Guest Editorial

Stress, Social Support, Coping, and Adjustment

Jack H. Medalie, MD, MPH Cleveland, Ohio

Since antiquity it has been known that emotional upsets can influence behavior and moods and even lead to illness. The explanations of these effects and the treatment varied depending on whether the current society believed in magic, superstition, or religion. With the advent of scien-

From the Department of Family Medicine, Case Western Reserve University, Cleveland, Ohio. Requests for reprints should be addressed to Dr. Jack H. Medalie, Department of Family Medicine, Case Western Reserve University, 2119 Abington Road, Cleveland, OH 44106. tific observation and analysis in terms of germ theory and linear univariate thinking relative to causation, the influence of psychosocial aspects, or the social environment on disease, became less accepted. Even today most medical schools do not teach psychosocial or behavioral science as part of their core curriculum, but rather hope that the students will receive some of this training from their clinical teachers in the hospital setting. At best, this is a rather forlorn hope!

During the pre- and post-World War II era, a number of publications by Walter Cannon,¹ Hans Seyle,² Harold Wolff,³ and Rene Dubos⁴ led to newer concepts of stress and disease. Building on the work of these pioneers, as well as on the work of many animal experimenters such as Liddell,⁵

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Conger et al,⁶ and Henry et al,⁷ John Cassel, in a number of seminal articles in the early 1970s,⁸⁻¹⁰ developed formulations of psychosocial processes, stress, and social support that in many respects revolutionized our way of thinking. Cassel's concepts were also very much in keeping with Bowlby's attachment theory,¹¹ which states that positive interaction with trusted others is essential for well-being.

Two of the many people influenced by Cassel and his work in North Carolina were McKay and Blake, who with some colleagues have published an interesting article in this issue.¹² They report on a six-month incidence study in a stable community in which 480 volunteer patients kept a record of their stressful life changes, their supportive relationships as they perceived them, and their illnesses during this period.

Their results showed that the group who perceived themselves as having high stress had 1.6 (male) and 1.8 (female) times more illness episodes than those with low levels of stress. Note also that taken into consideration were all types of stress as perceived by the volunteers and all types of illness, in keeping with one of Cassel's hypotheses that the effect of stressful situations depends on the way the person perceives it. Cassel further stated that psychosocial stress does not lead to a specific illness but rather increases the individual's susceptibility to any kind of disease depending on the individual's genetic makeup and the risk factors that were present prior to the stress(or). McKay et al did not measure specific illnesses, but rather measured all types of illnesses in keeping with this formulation.

In a number of studies Cassel showed that those who were exposed to high levels of stress and simultaneously who had poor social support were more susceptible to illness. The interaction of stress with degree of social support was the key element. McKay et al showed this very well for women in which those with high numbers of life change events and low perceived support had 2.5 times as many illnesses as did the group with low life changes and high support. Interestingly, this configuration did not hold up for the men in the study, a result for which the authors have no plausible explanation.

This inconsistency highlights one of the problems in the social support field. While most studies (Broadhead et al¹³ and Berkman's reviews¹⁴) show the pattern that support reduces rates of illness, general mortality, and complications of pregnancy, aids recovery from serious conditions, and promotes adherence (compliance), there are many inconsistencies in the results and even one negative report (Reed¹⁵). Such inconsistency could be due to many factors: a lack of clarity as to the components of support, difficulties in measurement (Bruhn¹⁶), the interrelation of and overlapping between stressors and support variables (death of a spouse is both a stressor and loss of support), or a problem with the conceptualization of where and how support fits into the overall model.

Support is usually considered to cover the following areas: emotional support, esteem support, informational support, instrumental support, material support, and active (mothering) support. This support occurs through a small number of intimate and trusted individuals or through large networks of community relatonships. Thus, there is both a quality and quantity to support. Both of these elements are important, but when compared, the perceived quality of the support appears to be more important. It is also worth keeping in mind that support and networks can have negative as well as positive effects.

