Consequences of Psychosocial Stress

The Universe of Stress Outcomes

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THE UNIVERSE OF STRESS OUTCOMES

Research into psychosocial stress is unified by its dominant focus on mental health outcomes, principally emotional distress and maladaptive behavior. This mental health orientation encompasses a broad spectrum of internal and external manifestations of stress at the individual or personal level. Included in this inventory are depression, anxiety, non-specific psychological distress, substance abuse and dependence, conduct disorder, and antisocial behavior. In general, psychosocial stress exerts pervasive, negative effects upon mental health, albeit of modest magnitude (Thoits, 1983; Aneshensel, 1992).

If the sole standard for assessing the impact of psychosocial stress is aberrant mood, thoughts, or behavior, then most exposure to stress should be judged inconsequential. This unsettling conclusion flows from the simple observation that most people function within the boundaries of normalcy (as it is socially constructed) most of the time. The common understanding that psychosocial stress is a ubiquitous facet of contemporary social life, however, leads us to expect high absolute rates of emotional and behavioral disorder. This apparent discrepancy has focused attention on the identification of conditions that regulate the mental health impact of psychosocial stress. In particular, contemporary work in
this area has emphasized coping and coping resources as forces that counteract exposure to stress.

Consider those who confront undeniably traumatic life circumstances and who appear free of mental, emotional, or behavioral disorder: are these resourceful copers who are indeed unaffected by their exposure to stress? Perhaps. The image of hardy individuals whose resilient personalities are impervious to life's cruelties certainly is comforting to ordinary people struggling with the routine difficulties of everyday life. It offers the illusion that the individual ultimately can triumph over any adversity, by sheer act of will if by no other means. Certainly many persons confront life's tragedies without being overwhelmed by sadness, numbing themselves with various substances, or venting their frustrations on others. The absence of these conventional markers of emotional and behavioral impairment, however, should not be confused with the absence of stress-induced injury.

An alternative interpretation asserts that at least some of these individuals are damaged by their encounters with stress, but manifest this adversity in forms other than psychopathology. For example, Dressler (1988) maintains that social groups with limited access to socially valued goals, a structural source of stress, seek social status through conspicuous consumption. While conspicuous consumption may be socially out-of-date and environmentally unwise, it hardly classifies as disordered behavior. Alternately, the failure of one's career to advance as anticipated may intensify achievement-oriented behavior. In this instance, exposure to stress would result in what generally is regarded as socially desirable behavior.

Thus, the mental health orientation, while informative about the stress-induced etiology of various disorders, samples only a limited segment of the universe of potential reactions to psychosocial stress. To date, this universe has not been fully mapped. This omission can be attributed at least partially to the success of mental health research in identifying provocative conceptual and empirical issues within its own domain of stress outcomes, many of which are addressed in subsequent chapters of this volume.

Let us consider alternative reactions to stress instead; manifestations that lie outside the realm of psychopathology. This uncharted universe is vast, infinite in its breadth and variety. No finite enumeration of its elements can capture each and every element within its boundaries. Our interest lies not with the idiosyncratic, however, but with nomothetic or universal forms of response. The purpose of contemplating this universe, therefore, is much more circumscribed: are there strategies for sampling this universe that represent more fully the entire domain encompassed by its conceptual boundaries?

The definition and assessment of the consequences of psychosocial stress is analogous to the situation encountered in developing a measure
of a construct. In classical measurement theory, development begins with a conceptual definition of the construct. This entails describing the boundaries of the construct; its content, or what elements fall within its boundaries; its differentiation from the content of other constructs; and, the specification of theory-based relationships with other constructs (Nunnally, 1967). This conceptualization guides the compilation of a pool of elements representing all facets of the domain and reflecting the degree to which subcomponents make up the total domain (American Psychological Association, 1974).

A finite measure cannot enumerate all elements falling within these boundaries, however, because this list typically is infinite. Instead, elements are sampled. Ideally elements are sampled in a manner that reproduces the character of the construct. That is, elements that are close to the core of the construct are selected more often than those at the periphery. In essence, the measure reproduces the content of the construct in miniature.

This is familiar terrain for stress researchers because these are the procedures that have been followed in the development of key constructs such as depression. Indeed, a rich prototype is provided by Dohrenwend and associates (1982) for the assessment of one specific type of stressor, life events. They refer to a population of events from which the sample is to be drawn, emphasizing that any list of life events is a sample representing a larger population of events. The issue of representativeness is critical to their instrumentation procedures and they criticize an earlier measure for undersampling positive changes. Dohrenwend et al. (1982) suggest that lists should be stratified on various dimensions of theoretical importance in order to draw a representative sample from each stratum.

