Published in final edited form as:
Issues Ment Health Nurs. 2012 July ; 33(7): 494–497. doi:10.3109/01612840.2012.662581.

Social Determinants of Health Status

Jacquelyn H. Flaskerud, RN, PhD, FAAN and
University of California—Los Angeles, School of Nursing, Los Angeles, California, USA

Carol Rose DeLilly, RN, MSN [Doctoral Student]
University of California—Los Angeles, School of Nursing, Los Angeles, California, USA

Socioeconomic status (SES) has been identified as a fundamental cause of disease (Link & Phelan, 1995, 1996; Phelan et al., 2004; Phelan, Link, & Tehranifar, 2010). People who are poor and powerless have worse health and longevity than those with money, power, and prestige. This situation was true during the times when infectious diseases were major killers and there was poor sanitation and overcrowding. It is equally true today when infectious diseases and crowding are no longer a threat in the US, but instead cancers and heart disease are the major causes of morbidity and mortality. People with lower SES continue to be the group that experiences the highest rates of morbidity and age-adjusted mortality from these more modern diseases, stimulated by risk factors such as poor nutrition, lack of exercise, and smoking that are more common in lower SES groups (Phelan et al., 2010). In order to explain this persistence across time, Link and Phelan (1995) proposed the theory that social conditions were the fundamental cause of the health disparities that exist between people without socioeconomic resources and those with these resources.

It is instructive to revisit the fundamental social cause theory of health disparities and to review the evidence that has accumulated supporting it over the years. Socioeconomic status as a fundamental cause of health inequalities has four essential features (Link & Phelan, 1995). First, it influences multiple disease outcomes, meaning that SES is not limited to only one or a few diseases or health problems but to many. Second, SES affects these disease outcomes through multiple risk factors (currently things such as smoking, diet, exercise). Third, it involves access (or lack of access) to resources that can be used to avoid risks or to minimize the consequences of disease once it occurs. Finally, the association between a fundamental cause and health status is reproduced over time via the replacement of intervening predisposing factors (e.g., overcrowding and poor sanitation replaced by lifestyle choices and behaviors); that is, SES continues to influence health inequalities even when the susceptibilities to major morbidity and mortality change over time (Link & Phelan, 1995). An important reason that SES is related to multiple disease outcomes through multiple pathways that change over time is that individuals and groups with high SES deploy resources to avoid risks and adopt protective strategies. Link and Phelan (1996) identified money, knowledge, power, prestige, and beneficial social connections as the serviceable resources that people with high SES mobilize purposefully to avoid risks and minimize the consequences of disease once it occurs. These resources can be used no matter what the risk may be or the protective behaviors called for in any given circumstance. Therefore, fundamental causes affect health even when the profile of risks, protective factors, and disease expression changes completely. It is the consistent association of SES

Address correspondence to Jacquelyn H. Flaskerud, School of Nursing, University of California, 700 Tiverton Ave, Factor Building, Box 951702, Los Angeles, CA 90095-1702. jflasker@earthlink.net.

Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

with overall health status in the face of dramatic changes in the predisposing factors to disease that led Link and Phelan to call SES a “fundamental” cause of health inequalities (Phelan et al., 2010).

Despite the researchers having spent over 15 years developing, explaining, testing, and demonstrating evidence of the link between SES and morbidity and mortality, it is still misunderstood by many in the scholarly and research communities. This fact came home to me again recently in dealing with a young colleague who was searching for a theoretical framework to explain the disproportionate occurrence of hypertension in African Americans. This colleague was not advised to examine socially-based determinants of health as explanatory variables, but only individually-based determinants such as diet and exercise. When the vulnerable populations conceptual model was proposed in the late 1990s, I (Flaskerud) was often frustrated by my inability to persuade my associates of the explanatory value of “availability of resources” (money, status, social connections) in predicting health status (Flaskerud & Winslow, 1998). My colleagues were skeptical of the important influence of resources and would call them “the demographics—I know—we measure those.” In Link and Phelan’s (1995) case, medical and epidemiologic researchers dismissed SES as a less critical confounding variable and focused on lifestyle factors as the explanation for inequalities in health status.

