outcomes and behavioral risk factors such as substance abuse and sexual risk behaviors (Anda et al., 1999).

However, most life-course approaches to health disparities do not focus on individual factors but rather on the accumulation of circumstances as a result of disadvantaged social status that either cluster or trigger a sequence of events. For example, prenatal nutritional deficits have been shown to combine with early childhood exposure to stress to change gene expressions that contribute to elevated cardiovascular disease risk in adult African Americans (Kuzawa & Sweet, 2009). Growing up in poverty increases the likelihood of experiencing a cluster of risk factors for poor health in adulthood, including stress, poor nutrition, and inadequate early childhood education. The prevalence of poverty among children in the United States is staggering; nearly one in four U.S. children lives in poverty. The poverty rate for children living in the United States ranks as thirty-second highest out of thirty-three developed countries (see figure 6.5). Childhood poverty disproportionally affects minority children, with 35 percent of Hispanic children...
and 39 percent of African American children living below the poverty line; this is drastically more than white (12%) and Asian American (14%) children (National Center for Health Statistics, 2012). Not only is childhood poverty experienced at high rates among black and Latino youths, but they are also exposed to environmental stressors at a higher rate. In 100 of the nation’s metropolitan cities, 76 percent of African American and 69 percent of Latino children live in worse neighborhood environmental conditions than the most disadvantaged whites (Acevedo-Garcia, Ospuk, McArdle, & Williams, 2008).
Like other health issues, childhood health challenges occur on a social gradient with those at the bottom being most affected. Developmental differences have been linked to differences in engagement and stimulation from caregivers, both of which are parenting behaviors that follow the social gradient (Evans, 2004; Guo & Harris, 2000; Votruba-Drzal, 2003). In a study examining mother-child communication, the number and length of utterances that mothers made to their two-year-old children varied by SES, and had a significant impact on the child’s language development. In interviews with the higher and lower SES groups, the mothers had the same goals for their children but differed in how important they thought it was to talk to a child and the amount of leisure time they were able to spend doing so (Hoff, 2003). There is a significant gap in low- and middle-income children’s readiness for school when they enter kindergarten, a gap that persists through elementary and secondary education and beyond (Ryan, Fauth, & Brooks-Gunn, 2006). Delayed cognitive development can have dramatic effects on income potential across the life course by influencing educational outcomes, which in turn have a significant impact on adult SES and health (Garces, Thomas, & Currie, 2002). Children living in poverty are also exposed to more environmental stressors: in a study of high school students, low SES and high SES high school students interpreted potential threats in the same way, but low SES students were much more likely to interpret ambiguous situations as threatening, which resulted in higher diastolic blood pressure (Chen, Langer, Raphaelson, & Matthews, 2004).

These social factors that occur on the social gradient affect health outcomes in childhood and later in adulthood. A higher percentage of children living in poverty across all racial groups have asthma when compared to children living in households with income just above the poverty level (National Center for Health Statistics, 2012). A social gradient is also observed for diagnoses of ADHD and obesity (National Center for Health Statistics, 2012). Additionally, childhood SES conditions are related to the following health conditions in adulthood: alcoholic cirrhosis, smoking related cancer, stomach cancer, cardiovascular disease, diabetes, depression, functional limitations, and respiratory disease (Braveman & Barclay, 2009).

Poverty has an intergenerational impact on health. Women who grew up in poverty are more likely to give birth to a child with low birth weight (Astone, Misra, & Lynch, 2007). The intergenerational transmission of poor health outcomes could also occur through lower educational attainment. In the United States, fifteen-year-olds whose parents had low educational achievement had worse math scores than those whose parents were highly educated, a gap that was larger than any other country included in the study (OECD, 2008). However, parental upward mobility may have differential impacts on the outcomes of their children, depending on race. For example, for women who grew up in households whose income fell below the poverty line, upward mobility was related to healthier
birth outcomes for white women but not for black women (Colen, Geronimus, Bound, & James, 2006). This relationship may be due to the disproportionate amount of chronic stressors, both economic and racial, that African American women experience in their childhood (Braveman et al., 2005), to continuing experiences of discrimination regardless of their SES, and increased sensitivity to stress later in life due to exposure to early childhood stressors (Ellen, Cutler, & Dickens, 2000; Rich-Edwards et al., 2001; Foster, Wu, Bracken, Semenya, & Thomas, 2000). All of these processes influence the amount of stress hormones that are released during pregnancy, which influences poor birth outcomes like low birth weight and premature birth by increasing inflammation during pregnancy and decreasing the mother’s and child’s immune system (Dominguez, 2008; Holzman, Jetton, Siler-Khodr, Fisher, & Rip, 2001; McEwen, 1998a).