In practice, they constructed a list of 102 life events by selecting items from previous lists, by drawing upon the researchers' own experiences, and by asking ordinary people the question, "What was the last major event in your life that, for better or for worse, interrupted or changed your usual activities?" (p. 330). In other words, they cast a wide net in order to capture the full spectrum of changes relevant within a given sociocultural setting.

Mapping the consequences of psychosocial stress also is comparable to the selection of a sample from a population. The procedures are virtually identical to those just described for the measurement of a construct. Specifically, a population is defined; its boundaries specify who is included and who belongs to some other population. Because populations usually are infinite, it is necessary to sample their component parts. The sample should duplicate population dimensions in reduced size. For example, if the population is roughly half male and half female, then the sample should reproduce this distribution. Thus, the success of a sampling design can be assessed by how well it represents the population.
While psychometric techniques have been used in the development of measures of key constructs, this approach has not been applied to the higher-order concept of stress consequences. Instead, the selection of elements from this universe has been dictated by the substantive proclivities of researchers and by funding imperatives. Given that the universe of potential outcomes is infinite—in the same way that the content of a construct or a population is infinite—it is not feasible to assess each and every outcome. Nor is this necessary. Instead, what is required is a representative sampling of the universe of outcomes, a sampling that represents the breadth, scope, and form of potential outcomes.

This more limited objective, however, has not yet been attained insofar as the vast bulk of work in this area has emphasized mental health outcomes. The difficulty lies not with the work conducted within the mental health arena, but in the dearth of similar inquiries pertaining to alternate manifestations of stress.

Attaining this objective requires first that the universe of potential stress outcomes be delineated. In terms of content validity, this universe is referred to as the performance domain (American Psychological Association, 1974). This domain is not constructed by the ad hoc enumeration of all conceivable responses to stress. Instead, the conceptual dimensions of this universe are defined: outcomes, then, are sampled along these dimensions. The critical task, therefore, is the identification of the various axes that comprise the theoretical dimensions of the universe of stress outcomes.

In the service of this objective, this chapter identifies several types of outcomes that merit more systematic inquiry than they have received in the past. I use the concept of the stress process to highlight several overlooked consequences of psychosocial stress. These additional consequences include reactions to the absence of desirable conditions, as distinct from the presence of aversive ones; intermediary outcomes, such as self-efficacy, that link a stressful condition to its focal outcome (e.g., depression); and secondary consequences, that is, repercussions of the focal outcome (e.g., depression-induced interpersonal difficulties). This chapter concludes with a discussion of the implications of a comprehensive assessment of outcomes for our understanding of full cost of psychosocial stress to the social system and its members.

**THE STRESSOR AND ITS CONSEQUENCES**

How should the universe of reactions to psychosocial stress be conceptualized? In contemplating this question, we must first consider the nature of stress, that is, the universe of problematic conditions with which individuals must contend. These conditions shape the boundaries of
individual response. A given stressor evokes a set of likely reactions, but precludes others. Similarly, reactions that can be anticipated in response to some stressful situations are irrelevant in other contexts. Thus, an individual's response can be understood best in the context of the specific circumstances that generate stress.

For example, interpersonal conflict is a relatively common occurrence in everyday life, a form of social interaction that many people experience as threatening, upsetting, aggravating, or simply unpleasant. While some prefer to avoid conflict at virtually any price, most people have encountered it repeatedly and have developed repertoires of coping strategies. These strategies may include intensified confrontation, acts of contrition, physical or psychic withdrawal, or cognitive gyrations that redefine the situation as something other than conflict. The techniques used to deal with conflict within the family, however, typically differ from those utilized at the work place, especially if the situation involves one's boss. Furthermore, conflict with one's spouse extracts a qualitatively different toll than conflict with fellow workers.

Hence it is useful to have a working definition of stress, by which I mean a state of arousal resulting from the presence of socioenvironmental demands that tax the ordinary adaptive capacity of the individual, or from the absence of the means to attain sought-after ends (Lazarus, 1966; Pearlin, 1983; Menaghan, 1983; Aneshensel, 1992). Stress is not an inherent attribute of the environment or the person in isolation from each other, therefore, but emanates from discrepancies between the external world and internal needs, values, ambitions, fears, weaknesses, and so forth.