When Link and Phelan (1995) described SES as a fundamental cause of health disparities, they acknowledged the gains that medical science has made in identifying risk factors for major diseases. However, they observed that most of this research has focused attention on risk factors that they identified as relatively proximal causes of disease such as diet, cholesterol level, exercise, and the like. They argued that there is a lack of context in this emphasis on such individually-based risk factors and that greater attention must be paid to basic social conditions: low economic and social status (SES), powerlessness, and lack of beneficial social connections. They identified these social conditions as distal factors—those that put people at risk of risks. Social conditions are fundamental causes of health disparities because they are primary (occur first), exemplify access to important resources, affect multiple disease outcomes through multiple risk factors, and maintain an association with disease even when intervening predisposing factors change. Socioeconomic status is a fundamental cause of health disparities because SES embodies an array of flexible resources, such as money, knowledge, prestige, power, and beneficial social connections that protect health no matter what the major predisposing factors of morbidity and mortality are at any given time (Link & Phelan, 1995; Phelan et al., 2004; Phelan et al., 2010).

First writing at the time of President Clinton’s attempt at health care reform, Link and Phelan (1995, 1996) were interested in identifying the critically missing factors that they theorized were necessary to craft effective interventions and improve the nation’s health. They were concerned that without careful attention to the social determinants of health, we as a country would run the risk of imposing individually-based intervention strategies that are ineffective and that we would miss the opportunity to adopt broad-based societal interventions that could produce substantial health benefits for our citizens. Through the intervening years, between the 1990s and the present, Phelan, Link, and colleagues (2004, 2010) have worked consistently to test their theory and to provide evidence supporting it. Empirical support for the theory lies in examining evidence of each of the four essential features of SES as a fundamental cause: (1) evidence that SES influences multiple disease outcomes; (2) evidence that SES is related to multiple risk factors for disease and death; (3) evidence that the mobilization of resources plays a crucial role in the association between SES and disease prevention and treatment and longevity; and (4) evidence that the association between SES and morbidity and mortality continues over time, even when the

major predisposing factors to disease and death change with advances in public health and medicine.

EVIDENCE THAT SES INFLUENCES MULTIPLE DISEASE OUTCOMES

There is ample evidence of the association between SES and multiple disease outcomes (National Center for Health Statistics [NCHS], 2010). Lower socioeconomic status as reflected in poverty, minority status, and low education levels is consistently related to higher occurrence of a range of major diseases including cancer, heart disease, stroke, and diabetes, and to fair or poor health status (NCHS, 2010). Additionally, low SES (individual poverty, income inequality, and area level poverty) was related over a 25-year period to mortality even when the causes of death changed over time (Galea et al., 2011).

EVIDENCE THAT SES IS RELATED TO MULTIPLE RISK FACTORS FOR DISEASE AND DEATH

There is more than enough evidence that SES is related to multiple risk factors for disease and death. Behavior and lifestyle choices such as smoking, lack of exercise, poor diet, and obesity have been related to cancers, heart disease, stroke, and diabetes. These risk factors have been found to be greater in persons with low SES than higher SES (Center for Health Statistics Study, 2008). Unprotected sexual activity, drug use, and needle sharing are linked to sexually transmitted diseases and other infectious diseases (Rubin, Colen, & Link, 2010). Other reported risk factors for disease have been identified as chronic stress, social isolation, and lack of preventive care (Phelan et al., 2010).