Social Exclusion

Absolute poverty, relative poverty, and social exclusion limit a person’s access to resources and full participation in social life, with major impacts on health. Homeless people, one of the most socially excluded groups in the United States, have the highest rates of premature death (Wilkinson & Marmot, 2003). In India there are large disparities between different castes in both health outcomes and access to care, which can be attributed to widespread social exclusion based on social status (Nayar, 2007). Rather than absolute poverty, it is relative poverty—earning less than 60 percent of the median income—that significantly reduces a person’s access to housing, education, transportation, food, and health care, and increases their social exclusion (Wilkinson & Marmot, 2003). An individual may also be excluded from society based on race, gender, age, or religion (Nayar, 2007). In addition to the economic disadvantages that occur with relative poverty, social exclusion can also take the form of residential segregation, racial discrimination, and a lack of political power or influence. All forms of social exclusion contribute to an individual’s overall stress burden.

The experience of racial discrimination in the United States has been linked to a wide variety of risk factors for negative health outcomes, including violence, poor quality sleep, abdominal fat, high blood sugar, artery calcification, breast cancer, and smoking (Landrine & Klonoff, 2000; Williams, Neighbors, & Jackson, 2003). The perception or appraisal of discrimination experiences as stressful is a better predictor of smoking than education, gender, income, and age (Landrine & Klonoff, 2000). Not only does the experience of discrimination negatively affect health, but also the anticipation of discrimination experiences is related to health outcomes (Kessler, Mickelson, & Williams, 1999). Some have argued that social exclusion, or discrimination, accounts for continued health disparities between African American and white Americans (Mays, Cochran, & Barnes, 2007). These findings are consistent internationally. In New Zealand, perceived discrimination
accounted for disparities in self-reported health between individuals of Maori and European descent (Harris et al., 2006). Similarly, discrimination explained disparities in Aboriginal and non-Aboriginal health and mental health in Australia (Larson, Gillies, Howard, & Coffin, 2007).

Discrimination can take many forms and may affect individuals in multiple ways. Discrimination may prevent someone from being hired for a job or considered for a promotion, may result in rude treatment in restaurants, or may be internalized by the recipient. Internalized discrimination occurs when racial groups accept the negative narratives that are present in the culture as being true (Ahmed, Mohammed, & Williams, 2007). Internalized discrimination is one of the most subtle forms of social exclusion and has been linked to increases in blood pressure, alcohol consumption, psychological distress, overweight, and negative cardiovascular outcomes (Williams & Mohammed, 2009).

The effects of discrimination and marginalization on mental health also disproportionately affect Latinos. Rates of mental health issues increase substantially the longer that immigrants live in the United States, and with each succeeding generation (Alegría et al., 2007). Some have attributed this increase to increased experiences of barriers to upward mobility and discrimination among second- and third-generation Latinos (Finch, Frank, & Vega, 2004), while others have argued that it is driven by the adoption of negative health behaviors such as substance use. The reception of immigrants in the United States, or the degree of social inclusion that they experience when they arrive, is related to stress and distress. In California in 2001, a time of increased anti-immigrant sentiment, native-born Mexican Americans reported less distress than did their immigrant counterparts (Williams & Mohammed, 2008).

Neighborhoods

The concentration of poverty and environmental risks in neighborhoods is another aspect of social exclusion that contributes to health inequality. Individuals who live in neighborhoods with lower aggregate SES have poorer health outcomes regardless of their individual income, indicating that processes within the neighborhood may be influencing health (Diez-Roux et al., 1997; Yen & Syme, 1999). Neighborhoods with high rates of disadvantage are typically spaces that also have high rates of other mutually reinforcing social problems. The neighborhood that a person lives in may limit upward mobility by reducing access to quality jobs and education, which ultimately increases economic hardship and stress (Fernandez, 2004; Pastor, 2001; Williams & Collins, 2001). It may also decrease access to healthy food and increase access to harmful substances, including drugs, alcohol, and cigarettes (Chuang, Cubbin, Ahn, & Winkleby, 2005; Morland, Diez-Roux, & Wing, 2006). Concentration of poverty in neighborhoods often results in higher rates of crime due to a lack of access to legal means of income generation.
and attention from law enforcement, which can erode social cohesion, trust, and ultimately social support (Morenoff, Sampson, & Raudenbush, 2001). Additionally, neighborhoods with high rates of poverty are often the site of industry facilities that produce environmental toxins and of poor-quality housing that poses health threats, such as elevated risk of childhood asthma (Evans & Kantrowitz, 2002; Northridge, Ramirez, & Stingone, 2010). Finally, communities with concentrated poverty are less likely to have sufficient quality health care and social services agencies (Deichmann, 1999).