In this regard, Wheaton (1990) finds fault with the "trait" approach to transitional life events, which assumes implicitly that the stressfulness of an event either is universal or resides in the characteristics of the event itself, such as being undesirable, uncontrollable, or unpredictable (cf.Thoits, 1983). He argues instead that events typically construed as being stressful are not necessarily experienced as upsetting when their occurrence ends a previous condition of ongoing strain within a social role. Thus, transitional events that are stressful to some, such as involuntary job loss or divorce, may constitute conditions of stress relief for others.

Stress should not be seen as merely a matter of individual perception, however. Goldstein (1979), for example, argues that the perception of events as stressful is influenced by larger social, economic, and cultural forces that act upon individuals.

**Intrusive versus Obstructive Stressors**

The distinction between the presence of aversive conditions versus the absence of desirable ones is pivotal to envisioning the full spectrum of
consequences of psychosocial stress. This distinction specifies the type of imbalance existing between the two critical components of stress: the environment and the person. The environment imposes conditions that are noxious to the person, or the individual desires that which is not provided by his or her social, cultural, or economic environment. The mismatch between person and environment, therefore, takes two dominant forms, mirror images of one another.

Two discrete adaptational challenges are posed by these diametrical tensions: to neutralize the insufferable and to realize that which exceeds one's grasp. That is, coping is oriented toward distinctly different objectives in these two types of situations. In the presence of aversive conditions, the functions of coping are to negate the threat imposed by the condition or to counterbalance its impact. The stimulus for corrective action originates with the condition, with the nature of the threat it imposes. The outcomes of ineffective coping with threatening conditions are those most studied by stress researchers: depression, anxiety, non-specific psychological distress, substance abuse or dependence, and deviant behavior.

The functions of coping with the failure of expected events to materialize are less well understood. In these circumstances, the stimulus for action originates within the individual, is driven by goal-oriented motives. The objectives of coping are to eliminate the obstruction, devise a strategy for attaining one's goals despite the obstacle, or alter one's goals.

This situation represents the core of Merton's (1969) analysis of adaptation to discrepancies between culturally prescribed aspirations and socially structured avenues for realizing these aspirations. The outcomes associated with such discrepancies are not necessarily those traditionally studied by stress researchers. Of the modes of adaptation Merton describes, three are especially applicable to obstructive stressors: innovation, retreatism, and rebellion. Adaptations of these types can be found readily on the streets of urban America and in its corporate offices; in the proliferation of organized criminal activity, gangs, and fraud; among the destitute, dropouts, and derelicts—those who are "in the society but not of it" (Merton, 1969: 174), and in the evolution of multiple "cultures of segregation" (Massey & Denton, 1993).

For example, Dressler (1988) examines the impact of status inconsistency (discrepancy between occupation and income); goal-striving stress (discrepancy between aspirations and achievements); and life-style incongruity (consumption patterns and cosmopolitan behaviors inconsistent with social class). He maintains that life-style incongruity arises whenever upward mobility is prevented by structural barriers. This combination of stressor-adaptation is not captured by the conventional orientation toward the mental health impact of aversive conditions.
The nature of the threat, therefore, is an essential determinant of the types of reactions or outcomes that can be anticipated. Most of what we know about the consequences of psychosocial stress is derived from research into events and ongoing situations that exert an undesirable presence in people's lives. The absence of positive states is less well understood, perhaps because absence is an illusive concept that defies simple measurement techniques. Methodological difficulties aside, the universe of stress outcomes needs to be expanded to include reactions to situations that obstruct the attainment of important life goals, especially obstructions of a structural nature.

**Person and Environmental Components**

Recall that psychosocial stress is seen here as a lack of person-environment fit. Its consequences, then, fall into two broad categories: impact upon the person and impact upon the environment.

The latter concerns transformation of the very circumstances initially evoking stress. To what extent are problematic life conditions avoided through prophylactic action? Once problems arise, are they readily resolved, or do they continue unabated or escalate? Alteration of the stressor is an important type of outcome because it forms a fundamental goal of coping behavior (Pearlin & Schooler, 1978; Pearlin & Aneshensel, 1986). Indeed, elimination of the stressor presumably constitutes the most successful outcome one might envision. While obvious, this type of outcome often is overlooked, perhaps because it concerns the environmental component of stress.

Instead, the consequences of psychosocial stress typically are conceptualized in terms of the person component. At issue is how well the individual adapts, given that undesirable conditions have not been avoided or eliminated. Two types of person-centered consequences can be distinguished depending on whether the adjustment of the individual to these external stressors is functional or dysfunctional.

