

New Directions.

The Social Context of Stress and Prevention Research

James House
Survey Research Center and Department of Sociology
University of Michigan, Ann Arbor

The scope, depth and quality of these chapters provides a superb introduction to the focal concerns of this collection—the role of social stress and moderating resources in the etiology and course of mental health and their implications for prevention research. Pearlin and Turner have provided many excellent conceptual and empirical insights into the stress process, especially the interrelations among stressors, moderating resources, and outcomes. To get a sense of the progress made over the past quarter-century in conceptualizing, empirically investigating, and truly understanding the stress process, one need only compare this discussion and analysis and those that follow to those of the late 1960s and early 1970s (e.g. House, 1974; Levine and Scotch, 1970).

Although the general stress process paradigm has not changed greatly, we now have a much more nuanced understanding of all parts of it. For example, we are much more sophisticated about different forms of stress-- chronic and acute-- and the relationships among them; we recognize social integration, social networks, and perceived and actual social support to be different phenomena with complex and not yet fully understood interrelations; we understand that stressors can alter moderating resources and vice versa; and we know that the impact of putative stressors is not always adverse and the effect of moderating resources, such as social support, not always benign. All of this we have learned by more intensively analyzing components of the stress process, singly or in combination. This increased knowledge and understanding can inform prevention and intervention research and programs and in some cases already has, as in some of the ongoing efforts of the Prevention Research Centers at Michigan and elsewhere described in this collection.

However, the most important lesson of this chapter, and I hope of the larger conference, is that we need to draw back from increasingly sophisticated analyses and dissections of the stress process to understand the larger contexts that influence all variables in the process and the relationships among them. This more macro or contextual view yields new insights into the stress process and into potential preventive interventions.

In several ways Pearlin illustrates how to take this more macro or molar perspective as well as the value of doing so. Let me first underscore and elaborate on Dr. Pearlin's point that stress research in all its forms must transcend the traditional tendency to focus on single diseases as outcomes-- a tendency that arises from and is embedded in the very structure of the National Institutes of Health and the paradigm of specific etiology that underlies this structure. Biomedical research and practice developed in the 19th and early 20th centuries when the major problems were infectious and communicable diseases, each of which was believed to have a specific biological etiologic agent, and in most cases did. The goal was to identify that agent-- be it a virus, bacterium or toxin-- and to develop mechanisms for destroying or neutralizing it either before or after it infected a host organism. The approach had notable success, none more striking than the development of the polio vaccine years ago.

We now recognize, however, that the paradigm of specific etiology provides only a partial and limited understanding of the problem of infectious and communicable diseases, because the incidence and course of such diseases are as much a function of the ability of the host to resist disease as of the ability of the agent to produce disease. Thus, the most prolific killer of all infectious diseases in 19th century Europe and America—tuberculosis—was substantially brought under control before the tubercle bacillus was discovered, much less subject to effective pharmacological treatment (Mc Keown, 1988). The causes of the decline of tuberculosis and its recent resurgence are to be found not primarily in the distribution of the bacillus, which has been and is widespread, but rather in the distribution of resistance to the bacillus. That resistance became increasingly widespread as the nutrition, living conditions, and general socioeconomic level of the population improved, yet remains weak in economically deprived populations or those with compromised immune systems, groups that are again growing in size in the United States and other nations.

Extension of the paradigm of specific etiology to the modern pandemic of chronic physical and mental disorders or diseases is even more problematic, especially in exploring the psychosocial determinants of health and illness. As Pearlin observes, almost any major psychosocial stressor or moderating resource relates to multiple physical and mental disorders. Discovery and understanding of such psychosocial sources of ill health are not likely to occur in a research paradigm that focuses on a particular disease outcome and works back from the outcome toward its presumably specific causes. Yet this is how research typically operates when it is structured as NIH is in terms of specific outcomes and diseases. Research is also needed that focuses on broader outcomes of health and illness and works forward from major psychosocial phenomena to understand their multiplicity of outcomes. Pearlin astutely observes, “When the generality of its effects if taken into account, the significance [of a stressor condition] to mental and physical health is ...even more profound and far reaching than we ordinarily assume it to be.” We need to build multiple outcomes into all research and interventions on the stress process and psychosocial risk factors to health. Determining what variables to study or make the focus of our research and interventions must be guided by social theory as well as psychological and biological theory.