All of these factors work together to create an environment in which there is a high concentration of chronic stressors and a deprivation of resources to cope, affecting health outcomes (Boardman, 2004; Massey, 2004; Roberts, 1997). Residential segregation is linked to increased risk for illness, death, preterm births, and the presence of risk factors for cardiovascular disease (Acevedo-Garcia, Lochner, Osypuk, & Subramanian, 2003; Matthews et al., 2005; Osypuk & Acevedo-Garcia, 2008; Williams & Collins, 2001). Living in disadvantaged neighborhoods is also related to poor mental health outcomes (Mair, Roux, & Galea, 2008). Women exposed to community violence are twice as likely to report depression and anxiety (Clark et al., 2008). Children are particularly vulnerable to stressful neighborhood environments and show higher rates of teen pregnancy, substance abuse, obesity, smoking, limited exercise, and poor dietary habits, all of which are risk factors for poor health in adulthood (Mather & Rivers, 2006). For children in poor neighborhoods, community violence interacts with environmental risks, like pollution, to affect rates of asthma (Williams, Sternthal, & Wright, 2009).

One important way that neighborhood segregation influences health is through access to affordable and healthy food and safe spaces to exercise. Economic growth and increased sanitation in the United States has created an epidemiological shift in the primary causes of death, moving from infectious diseases at the turn of the twentieth century, to the chronic diseases of today that account for most deaths, such as diabetes and cardiovascular disease (Mathers & Loncar, 2006; World Health Organization, 2012). The growing incidents of diabetes and cardiovascular disease are related to the growing obesity trend and can be at least partially attributed to poor diet and a lack of exercise (Mokdad, Marks, Stroup, & Gerberding, 2004).

A social gradient is observed in rates of childhood obesity, healthy eating, and sedentary behavior, which may be linked to access to health services (Braveman et al., 2010; Braveman & Barclay, 2009). Disadvantaged neighborhoods typically have few grocery stores with a variety of fruits and vegetables and more convenience stores (Morland, Wing, & Roux, 2002). These conditions have led to neighborhoods being labeled as “food deserts” (Cummins & Macintyre, 2002). Between 1970 and 1990, when large segments of the population were moving out of city centers and into the suburbs, one half of city grocery stores in the three major U.S. cities closed in response to a decreasing median income (Nayga & Weinberg,
1999). The disparity in access to food is stark in cities such as Philadelphia, where the highest-income neighborhood had 156 percent more supermarkets than the lowest-income neighborhood in the city (Walker, Keane, & Burke, 2010). The decline in supermarkets has resulted in an increased consumption of calorie-dense inexpensive food sold at convenience stores and fast food restaurants (Drewnowski & Specter, 2004). When residents living in food deserts do not have access to a vehicle, live in an environment where it is unsafe to walk, or work long hours leaving little time to grocery shop or prepare food, this dynamic can have detrimental impacts on their diet and on their overall well-being (Lake & Townshend, 2006).

In consumer markets in urban areas, both the price of healthy foods and the quality of fresh fruits and vegetables are also deterrents to healthy eating behavior (Powell, Slater, Mirtcheva, Bao, & Chaloupka, 2007). Living in a food desert is related to diabetes, heart disease, and cancer (Cotterill & Frankin, 1995). In addition to having less access to healthy foods, lower SES blocks also have fewer recreational facilities, which in turn is associated with higher rates of overweight residents and lower rates of exercising at least five times a week (Gordon-Larsen, Nelson, Page, & Popkin, 2006). Reported incidents of serious crime also decreased adolescents’ likelihood of engaging in vigorous exercise (Popkin, Duffey, & Gordon-Larsen, 2005). Although many of the driving forces behind obesity are believed to be behavioral, the built environment and access to healthy food can serious restrict attempts to change behavior.

Although not always the case, there is often overlap between neighborhood racial segregation, the proportion of ethnic minority residents, and concentrated poverty; when more than 40 percent of the neighborhood residents live below the poverty line (Massey, 2004). Living in these neighborhoods is related to multiple risk factors for poor health in both the United States and internationally (World Health Organization, 2010). Income and racial segregation typically have an inverse relationship for most ethnic groups: the more one earns, the less likely it is that one will live in racially segregated neighborhoods. This is not, however, the case for African Americans; regardless of an individual’s SES, African Americans are more likely to live in racially segregated neighborhoods (Massey, 2004). Living in a racially segregated neighborhood and having higher income levels may not decrease the potential health risk that upwardly mobile African Americans experience. When comparing two primarily African American communities, one with a median income below the poverty line and one with a median income slightly above it, the neighborhood with the higher median income had similar health outcomes on nine of thirteen indicators (Diez-Roux et al., 2001). The risk posed by racial segregation is not the impact of living with members of similar ethnicity per se, but rather the overlap with concentrated poverty, a dynamic that is the result of America’s history of racial inequality (Williams et al., 2010).
Employment and Unemployment