Hamburg and Killilea¹⁷ summarize the underlying hypotheses of the support theories to be as follows:

1. Social support can have a *direct effect* on health.

2. Social support provides a *buffer* against effects of high stress (as shown in the article by McKay et al for women only).

3. Social support has a *mediating effect* that stimulates the development of coping strategies and promotes mastery.

4. Lack of social support *exacerbates the impact* of stressful life events.

Note that while hypotheses 1, 2, and 4 are often discussed, the mediating effect that stimulates coping strategy is an important hypothesis which is seldom reported. Coping strategies can be considered to include affective (emotional) strategies, cognitive (informational) strategies, and instrumental (tangible) strategies. Methods of coping, which include the above strategies to promote human relationships, supportive networks, acqui-

Stressors perception of Life change events: Heredity Transitions Biology Crises Psychology Daily hassles Life cycle stage Chronic disease onset Past experiences: Severity of stressor General Specific Personality and maturity Locus of control Self-sufficiency Health status D D	Affective Cognitive Instrumental Cultural beliefs Societal influences Family relationships Peer and work relationships Eamily functioning	From adjustment, good functioning, and no change or improvement in health status to Maladjustment dysfunc- tion and deterioration of health status D
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stressors, C = mediates effect of stressors and improves coping, D = direct effect on health status

sition of information, and development of new skills, have much to offer in promoting health (Hamburg and Killilea¹⁷).

To place stress and support into an overall concept, Figure 1 is a diagram of an adjustment model to demonstrate how and where support enters the

picture. For purposes of this editorial, the diagram appears linear and unidirectional, but in actuality it is neither. If this model is an acceptable summary of the state of the art as we understand it, it has numerous important implications for family practice.

References

1. Cannon WB: Stresses and strains of homeostasis. Am J Med Sci 1935; 189:1-14

2. Seyle H: The general adaptation syndrome and diseases of adaptation. J Clin Endocrinol 1946; 6:117-230

3. Wolff HG: Life stress and bodily disease. Res Publ Assoc Res Nerv Ment Dis 1949; 29:3-1135

4. Dubos R: Man Adapting. New Haven, Yale University Press, 1965

5. Liddell H: Some specific factors that modify tolerance for environmental stress. In Wolff HG (ed): Life Stress and Bodily Disease. Baltimore, Williams & Wilkins, 1950, pp 155-171 6. Conger JJ, Sawrey W, Turrell ES: The role of social

experience in the production of gastric ulcers in hooded rats placed in a conflict situation. J Abnorm Psychol 1958; 57:214-220

7. Henry JP, Meehan JP, Stephens PM: The use of psychosocial stimuli to induce prolonged hypertension in mice. Psychosom Med 1967; 29:408-432

8. Cassel JC: Psychosocial processes and stress. Int J Health Serv 1974; 4:471-481 9. Cassel JC: An epidemiological perspective of psychosocial factors in disease etiology. Am J Public

Health 1974; 64:1040-1043

10. Cassel JC: The contribution of the social environment to host resistance. Am J Epidemiol 1976; 104:107-113

11. Bowlby J: Attachment and Loss. New York, Basic Books, 1969

12. McKay D, Blake RL Jr, Colwill JM, et al: Social supports and stress as predictors of illness. J Fam Pract 1985; 20:575-581

13. Broadhead WE, Kaplan BH, James SA, et al: The epidemiologic evidence for a relationship between social support and health. Am J Epidemiol 1983; 117:521-537

14. Berkman L: Measures of social networks and social support. Presented at the National Heart, Blood and Lung Institute Workshop, Galveston, Texas, December 11-14, 1983

15. Reed D, McGee D, Yano K: Psychosocial processes and general susceptibility to chronic disease. Am J Epidemiol 1984; 119:356-370

16. Bruhn JG, Philips BU: Measuring social support: A synthesis of current approaches. J Behav Med 1984; 7:151-169

17. Hamburg BA, Killilea A: Relation of social support, stress, illness and use of health services. Healthy People Report. Washington, DC, Institute of Medicine, National Academy of Sciences, 1979, pp 253-276