In this context, functional adaptation is equivalent to "effective" coping. The positive end of the continuum of stress consequences, therefore, can be identified via the intended functions of coping. One function entails neutralizing the negative meaning ascribed to the stressor, thereby symbolically ridding oneself of the external stimulus (Pearlin & Schooler, 1978; Pearlin & Aneshensel, 1986). A bad situation can be compared to an even more disastrous one. In the wake of the 1994 Northridge earthquake, Southern Californians comforted themselves with the knowledge that freeways had collapsed during the night and not at rush hour. Similarly, revised aspirations often are substituted for unattainable ones. Someone whose career plateaus at midlife may devalue occupation success, for example, and seek greater personal gratification.
in family life. In situations such as these, the meaning of the stressor is altered to render it less threatening.

Coping also serves to manage internal states of arousal or distress, thereby relieving oneself of the internal response to the stressor (Pearlin & Schooler, 1978; Pearlin & Aneshensel, 1986). The stress-management industry flourishes within this sphere, offering techniques to diminish arousal, such as exercise and meditation. The pharmaceutical industry also conducts considerable business in emotional control, dispensing tranquilizers and Prozac. Blunting emotions with alcohol, drugs, or food serves the same function, as does withdrawal into passive pursuits such as escapist viewing of television.

Dysfunctional outcomes, in turn, are equivalent to "improductive" coping. Confronted with an intractable stressor, the individual has not redefined circumstances to render them less threatening and continues to endure strain. Ineffective coping does not invariably mean that the individual has failed at his or her task or lacks stamina. Instead, some situations cannot readily be painted in a rosy hue and others overwhelm even the most resilient of personalities.

Nonetheless, person and environment remain mismatched, the state of tension persists, and ultimately its intensity, its duration, or both overwhelm the individual. The consequences of such unresolved pressures often entail internal states or behavior that is harmful to oneself, harmful to others, or harmful to the social system.

Theory and research into the consequences of psychosocial stress have overwhelmingly emphasized these dysfunctional outcomes, responses that entail abnormal internal states or maladaptive behaviors. Consequently, the research agenda for future work in this domain should encompass adaptive responses to stress, including those that alter the environmental component of stress.

A PROCESS PERSPECTIVE ON OUTCOMES

The Stress Process Paradigm

Much of the psychosocial stress research conducted over the past decade has employed the conceptual framework of the stress process. Pearlin identifies three major components of this model: sources of stress, mediators of stress, and manifestations of stress (Pearlin et al., 1981). The occurrence of stressful life events and ongoing life difficulties is linked to emotional distress via the impact of stress upon psychosocial mediators, also referred to as coping resources. The concept of mediation, therefore, is inseparable from both the stressful life conditions encountered by people and their emotional well-being. Most applications
of the stress process model have focused on mental health outcomes, especially depression and symptoms of nonspecific psychological distress. Findings from this vast body of literature are quite consistent and conclusive: exposure to stressful life events and ongoing life difficulties is detrimental to emotional well-being.

The conventional application of the stress process model has positioned mental health as the end point of the process. As a result, mental health has become the sanctioned yardstick for evaluating the consequences of psychosocial stress. This approach is appropriate and constructive insofar as one intends to explicate the social origins of emotional or behavioral disorder. This perspective is too constricted, however, for the comprehensive objective of describing the consequences of psychosocial stress. These consequences include, but are not limited to, mental health outcomes.

Yet, the prevailing emphasis on mental health as the principal end point has had the unintended effect of obscuring alternate end points. It should be emphasized, however, that this unfortunate limitation is not inherent in the stress process model or its potential application. It is instead the inadvertent result of superimposing a medical orientation on a social problem (Aneshensel, Rutter, & Lachenbruch, 1991). That is, most research in this area examines a single type of disorder with the intention of explicating the etiology of that disease or condition. This certainly is the orientation fostered by the organization of the National Institutes of Health, which evaluate and fund research primarily through centers focusing on specific types of diseases. Funding imperatives have fostered disease-specific models as distinct from those that assess the comprehensive impact of problematic social arrangements.

Nevertheless, the stress process model points directly toward two alternative end points. One is embedded within the model itself; the other is an extension of it. The first concerns intermediary consequences, that is, conditions that connect stressors with mental health. The other concerns secondary consequences, that is, the psychosocial repercussions of stress-induced emotional or behavioral disorder. Let us consider these alternatives.

**Intermediary Consequences**

The very notion of process presupposes passage through various phases. In particular, the stress process model links stress to mental health through a network of intermediary outcomes or mediators. This network comprises, in essence, a system of indirect causal effect. The intermediary outcomes function as intervening variables, forming the conduit through which stress ultimately damages well-being. Each of these intermediary outcomes could and sometimes is treated as an ou-
come in and of itself. Each facet of this process, therefore, may be viewed as a discrete consequence of psychosocial stress. This shift in focus entails recasting midpoints in the stress process as end points.