In general, having a job is better for health than not having a job, but the type of work and the organizational structure can negatively affect health (Wilkinson & Marmot, 2003). Employment has the potential to improve health by providing income, increasing access to insurance, providing contact with coworkers that could increase social support, and providing opportunities for feeling a sense of accomplishment or control. On the other hand, employment can expose people to physical and emotional strain that may negatively influence their health. The physical nature of work makes occupations a clear pathway to health. Jobs that require repetitive movement or heavy lifting put individuals at risk for musculoskeletal injuries (O’Neil, Forsythe, & Stanish, 2001), and sedentary jobs put people at risk for obesity, diabetes, and heart disease (Warburton, Nicol, & Bredin, 2006). Compared to whites, ethnic minorities have higher levels of exposure to occupational hazards and are at greater risk of injury or death on the job (Murray, 2003). The relationship between work and health is not limited to employment in hazardous conditions, but also applies to professionals. Significant stress that affects health occurs when professionals feel a low sense of control or inadequately rewarded given the effort required by their job (De Jonge, Bosma, Peter, & Siegrist, 2000; Marmot, Bosma, Hemingway, Brunner, & Stansfeld, 1997). As one ages, transitioning into jobs that reflect one’s interest is related to increased job satisfaction and better health outcomes (Padavic & Reskin, 2002).

Over the past century, women have entered the labor market in record numbers. In general, employed women have better health outcomes compared to their unemployed counterparts (Klumb & Lampert, 2004). For women, however, role strain can contribute to work overload, which may have a negative impact on health (Presser, 2000; Repetti, Matthews, & Waldron, 1989). For working mothers who reported both parenting stress and work stress, morning cortisol levels, a biological marker for stress, were significantly higher on work days when compared to nonwork days (Hibel, Mercado, & Trumbell, 2012). Overall, black women had a less positive perception of their overall employment trajectory when compared to white women. For black women, perceived control was a significant predictor of perceiving a positive work trajectory, which in turn was associated with lower mortality (Shippee, Rinaldo, & Ferraro, 2012). Employment status also has an effect on birth outcomes. For pregnant women, low job control is linked to low birth weight and premature delivery (Meyer, Warren, & Reisine, 2008). The combination of work and family responsibilities seems to influence how employment affects health. However, control at work is consistently shown to have a positive impact on the health of women.

Employment also affects access to health insurance. Although the number of individuals who obtain health insurance through their employer is decreasing and the number of covered under government health insurances in on the rise, more
than half (56%) of Americans still rely on their employer for health insurance (DeNavas-Walt et al., 2013). Employment is no guarantee of insurance coverage. The majority of educated professional women have health insurance, but women who work in the service sector frequently do not (Montez, Angel, & Angel, 2009). Compared to whites, Mexican Americans and African Americans are more likely to work at jobs that do not offer insurance (Montez et al., 2009). Prior to the extension of universal health care through the Affordable Care Act under the Obama administration, the presence of preexisting conditions kept 25 percent of workers at a job they would prefer to leave because their medical benefits may be jeopardized if they were to seek employment elsewhere (Madrian, 1994). Losing employer-based health insurance is also a barrier to entrepreneurship (Fairlie, Kapur, & Gates, 2011). Self-employment puts the heavy cost of insurance on the individual, often resulting in no coverage. This is especially important for immigrants who frequently strive to become upwardly mobile by owning their own business (Kesler & Hout, 2010). For women, health insurance coverage is dependent on their own employment or the employment of their spouse (Moen & Roehling, 2005). Depending on their spouse for insurance can increase a woman’s dependence on their mate, increasing the vulnerability especially of stay-at-home mothers (Pascall & Lewis, 2004).

Unemployment has negative impacts on health (Bartley & Plewis, 2002). Both the financial and psychological consequences of unemployment pose a substantial health risk. Mortality more than doubles for men who have been unemployed for five consecutive years (Morris, Cook, & Shaper, 1994). Mental health worsens after a job loss and improves after reemployment (Paul & Moser, 2009). Unemployment has also been associated with a high risk of suicide (Li, Page, Martin, & Taylor, 2011; Yoshimasu, Kiyohara, & Miyashita, 2008). The impact of unemployment on health starts before individuals actually lose their job, when they begin to sense that they will be let go. The anxiety and insecurity that people feel when they might lose their job are related to increased mental health problems, self-reported general ill physical health, and heart disease specifically (Marmot & Wilkinson, 2006). Compared to permanent employees, temporary workers have higher rates of psychological distress, and poor physical and global health, further reinforcing the effect of job insecurity on distress and health (Virtanen et al., 2005).