The failure to approach research and interventions on the stress process in this way may explain why Pearlin and the broader research community studying psychosocial factors and health have only recently come to rediscover the importance of major dimensions of social inequality-- race/ethnicity, gender, and especially socioeconomic status (SES)-- for understanding the stress process and the nature of physical and mental health in society. In his paper and in his work over the past 5 to 10 years, Pearlin and others have tried to show that structured social inequalities have pervasive effects on health because they have pervasive effects on the distribution of- or exposure to- both stressors and moderating resources. I focus here on SES, where the theoretical and empirical picture is perhaps simplest and clearest, while recognizing that similar, if sometimes more complex and nuanced, arguments can be made regarding both gender and race/ethnicity.

Pearlin argues theoretically and Turner shows empirically that almost all consequential stressors and moderating resources vary by SES, with persons in lower socioeconomic strata having more of the stressors, both acute or event-related and chronic, and less of the moderating resources, such as social support and mastery, self-efficacy, and self-esteem. Our own research on the role of behavioral and psychosocial factors in maintaining physical and mental health in middle and later life shows consistent SES differences in physical health and mortality. It also shows that SES persons in lower socioeconomic strata not only have more of the stress and less of the moderating resources that Pearlin and Turner discuss, but also have poorer health behaviors or lifestyles, as indexed by cigarette smoking, lack of physical activity, and immoderate levels of alcohol consumption and weight or body mass. Adjusting for SES differences in this broad array of risk factors for health accounts for most of the substantial SES differences in health outcomes, such as chronic conditions or functional status, just as it is possible to account for SES differences in depressive symptoms and diagnosis of major depressive disorders (House et al., 1990, 1992, 1994).

House et al., 1994 illustrated that the findings on SES and mental disorders can be generalized in terms of both the populations studied and the particular indicators of both SES and health. In a national probability sample of adults aged 25 or older in the contiguous United States, socioeconomic differences in physical health, as indexed by education and functional status, respectively, are small in early adulthood, increase through middle and early old age, and then decline in late old age. The measure of functional status ranges from “confinement to a bed or a chair, through ability to walk several blocks or climb several flights of stairs, to the ability to do heavy work around the house such as washing walls or shoveling snow,” and is shown as the proportion of people reporting no limitations in any of these activities. SES is indexed in terms of level of education, but we find very similar results for income.

These differences in functional status by education and age are partly explainable by differences in income that are produced by education and age. Most importantly, the remaining differences in education are almost entirely explained by differences across educational levels in a dozen or so social risk factors for health (including smoking, immoderate drinking, relative weight, social relationships and support, chronic and acute stress, and self-efficacy). We are similarly able to explain differences in functional status by income, and find similar results when the health outcome is a measure of chronic conditions (House et al., 1994). Thus, our research on SES, age, and physical health is entirely consistent with Pearlin's argument that levels of social stresses and resources, which affect greatly both physical and mental health, are themselves determined by individual position in the larger system of social stratification by SES, race/ethnicity, or gender. If I find any fault in the papers in this collection, it is that most do not push these theoretical ideas and empirical findings far enough in terms of their implications for both research and prevention. SES and its correlation and conjunction with racial/ethnic and gender statuses, as in the very high rate of morbidity and functional status limitations among poor African-American women, shape exposure to stressors and moderating resources and also to risky health behaviors or lifestyles, physical-chemical hazards, and deprived or hazardous living environments.

Pearlin notes, "Theoretically, then, preventive efforts are most effective when they appropriately alter the conditions of life as perceived by status groups who are differently at risk for particular stressors." But he continues, "In reality, however, preventive strategies aimed at stress-related conditions associated with statuses are difficult to initiate... .In general, status hierarchies and the inequalities they embody are highly resistant to change through purposive planning. This seems to be especially true in the case of economic stratification, which is the most pivotal in regard to risk of exposure to stressors," and I would add to most other major behavioral, environmental, and psychosocial risk factors to health. Pearlin recognizes that "systems of inequality...do change over time, usually as a result of struggle and conflict," but also notes that such change is unlikely in the short-run and that even when it occurs it takes some time for its impact on health to become manifest.