Of the numerous potential mediators of psychosocial stress, social and psychological coping resources have figured most prominently both in theory and empirical research, especially social support and self-efficacy. Social support refers to the satisfaction of a person's basic social needs—affection, esteem, approval, belonging, identity, and security—through interaction with others (Cobb, 1976;Thoits, 1982). House and Kahn (1985) have identified three distinct dimensions to social support: integration, the existence of relations; networks, their structure; and, support, then functional content including socioemotional, instrumental, informational, and appraisal dimensions.

Self-efficacy is a cognitive orientation attributing outcomes, such as success and failure, to personal attributes, such as ability and effort. Mirowsky and Ross (1981) equate the concepts of self-efficacy, mastery, internal locus of control, personal control, perceived control of the environment, and instrumentalism, concepts that are opposite in meaning to fatalism, external locus of control, powerlessness, and learned helplessness.

Coping resources such as social support and self-efficacy should not be viewed solely as attributes of the individual because access to these resources is influenced by social position (Pearlin, 1989; Aneshensel, 1992). Ross and Mirowsky, for example, contend that these personal characteristics are anchored in the types of social experiences that occur as a consequence of social stratification:

The sense of powerlessness is a form of subjective alienation that grows from the experiences common in certain kinds of social conditions...from the inability to achieve one's ends, from inadequate resources and opportunities, from restricted alternatives, and from jobs in which one does not choose what to do or how to do it...experienced disproportionately by those with low education and low income, and possibly by women. (1981: 297)

In order to mediate the impact of psychosocial stress, intermediate outcomes must be associated both with exposure to stress and with the end point of interest, in this instance emotional distress or maladaptive behavior. As is the case with any intervening variable, social support and self-efficacy, therefore, must be influenced at least in part by exposure to psychosocial stress and, in turn, must influence well-being.

The latter condition—the link to mental health consequences—is well established empirically for both social support and self-efficacy. Social support, especially socioemotional support, is related to diverse forms of psychological disorder, physical morbidity, and mortality (e.g., Turner, 1981; Aneshensel & Stone, 1982; Turner, 1983; Kessler & McLeod,
Moreover, longitudinal studies demonstrate that this relationship is reciprocal: causal influence goes from support to disorder and vice versa (Turner, 1981; Aneshensel & Huba, 1984). Similarly, self-efficacy is inversely related to at least some forms of psychological distress (e.g., Wheaton, 1983; Mirowsky & Ross, 1984; LaGreca, Ritchey, & Mullis, 1990). For example, Wheaton (1980) found fatalism mediates the relationship between socioeconomic status and psychological distress: low-status persons are fatalistic and hence distressed.

Given that some stressful situations are intractable, a belief in personal control may appear to be counterproductive at times. Wheaton (1980), however, maintains that a continuing emphasis on external attributions is pervasively harmful, even though such attributions may be beneficial in some specific circumstances. He argues that fatalistic attributions make the goals of social action seem less attainable, undermining motivation. Similarly, Thoits (1987) suggests that a sense of control should lessen the psychological impact of even fateful events by encouraging active problem solving in their aftermath. Thus, the impact of personal efficacy spans various types of stressful encounters, not merely those that could be prevented or reversed by personal skill or effort.

Moreover, self-efficacy appears to affect psychological distress via its impact on coping behavior, thus uncovering yet another intermediary outcome. For example, Seeman and colleagues (1988) conclude that mastery encourages social learning and flexibility, which make effective, instrumental behavior more likely, and escape behavior such as problem drinking less likely. The combination of low social engagement and high powerlessness is especially problematic.

What about the second condition, the link between psychosocial stress and the intermediary outcomes? Because interest in social support and self-efficacy has emphasized their mediating role, considerably more is known about their indirect mental health effects than about their association with stressors.

In theory, coping resources, such as social support and self-efficacy, may be unchanged by exposure to stress, depleted, or enhanced. Wheaton (1985) presents a comprehensive evaluation of the possible interconnections among these constructs (cf. Ensel & Lin, 1991). Three of these possibilities are especially germane to the present discussion.

The first is the stress-suppression model: the emergence or intensification of stress mobilizes a resource, such as social support or self-efficacy, which then alleviates distress. As life difficulties worsen, the individual may rely more heavily on his or her internal strengths, receive more aid and succor from social ties, or experience both of these gains. In this situation, the indirect effects of stress are opposite to its direct effects:
the total impact of stress on mental health, therefore, is reduced. This beneficial outcome is achieved by virtue of a positive relationship between stress and social support, self-efficacy, or other coping resources.