**Substance Use**

Tobacco is the leading cause of preventable death in the United States, responsible for over 400,000 deaths annually (Koh & Sebelius, 2012). Tobacco is a contributing factor in morbidity and mortality from cancer, heart disease, stroke, complications during pregnancy, and respiratory illness (CDC, 2008). Parents who smoke also put their children at risk for asthma and other respiratory problems.
in the short run and a higher chance of smoking as adults in the long run (Bar- 
noya & Glantz, 2005; Cook & Strachan, 1997). In fact 49,400 deaths annually are 
attributed to second-hand smoke (CDC, 2008). Poor housing, low income, single 
parenting, and unemployment are all associated with high rates of smoking, a 
major risk factor for heart disease and cancer (Marmot & Wilkinson, 2006).

Substance abuse is both a reaction to inequality and, in the cases of alcohol 
and illicit drug abuse, the cause of a decline in SES. Rates of alcohol dependence, 
illicit drug use, and cigarette smoking all occur on the social gradient. For ex-
ample, in 2011 45 percent of adults with a GED, 35 percent of adults who attended 
between nine and eleven years of school, 24 percent of adults with a high school 
diploma, 9 percent of adults with an undergraduate college degree, and 5 percent 
of adults with a postgraduate degree smoked (CDC, 2012c). This disparity in rates 
of smoking does not necessarily translate into racial disparities. African Americans 
and Latinos smoke less than their white counterparts, surpassed only by Native 
Americans (Fagan, Moolchan, Lawrence, Fernander, & Ponder, 2007). However, 
African American males are diagnosed and die from lung cancer at higher rates 
than any other racial group (Fagan et al., 2007).

Very similar trends are found in the estimated 80,000 preventable deaths in 
the United States annually due to alcohol use and abuse, making it the third-most 
frequent lifestyle-related cause of death. Excessive alcohol use has short-term and 
long-term impacts on health. In the short term, alcohol abuse is related to unin-
tentional injuries, violence, sexual risk behaviors, miscarriages, and alcohol poi-
soning (CDC, 2012b). Excessive use over an extend period of time is related to 
dementia, stoke, hypertension, depression, anxiety, suicide, unemployment, fam-
ily conflict, cirrhosis of the liver, and gastritis (CDC, 2012b). In the United States 
alcohol use disorder and dependence fall on the social gradient but alcohol abuse 
does not (Lee et al., 2010). As with cigarette use, compared to white Americans, 
Hispanic, African American, and Asian Americans report less alcohol use and 
heavy episodic (or binge) drinking; only Native Americans surpass the rates for 
whites (Chartier & Caetano, 2010). However, once alcohol dependency occurs, 
Hispanics and African Americans have a higher prevalence of recurrent or persis-
tent dependence and mortality (Dawson et al., 2005). Despite the relatively low 
rates of use, Hispanics and blacks are also at greater risk of developing cirrhosis 
(Flores et al., 2008); Hispanic men have the highest rate of mortality due to the 
disease (Yoon & Yi, 2012). Some of these disparities in recurrence and mortality 
may be due to an unmet need for alcohol abuse treatment among ethnic minori-
ties and lower rates of treatment completion (Bluthenthal, Jacobson, & Robinson, 
2007). Studies have shown that when treatment is completed, success rates are 
the same as whites (Tonigan, 2003). Additionally, American Indian, African Ameri-
can, and Hispanic people reported higher rates of concurrent substance use (alco-
hol and another drug) compared to whites (Office of Applied Studies, 2008). 
Despite higher rates of co-occurrence, there has been a dramatic decrease in the
use of injection drugs use in ethnic minority groups (Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2011).

Tobacco and alcohol are aggressively marketed in low-income neighborhoods (Koh, Massin-Short, & Elqura, 2009). Alcohol outlets are more densely located in disadvantaged neighborhoods (Romley, Cohen, Ringel, & Sturm, 2007) and their concentration is related to increased rates of alcohol-related violence and morbidity, including intimate-partner violence, violent assaults, sexually transmitted infections, and liver problems (Gruenewald, Freisthler, Remer, LaSala, & Treno, 2006; McKinney, Caetano, Harris, & Ebama, 2009). The CDC has taken a comprehensive social determinants approach to smoking, which includes media, policies, and price increases; this approach has had an impact on some populations. However, people on the lower socioeconomic rungs of society continue to smoke at rates well above the norm (CDC, 2014). Although historically rates of lung cancer did not follow a social gradient, in recent years a gradient has emerged (Adler & Stewart, 2010).