These cautions are appropriate, but ought not to dissuade us from pursuing a potentially very fruitful line of research and intervention. Systems of inequality, including those based on economic stratification, do change significantly and regularly in response to both naturalistic processes, such as economic growth and decline, and planned interventions, such as public and private policies regarding income distribution, taxation, and the provision of basic social welfare services and supports (see Danziger's later discussion). Over the past several decades, the United States has lagged increasingly behind other major industrialized societies in population measures of physical health such as life expectancy (and perhaps mental health as well, although cross-national comparative work on the social epidemiology of mental disorders is still under development). This decline has occurred despite the United States' continued high level of economic productivity and its preeminent position in spending for and quality of advanced biomedical research and medical care (House, 1994). Wilkinson (1994) and colleagues have shown that both at a single point in time and across time, levels of population health in advanced industrialized nations or changes therein are predicted not by absolute levels of the gross national product (GNP), and also not by spending on medical care, but rather by the relative equality of the distribution of income or changes therein. Through very different mechanisms, both Japan and the Scandinavian countries of Europe have achieved high levels of, or rapid progression toward, equality of income distribution, and they have concurrently achieved similarly high levels of and improvement in population health.

The political difficulties of achieving similar changes in the United States cannot be minimized. Yet, there is every reason to focus our research and prevention efforts increasingly on already existing naturalistic or planned changes in levels of social and especially economic deprivation and stratification. Several ongoing longitudinal studies are examining socioeconomic position and health, but there are no studies that analyze both well and hence allow for non-experimental analysis of the health effects of income change (or vice versa). We could advance epidemiological research by incorporating more and better measures of health into ongoing socioeconomic studies (e.g., the Panel Study of Income Dynamics, National Longitudinal Surveys, Survey of Income and Program Participation) and better socioeconomic measures into ongoing health surveys (e.g., the National Health Interview Survey, National Health and Nutrition Examination Surveys, and National Longitudinal Mortality Survey).

Although many social programs and much intervention research are focused on both health and on social welfare and income, again we fail to capitalize on opportunities to evaluate the health effects of social welfare or economic programs or the degree to which health-directed preventive interventions are more or less effective as a function of socioeconomic context. All these research projects and programs could also be enriched by a judicious inclusion of measures of the kinds of social stressors and resources that the Pearlin paper delineates so well. Building a better foundation of epidemiologic and prevention research on these problems is one way that we may come to affect broader social policy, though by no means the only or quickest way.

A focus on the broader social context of stress and prevention research, which I join Pearlin and Turner in urging, is clearly a *complement*, not an alternative, to continuing epidemiologic and prevention research on the effects of social stressors and resources on mental and physical health. It is a very needed and necessary complement, which these papers appropriately bring to the forefront of this volume.

References

- House, J. S. (1974). Occupational stress and coronary, heart disease: A review and theoretical Integration, *Journal of Health and Social Behavior*, 15,12--27.
- House, J. S. (1994). Synthesis. In S. J. Blumenthal, K. Matthews, & S. M. Weiss (Eds.), *New research frontiers in behavioral medicine: Proceedings of the National Conference* (pp. 165-168). Washington, DC: NIH Health Behavior Coordinating Committee and the National Institute of Mental Health.
- House, J. S., Kessler, R. C., Herzog, A. R., Mero, R. P., Kinney, A. M., & Breslow, M. J. (1990). Age, socioeconomic status, and health, *The Milbank Quarterly*, 68,383-411.
- House, J. S., Kessler, R. C., Herzog, A. R., Mero, R. P., Kinney, A. M., & Breslow, M. J. (1994) Social stratification, age, and health. In K. W. Schalie, D. Blazer, & J. S. House (Eds.), *Aging, Health Behaviors, and Health Outcomes* (pp. 1-32). Hillsdale, NJ: Erlbaum.
- House, J. S., Lepkowski, J. M., Kinney, A. M., Mero, R. P., Kessler, R. C. & Herzog, A.R. (1994). The social stratification of aging and health, *Journal of Health and Social Behavior*, 35,213--234.
- Levine, S. & Scotch, N. (1970). *Social stress*. Chicago: Aldine.
- Mc Keown, T. (1988). *The origins of human disease*. London: Blackwell.
- Wilkinson, R. G. (1994). The epidemiological transition: From material scarcity to social disadvantage, *Daedalus*, 123,61-78.