EVIDENCE THAT THE MOBILIZATION OF RESOURCES PLAYS A CRUCIAL ROLE IN THE ASSOCIATION BETWEEN SES AND DISEASE PREVENTION AND TREATMENT AND LONGEVITY

Testing the importance of resources is difficult, because it requires separating the ability to use socioeconomic resources from SES itself. This would require creating a situation in which high SES persons cannot use their socioeconomic resources to minimize the consequences of disease. Such a situation occurs naturally when the causes and cures of fatal diseases are unknown. In these circumstances, socioeconomic resources cannot be used to avoid death due to these diseases, because it is not known how the resources should be used (Phelan et al., 2010). In 2004, Phelan and colleagues identified a situation in which resources should be less helpful in prolonging life, and tested the following hypothesis: For less preventable causes of death (for which we know little about prevention or treatment), socioeconomic status will be less strongly associated with mortality than for more preventable causes. They used data from the National Longitudinal Mortality Study which followed Current Population Survey respondents (N = 370,930) for mortality for nine years. Two physician-epidemiologists rated causes of death that were highly preventable (such as lung cancer and ischemic heart disease) and causes that were not very preventable (such as brain cancers and arrhythmias). The researchers found that socioeconomic inequalities in mortality were significantly more pronounced for causes of death that rated as being highly preventable, and thus more amenable to the application of flexible resources, than for causes that were rated as not very preventable. These findings lend support to the theory of fundamental causes and the importance of socioeconomic disparities associated with mortality.

EVIDENCE THAT THE ASSOCIATION BETWEEN SES AND MORBIDITY AND MORTALITY CONTINUES OVER TIME, EVEN WHEN THE MAJOR CAUSES OF DISEASE AND DEATH CHANGE

In order to support this feature of fundamental cause theory, it is necessary to show that the SES-health gradient shifts in favor of high SES individuals following the development of new knowledge, such as new treatments or cures for diseases or effective methods to prevent disease. A temporal relationship would be expected in the emergence of new knowledge with a decline in the rates of a particular disease among persons with high SES while those with low SES would experience relatively higher morbidity and mortality. Examining several studies with multiple disease outcomes, Phelan and colleagues (2010) found that new knowledge about the effects of smoking on lung cancer and heart disease, of cholesterol levels on cardiovascular disease, the use of hormone replacement therapy (HRT) on breast cancer incidence, and the effects of highly active antiretroviral therapy (HAART) on the course of HIV/AIDS led to new preventive measures and treatments. Likewise, in turn, these new approaches led to a decline in morbidity and mortality rates for higher SES persons and relatively higher mortality for less advantaged groups.

In summary, there is mounting evidence in support of the theory of fundamental causes when each of the four essential features is examined. There are health policy implications that flow from these findings. In addition to policies that encourage medical and other health-promoting advances, policies that break or weaken the link between these advances and socioeconomic resources are needed. According to Phelan and colleagues (2010) this could be accomplished by reducing disparities in socioeconomic resources themselves or by developing interventions that, by their nature, are more equally distributed across SES groups.

An additional issue requires attention and explanation: the association of race/ethnicity to health status. Some of the studies that tested fundamental cause theory used race/ethnicity as a stand-in for SES, contrasting rates of morbidity and mortality among whites and racial/ethnic minorities (see, e.g., Kreiger, Chen, & Waterman, 2010; Rubin et al., 2010). In one study using race as an explanatory variable, the incidence of breast cancer was examined after the association of HRT with breast cancer was established. US breast cancer incidence rates began falling in the years after this association was made. However these falling rates were found to occur only in white non-Hispanic women who lived in high-income counties, and were age 50 or older, and not among black non-Hispanic, Asian/Pacific Islander, Hispanic, or American Indian/Alaskan Native women regardless of county income level or age (Krieger et al., 2010). In another study using race as an explanatory variable, Rubin et al. (2010) examined SES and black to white inequalities in HIV/AIDS mortality in the US before and after the introduction of HAART. Higher SES and white race were associated with the greatest declines in mortality during the post HAART period.

Findings such as these may lead to confusion about the influence of race/ethnicity on health outcomes. Race and ethnicity are linked to health outcomes not because of race or ethnicity per se, but because racial/ethnic minorities experience low SES. That is, they are poorer and have fewer flexible resources (power, knowledge, prestige, and beneficial social connections) than their majority counterparts to avoid risk and minimize the consequences of disease once it occurs. These are important distinctions to understand; race/ethnicity acts as an indirect measure of SES only because racial/ethnic minorities experience consistently lower SES.