Social Networks and Support

Social networks shape health outcomes by influencing health behaviors (positive or negative); providing social support, including emotional and instrumental support, social engagement, and attachment; and providing access to material resources (Berkman & Glass, 2000). Social support has the potential to interrupt the relationship between poverty and stress and to help prevent negative health outcomes (Link & Phelan, 1995). There is substantial evidence that social support decreases blood pressure and hypertension and increases self-rated health (Strogatz et al., 1997; Uchino, 2006; Uchino, Cacioppo, & Kiecolt-Glaser, 1996; Zunzunegui, Alvarado, Del Ser, & Otero, 2003). Social support has been shown to decrease stress in a variety of settings. Among African Americans, religious involvement has been shown to mitigate the effect of discrimination (Ellison, Musick, & Henderson, 2008). Social support in work settings is linked with health and may buffer against the negative effects of physical and mental stressors (Kuper, Singh-Manoux, Siegrist, & Marmot, 2002). Social support also buffers the effect of neighborhood disadvantage on distress (Rios, Aiken, & Zautra, 2012). For elderly people living in the high poverty neighborhood of Little Havana, a primarily Cuban community in Miami, having a front porch increased feelings of social support and buffered against stress (Brown et al., 2009).

However, individuals living below the poverty line report smaller social networks, less social support, and less integration (Gecková, Van Dijk, Stewart, Groothoff, & Post, 2003; House & Williams, 2000). For example, social support has been found to prevent stress for individuals living in high-income neighborhoods,
but not those living in low-income neighborhoods (Elliott, 2000). Similarly, informal ties are more beneficial in high-income white neighborhoods where they are coupled with more-formal institutions, but negatively affect well-being in disadvantaged neighborhoods (Caughy, O’Campo, & Muntaner, 2003; Latkin & Curry, 2003; Wen, Cagney, & Christakis, 2005). Individual social integration predicted higher hypertension for individuals with less than high school diploma, but began to have a protective effect for high school graduates (Gorman & Sivaganesan, 2007). Wilkinson (2006) provided a possible explanation for these dynamics through the historical influence of social inequality on social cohesion. Historically, when the gap in income inequality was narrower, there was more social cohesion and a sense of solidarity in society; as income inequality grew, so did social mistrust and conflict and consequently poorer health. The idea that social support and social cohesion positively impact health is known, but what is not known is if those factors can potentially inhibit the impact of SES on negative health outcomes.

**CULTURAL DETERMINANTS OF HEALTH**

As our understanding of the social determinants of health, well-being, and health disparities has advanced, evidence is accumulating that the determinants of health-related resources such as money, knowledge, power, prestige, social connections, physical environment, and social policies (Koh & Nowinski, 2010; Koh et al., 2010; Link & Phelan, 1995) are also shaped by cultural processes (Phelan, Link, Diez-Roux, Kawachi, & Levin, 2004). The cultural mechanisms that are associated with social determinants expand our understanding of ethnic minorities’ health vulnerabilities and manifestations of risk and resilience behaviors, and help to identify effective prevention and treatment approaches that would curtail the negative effects of minority status on health while strengthening protective elements of cultural backgrounds. Approaching health disparities as being directly or indirectly influenced by cultural processes is a holistic approach to understanding social determinants of health. Culture is a multidimensional and multilevel system that extends beyond beliefs and values to include biopsychosocial and ecological systems (Kagawa-Singer, Dadia, Yu, & Surbone, 2010). Culture encompasses the social, historical, political, and geographical lived experience of people, allowing them to create meaning, share experiences, and construct behaviors (Kagawa-Singer et al., 2010). Yet, little attention in the health disparities research has been given to culture as a contextual factor in health disparities (Adler, Boyce, Chesney, Cohen, & Folkman, 1994). Fluid, dynamic, and enveloping, culture is active long before a person gets sick or needs care.

Culture influences the pathways leading to illness and thereby patterns the need for and entry into health care where disparities emerge. Cultural norms, for
instance, dictate which health and risk behaviors are acceptable, and these behaviors have consequences for health and the emergence of health disparities (Cockerham, 2000). Culture also influences how people cope with everyday problems and adverse events, and how families are structured to support their members (DHHS, 2001). Cultural processes, such as immigration, acculturation, maintenance of cultural heritage, and development of ethnic and gender identity, all relate to people’s integration into society, their sense of self and belonging, and their access to and utilization of various resources, including health care and social services. For example, an immigrant’s limited English proficiency or inability to understand mainstream American forms of interaction may cause stress, and this stress may translate into negative health outcomes through various pathways. At the same time, the ability to speak one’s native language can promote feelings of connectedness and facilitate social integration with one’s cultural group, both serving as a source of strength and resilience in time of stress. They may also facilitate ties to coethnic sources of social and material support, leading to positive health outcomes. Viewed in this light, culture is more than a collection of beliefs and values: it is also a responsive and adaptive system that serves a function (Kagawa-Singer et al., 2010). Knowledge of the function of culture as well as cultural processes influencing health and health disparities is vital for designing and implementing prevention and treatment interventions at the population level and eliminating health disparities (Dreher & MacNaughton, 2002).