In stark contrast, the second possibility is that stress depletes psychosocial resources. Those providing social support may tire of the task and turn away, for example, or simply become exhausted. When efforts to resolve difficulties fail, inner resolve may fade as well. As Wheaton notes, the mental health impact of stress appears to be reduced in this model, but this reduction is illusory, pertaining only to direct causal effects while total causal effects remain unchanged. Psychosocial resources do not offset the occurrence of stress in this situation, but instead help to explain the mechanisms by which stress damages well-being. In this scenario, stress bears negative consequences not only for well-being but for psychosocial resources as well.

The third possibility is that stress and psychosocial resources are completely independent of one another. In this instance, the occurrence of stress does not alter, positively or negatively, resources like social support and self-efficacy. Stress is inconsequential to these intermediary outcomes. These resources are not inconsequential to well-being, however, because they act to counterbalance the impact of stress.

The most comprehensive assessment of competing models of social psychological resources has been undertaken by Ensel and Lin (1991). They empirically test six models that differ from one another on the basis of the hypothesized link between stressors and resources. Two of these models are especially germane to the present discussion. Both of these models fall under their general classification of coping models, which cast psychosocial resources as reactive elements in the stress process, triggered by the occurrence of external stressors. The alternatives are that, quite simply, resources are mobilized or depleted. Ensel and Lin (1991) refer to these alternatives as the counteract in model (resources function to offset the impact of stressors) and the deterioration model (stressors reduce or weaken resources).

They test these models using multiwave panel data to disentangle the causal ordering implicit in the alternatives. Their results lend support to the deterioration model, that is, as stressors increase, resources decrease. No support is found for mobilization. A third alternative, the stress-deterrent model, which posits no causal association between stressors and resources, also receives support.

As mentioned previously, the empirical evidence concerning these possibilities is scant and equivocal, requiring more systematic examination than it has received in the past. This indeterminate conclusion stems in part from differences among prior studies in their methodologies, especially the types of stressors and mediators examined. More importantly, psychosocial resources have been cast in a supporting role, impor-
tant only insofar as they are consequential to emotional well-being. Thus, many studies utilizing these constructs simply do not report relationships between exposure to stress and psychosocial resources even though this information is embedded in their analysis.

Thus, intervening variables in stress process models should be examined more analytically as outcomes in their own right. Ensel and Lin (1994) refer to this research agenda as examining the dynamics of a support process within a life stress process. Their own research supports depletion and independence models, but opens the door to more research of this type as distinct from providing a conclusive test. The complexity of these interrelationships is demonstrated by Stoller and Pugliesi (1991) who find that diminishing health among older persons, a stressor, increases the scope of assistance provided by their social network while the size of the network remains unchanged. Thus, the effectiveness of the resource may change while its quantity does not.

It is evident from everyday commonplace observation that all three types of associations are present under various circumstances, stressors intensity, diminish, and leave unchanged resources. We have all had the opportunity to witness people whose friends and relatives rally around them in time of need as well as those who are abandoned when they most need to be fortified.

The directions for future work in this area, therefore, are self-evident. First, what types of stressors exert what kinds of effects on what types of coping resources? Second, and perhaps more importantly, under what conditions do stressors augment or deplete coping resources? The answers to these questions are essential to our understanding of not only intermediary consequences, but the other end points that direct research in this area.

To date, the "cost" associated with stress-induced changes in psychosocial resources has been tabulated with regard to the sole outcome under investigation in any given inquiry, typically emotional distress or maladaptive behavior. This standard is inadequate because it overlooks the consequences of psychosocial resources in other domains of life. That is, a stress-induced reduction in psychosocial resources might be inconsequential with regard to a specific disease entity, but nonetheless of paramount importance to other unassessed outcomes.

Suppose, for example, that a specific stressor exerts a modest effect on a specific disorder, say parental divorce and conduct disorder. Given that the gross association is weak, the portion that can be attributed to various mediators is likewise meager. To continue the example, the stress-induced contribution of self-efficacy to conduct disorder necessarily will be minute. Of course, self-efficacy might reduce the risk of conduct disorder independently of parental divorce, but this direct contribution is separate from the workings of the stress process, that is, is not a cost of
consequence of exposure to stress. One might reasonably conclude that parental divorce in general and its detrimental impact on self-efficacy in particular are immaterial to the emergence of conduct disorder.

It would be a mistake, however, to conclude that these factors are consequential. Both parental divorce and its impact via self-efficacy might well be determining factors with regard to other outcomes. Suppose both contribute substantially to a generalized withdrawal from social relationships, generating a weak attachment to social institutions that ultimately is manifest as diminished school achievement and restricted occupational aspirations.