Why is it so often the case that race/ethnicity can serve as a proxy for SES? Jonathan Mann attributed this association to discrimination. In 1998, he spoke of the societal context to the taxonomy of health. He said that lack of resources and power, discrimination, and violation of human rights were primary pathogenic forces in creating health disparities (Mann, 1998). Working principally in the area of HIV/AIDS worldwide epidemiology, Mann and Tarantola (1996) asserted that regardless of where and among whom HIV entered a country, the brunt of the epidemic gradually and inexorably turned toward those who bear the societal burden of stigma, discrimination, and marginalization: the poor, minorities, the dispossessed—women, children, gay men. Examining the spread of the epidemic, they found that, over time, in every country, HIV/AIDS revealed a pattern of affecting people who were marginalized, stigmatized, and discriminated against. According to this explanation, discrimination against racial/ethnic minorities is at the root of their low social and economic status.

While discrimination can explain low SES what about the effects of racism on health? Racism is an attitude toward a racial group just as sexism is toward a gender group and ageism toward an age group. But racial (or ethnic) discrimination is a behavior carried out against a racial or ethnic group. The question has been raised whether racial discrimination in and of itself could explain poor health outcomes. An upcoming column will address this issue from a theoretical and research perspective.

Acknowledgments

Carol Rose DeLilly is supported by NIH/NINR T32 NR007077 Health Disparities and Vulnerable Populations Research Training Grant.

REFERENCES

Center for Health Statistics Study. Behaviors: The actual cause of death. Health Policy and Evaluation Research. 2008; 7(6):1–12. Retrieved from http://www.dchd.net/files/Behavioral%20Risk%20Factors.pdf.

Flaskerud JH, Winslow BW. Conceptualizing vulnerable populations' health-related research. Nursing Research. 1998; 33:69–78. [PubMed: 9536190]

Galea S, Tracy M, Hoggatt KJ, DiMaggio C, Karpati A. Estimated deaths attributable to social factors in the United States. American Journal of Public Health. 2011; 101(8):1456–1465. [PubMed: 21680937]

Krieger N, Chen JT, Waterman PD. Decline in US breast cancer rates after the women's health initiative: Socioeconomic and racial/ethnic differentials. American Journal of Public Health. 2010; 100:S132–S139. [PubMed: 20147667]

Link BG, Phelan JC. Social conditions as fundamental causes of disease. Journal of Health and Social Behavior. 1995; 35:80–94. (Extra Issue). [PubMed: 7560851]

Link BG, Phelan JC. Understanding sociodemographic differences in health—The role of fundamental social causes. American Journal of Public Health. 1996; 86(4):471–473. [PubMed: 8604773]

Mann JM. Society and public health: Crisis and rebirth. Western Journal of Medicine. 1998; 169:118–121. [PubMed: 9735698]

Mann, JA.; Tarantola, D. Societal vulnerability: Contextual analysis. In: Mann, JA.; Tarantola, D., editors. AIDS in the World II: Global dimensions, social roots, and responses. New York, NY: Oxford University Press; 1996. p. 444-467.

National Center for Health Statistics. Health United States 2010: With chartbook on trends in the health of Americans. Hyattsville, MD: 2010. Retrieved from http://www.cdc.gov/nchs/data/hus/hus10.pdf#056

Phelan JC, Link BG, Diez-Roux A, Kawachi I, Levin B. "Fundamental causes" of social inequalities in mortality: A test of the theory. Journal of Health and Social Behavior. 2004; 45(3):265–285. [PubMed: 15595507]

Phelan JC, Link BG, Tehranifar P. Social conditions as fundamental causes of health inequalities: Theory, evidence, and policy implications. Journal of Health and Social Behavior. 2010; 51(1 suppl):S28–S40. [PubMed: 20943581]

Rubin MS, Colen CG, Link BG. Examination of inequalities in HIV/AIDS mortality in the United States from a fundamental cause perspective. American Journal of Public Health. 2010; 100(6): 1053–1059. [PubMed: 20403885]