Cultural processes can directly influence health in a number of ways. Cultural norms for Mexican immigrants, for example, may permit or tolerate heavy episodic alcohol consumption by males but not females, thus resulting in different levels of risk by gender (Caetano & Medina-Mora, 1988; Kulis, Marsiglia, & Hurdle, 2003; Loury & Kulbok, 2007). Culture influences how people experience and cope with everyday problems and adverse events (DHHS, 2001) and how families are structured to support their members. Stress resulting from the ethnic minority experience and the acculturation process can produce ill effects and disease (Clark, Anderson, Clark, & Williams, 1999), but an individual’s social support system, which is closely related to culture or protective cultural processes, can buffer the effects of stress.

Culture also influences how families interact and deal with health disparities. For example, different types of family interactions predicted schizophrenia relapse in Mexican American and white families: in Mexican American families whose interactions featured distance or lack of warmth, but in white families whose interactions featured criticism (Lopez et al., 1998). Latino cultural norms, such as closely interdependent intergenerational families, religious values, strong commitment to family, and respect for adults, all serve to protect poor adolescents from teen parenthood (Denner, Kirby, Coyle, & Brindis, 2001).

The process of acculturation—adaptation to another culture—and its outcomes are associated with health. As acculturation progresses, the risk of greater
substance use generally grows (Marsiglia, Kulis, Wagstaff, Elek, & Dran, 2005; Marsiglia & Waller, 2002). Greater acculturation has been associated with lower HIV risk due to greater condom use, but also to higher HIV risk due to earlier and more frequent sexual activity (Marsiglia & Navarro, 1999). Very rapid acculturation processes have been associated with poorer mental health and greater substance use among youths and young adults (Castro, 2005).

Like acculturation, the cultural process of developing a strong ethnic identity as a member of an ethnic minority group is dynamic and associated with health. People who identify strongly with their cultural group, for example, have been found to report less substance abuse (Marsiglia, Kulis, Hecht, & Sills, 2004). Cultural orientation and traditionalism are key variables to consider in prevention for Native Americans (Kulis, Napoli, & Marsiglia, 2002; Stiffman et al., 2006). Research with Native Americans youths suggests that those in more traditional families have later ages of sexual initiation and higher rates of condom use (Mitchell, Kaufman, & the Pathways of Choice and Healthy Ways Project Team, 2002). Yet the effects of strong ethnic identity are not always protective (Marsiglia, Kulis, & Hecht, 2001): the effect of strong ethnic identity on mental health, for example, may vary by acculturation level, and in some cases may have a negative effect (Gamst et al., 2002).

Closely intertwined with acculturation and ethnic identity are associated stressors experienced by ethnic minority groups: acculturation stress, family acculturation gaps, and ethnic discrimination. These experiences of cultural dislocation and conflict can create stressors for Latino and Asian immigrants and their children that lead to deleterious health outcomes (Ayers et al., 2013; Kulis, Marsiglia, & Nieri, 2009; Kulis, Marsiglia, Yabiku, & Kopak, 2010). Ethnic discrimination affects mental health, self-esteem, and ethnic identity (Ayón, Marsiglia, & Parsai, 2010; Umaña-Taylor & Guimond, 2010; Umaña-Taylor & Updegraff, 2007). Parent-adolescent acculturation gaps may lead to externalizing and internalizing problem behaviors (Delgado, Updegraff, Roosa, & Umaña-Taylor, 2011; Marsiglia, Kulis, Fitzharris, & Becerra, 2010).

**PRACTICE AND POLICY IMPLICATIONS**

The evidence of social determinants of health that result in unequal outcomes in mortality and morbidity along a social gradient has implications for social work practice and significant policy implications. The social gradient itself is not fixed and can be changed by political, social, and economic shifts that make gaps in inequality more narrow (Marmot & Bell, 2009). In the United States the social gradient for life expectancy for both men and women has become steeper since 1980, reflecting the growing inequality in society as a whole (Woolf, Johnson, Fryer, Rust, & Satcher, 2004). It is easy to quickly assess the social gradient in
health outcomes as a function of access to quality health care, but health care only accounts for 10 percent of the variation in health statuses (McGinnis, Williams-Russo, & Knickman, 2002). Although access to quality health care is certainly essential to addressing health inequality, addressing social determinants of health that disproportionately affect individuals at the lower end of the socioeconomic spectrum may be essential to achieving health equality.