The point is not that all possible manifestations need be assessed, but rather that the outcomes examined comprise a reasonable sample of realm of likely consequences. In the absence of this type of comprehensive assessment, the cost of stress-related damage to personal and social coping resources inevitably is underestimated. Therefore, it is imperative first that intermediary stress consequences be assessed in their own right, and second that the repercussions of these outcomes be assessed across a broad span of social functioning.

Secondary Consequences

Ironically, those consequences that have received the most concentrated attention in stress research, mental health outcomes, can be viewed constructively as midpoints rather than end points. Casting stress-induced disorders as intermediary outcomes in the stress process illustrates that the mental health consequences of psychosocial stress often are not confined to a single person, but impinge as well upon other social actors. People quite clearly are affected by the problems encountered by others for whom they care, an effect that may alter the nature of the social network. For example, Johnson (1991) examines the impact of expression on social networks, positing social selection processes whereby others reject or avoid distressed individuals because they are experienced as burdensome. He finds that psychological distress contributes to decreases in primary but not secondary social relationships, a process most pronounced among men. Let us consider how emotional distress enacts a social network.

This type of “contagion” effect has been examined most completely within the context of the family. Disorder often clusters within families, especially for particular types of disorder including affective disorders, schizophrenia, and alcohol abuse and dependence (Weissman et al., 1981a). For example, Weissman and associates (1984b) find that children of depressed parents are two to three times more likely than other children to experience symptoms of psychiatric disorder; this risk redoubles if both parents are impaired. Major depression, bipolar disorder, and
alcoholism have been the subjects of intensive efforts to locate genetic modes of intergenerational transmission (Plomin, 1989). Familial clustering also may arise because relatives share, to some extent, the same environment. The genetic and environmental explanations portray familial clusters of disorder as resulting from mutual exposure to the same etiologic agent. A third explanation, of course, is that disorder in one person produces disorder in others.

Coyne and associates (1987) considered contagion effects among partners of two groups of depressed patients: those in which the proband was actively symptomatic and those in which he or she was in remission. Spouses of actively depressed patients report considerable dislocation of their daily lives: household routines and social life often are disrupted, others in the family come to feel neglected, and difficulties emerge in other major social roles, such as work and finances. Subjective burdens also are common, including emotional upset, worry, nervousness, and discouragement. Spouses of recovered depressed patients, however, are not free of hardship; they experience emotional strain, fear of relapse, and uncertainty about the future. Coyne and colleagues (1987) conclude that spousal disorder itself is a source of stress, even when in remission, and that depressed persons produce distress in others.

Noh and Avison (1988) similarly find that the spouses of discharged psychiatric patients tend to experience psychosocial hardship, but also report that this outcome is by no means universal. Indeed, they find that the objective nature of the former patient’s symptoms contribute to spousal burdens only to a limited extent. These burdens depend more heavily on the characteristics of the spouse and his or her social environment, including most prominently exposure to stress, self-efficacy, and social support. The perception of the ex-patient as a burden, in turn, is associated with psychological distress among family members living with him or her.

The interactions of depressed mothers with their children illustrate one mode of intergenerational transmission of disorder. Weissman and Siegel (1972) find that depressed mothers are pervasively impaired as mothers. These women are only moderately involved with their children, and often are preoccupied and withdrawn. They report feeling diminished affection for their children, resentment and ambivalence toward the family as a whole, and guilt about their performance as mothers. Impaired performance as a mother, in turn, is linked to emotional and behavioral disturbance in children. In sum, maternal depression produces poor parenting, which, in turn, puts children at the risk of developing difficulties of their own.

Moreover, parental exposure to stress is consequential to the emotional well-being of their sons and daughters. A recent investigation by Ge, Conger, Lorenz, and Simons (1994) connects parental life events to ado-
Adolescent depression via a series of mediators or indirect causal links: stressful life events experienced by parents are first related to parental depressed moods, which, in turn, disrupt skillful parenting practices. These disrupted parenting practices then place adolescents at increased risk for symptoms of depression. Thus, negative events occurring to parents set in motion a chain of events that ultimately damage their sons and daughters.

This study is especially important because it demonstrates one of the mechanisms through which the stress exposure of one person affects the emotional well-being of another. Specifically, parental mood and behavior comprise one of the avenues leading to adolescent developmental psychopathology. In essence, harsh, hostile, and inconsistent parenting behavior constitutes a stressor for the adolescent. Adolescent emotional distress, therefore, can be seen as depending on their exposure to stressful parental behavior. The import of Ge and associates' (1994) findings, however, lies in demonstrating that this exposure is rooted in the parent's own exposure to stress. That is, the problematic conditions that impinge upon adolescent well-being do not arise in isolation, but are consequences of parental exposure to stressful life events.