Social workers are ideally positioned to follow the recommendations that health disparities be addressed through a multilevel approach focusing on individual behaviors as well as on social conditions (Koh et al., 2010). This multilevel approach links the health of individuals and the health of the community (Koh, Nowinski, & Piotrowski, 2011). Thus, focusing only on single risk factors and proximal causes of disease will fail to explain and address the underlying causes of poor health outcomes. If health disparities are to be eliminated, interventions seeking to change individual risk factors need to integrate social determinants as fundamental causes of health and well-being (Koh et al., 2010; Link & Phelan, 1995). Interventions that effectively account for underlying causes of disease that affect multiple health outcomes, rather than single diseases, will have wider-reaching effects. Interventions should not incorporate only social determinants, poor health behaviors, and health outcomes to reduce health disparities effectively (Ansari, Carson, Ackland, Vaughan, & Serraglio, 2003), but should also account for the intersection of social statuses, geography, risk factors, and diseases that create and maintain health disparities (Koh et al., 2010). Interventions that account for these intersections and incorporate multiple levels of influence will be the ideal strategies for reducing and eliminating health disparities in socially vulnerable groups, such as racial/ethnic minorities (Koh et al., 2010). In turn, framing health disparities in this way will lead to interventions that empower ethnic minority communities because the multiple levels of their world are being integrated and incorporated to produce change (Koh et al., 2010).

Social determinants of health are complex and interconnected. Individuals are affected by stress in their job and in their neighborhood, and as a result of social exclusion. Children who are born into poverty and as a result have a lack of access to nutritious food, quality education, and early childhood medical care are more likely to remain poor and experience negative health outcomes in adulthood. The experiences of stress in childhood may make a person more sensitive to stressful experiences in adulthood. The complexity and interconnectedness of social determinants of health and their impact on health behaviors makes them more difficult to address (Braveman et al., 2011). Despite the complexity, as we discover more about what is driving health inequalities, examples of how social workers can partner with community to address social determinants of health proliferate. Here are a few.

In an effort to address conditions in the home that may determine a child’s educational trajectory even before he or she enters school, a program called Baby
College was developed as part of the cradle-to-college wrap-around services provided by the Harlem Children Zone. In Baby College, parents with infants attend classes on topics ranging from brain development and the importance of reading to your child to immunizations. Baby College’s goal is to give children in the Harlem neighborhood a fair start on the pathway to college, knowing that by addressing early childhood education they are addressing educational attainment and a variety of health outcomes.

A residential neighborhood outside the port city of Oakland, California, used science to advocate for a healthier living environment. East Oakland was the main route for diesel trucks carrying goods out of the port, which subjected the neighborhood residents to excessive toxic exhaust and noise. The neighborhood was also experiencing childhood hospitalization for asthma twice as high as the entire county. To address this health inequality, the neighborhood partnered with a local university to develop a device so that residents could collect air quality samples. The result of the test showed that the neighborhood had extremely high levels of a particulate matter. These data were used to advocate that the truck route be diverted out of the neighborhood (Communities for a Better Environment, 2010).

In his neighborhood in South Central Los Angeles, Ron Finley decided to address the lack of access to healthy food by starting an organization; LA Green Grounds converts vacant lots and city spaces into gardens full of fresh fruits and vegetables. Engaging the community in gardening projects not only increased their access to health foods in a food desert, but also educates participants about nutrition and risk factors for diabetes.

By definition, health inequities are an injustice. Social workers have a critical role to play in reducing health inequity in both micro and macro social work practice. To reduce health disparities, social workers may need to shift their thinking when approaching community-wide health issues (such as from treatment to prevention) and from immediate health behaviors (such as substance abuse and exercise), to more distal factors (such as access to healthy foods, employment, and chronic stressors) (Braveman et al., 2011). Social workers in direct practice frequently work with clients to increase coping mechanisms to decrease stress. Working to minimize the impact of stress on individuals is crucial to reducing health inequality, but social workers may also want to address the underlying sources of stress and reduce the number and severity of stressors that clients need to cope with on a daily basis. Addressing stressors at the source, and early in life, may take a more macro or upstream approach. By working to create less-stressful work, school, and institutional environments, and by providing safety-net services that reduce financial stress, social workers are addressing health inequality.

The Commission on Social Determinants of Health (2008) recommends three action steps:

1. Improve the living conditions in which people are born, grow, work, live, and age.
2. Improve the inequitable distribution of resources and power, which is the structural driver of daily living conditions.
3. Expand the knowledge base by measuring the problem and evaluating the impact of action.

Social workers can address these action steps by working with individual clients in direct practice to identify aspects of their social environment that may be compromising their health. Social workers can help clients recognize, draw from, and build up protective factors in health such as social support. They can partner with communities to identify neighborhood conditions that may be undermining health and work to actively address them by challenging policymakers to consider the impact of legislation on social determinants of health.