The case of paternal unemployment is especially informative about low conditions of parental psychosocial stress can result in negative child outcomes. McLoyd (1989) provides an extensive review of this literature, spanning the years of the Great Depression to more recent economic downturns. The first link in her model concerns the impact of unemployment and income loss on fathers. Compared to employed men, those who are unemployed are more depressed, anxious, and hostile; they also are more dissatisfied with themselves and their lives.

Second, job and income loss affect father-child interactions. In general, fathers who respond to economic loss with irritability and pessimism are less nurturing and more punitive and arbitrary in their interactions with the child. Finally, these fathering behaviors increase the child's risk of socioemotional problems, deviant behavior, and reduced aspirations and expectations. McLoyd's summary itemizes the following adverse child outcomes of paternal job loss: mental health problems, low self-esteem, reduced competence in coping with stress, and serious behavior problems such as delinquency and drug use. In this illustration, parental exposure to stress, which might ordinarily be evaluated with regard toarental mental health outcomes, becomes additionally consequential because parental outcomes are material to child outcomes.

Parenthetically, intergenerational transmission sometimes flows in the reverse direction. Thus, Arey and Warheit (1980) report that having an emotionally disturbed child is psychologically distressing to parents, especially mothers. Also, these secondary outcomes represent abnormal emotional or behavioral states in their own right, but it should be empha-
ized that these reactive disorders often are normal reactions to abnormal situations.

These studies illustrate quite clearly that stress-induced emotional and behavioral disorders are consequential to the well-being of other persons, especially family members. Two mechanisms appear particularly salient. First, the initial disorder is distressing in and of itself. Second, this disorder often creates social circumstances that are experienced by others as intensely stressful and, hence, are conducive to their own risk. These disorders constitute secondary consequences of the conditions generating the initial disorder.

**Stress Proliferation**

One specific instance of the propagation of stress-related consequences deserves special attention: the conditions under which stressful life experience generates more of the same. Pearlin has described recently the generation of secondary stressors as a process of stress proliferation (Pearlin et al., 1990). The original stressor sets in motion a series of dislocations that spawn new sources of stress. Primary stressors are primary in the sense of being the root origin of a series of other problematic life conditions. These consequent stressors are labeled as secondary stressors to accentuate their dependence on the presence of an initial problematic area of life. It should be emphasized that these stressors are not secondary in terms of their potency. Once established, secondary stressors are every bit as powerful as those that are primary (Pearlin et al., 1990; Aneshesel et al., 1995). Moreover, these secondary stressors often serve as the conduit through which primary stressors come to damage emotional well-being. The underlying premise of this conceptual scheme, therefore, is that stressors tend to beget other stressors, which, in turn, affect emotional well-being.

For example, in our research into family caregivers for persons suffering from dementia, primary stressors pertain to the stressors located within the enterprise of caregiving itself: the need for care arising from the cognitive deterioration of the dementia patient, the behavioral responses of the caregiver in assisting and monitoring the patient, and the subjective meaning of these circumstances for the caregiver's life (Pearlin et al., 1990; Aneshesel et al., 1995). These primary stressors are linked to the caregiver's emotional well-being via their impact upon other domains of life, such as family, work, and finances. Employed caregivers, for example, frequently find their work interrupted by care-related crises, which, in turn generate a type of on-the-job stress not encountered by those who are free of care responsibilities and those who are not working. Strains experienced at work, in turn, generate depressive symptomatology among caregivers over time.
Other researchers have noted as well that exposure to stress possesses some stability over time: those who encounter stress at one point in time tend to subsequently encounter stress as well. In the case of a single source of stress, such as marital discord, it is intuitively clear how a condition tends to perpetuate itself. However, events that are presumably independent of one another also demonstrate some tendency to cluster over time (e.g., Ensel & Lin, 1991; Turner & Noh, 1988). The concept of stress proliferation seeks to account for the clustering of stressors by describing a process whereby problems in one area of life spill over into other areas of life, including those that are not directly involved with the original source of stress.

Processes of stress proliferation are essential to our consideration of the consequences of psychosocial stress, especially with regard to variation in the impact of a particular source of stress. Variation in mental health impact often is equated with differential vulnerability to stress, especially deficits in coping resources. Persons who appear to be excessively affected by a primary stressor may not be unresourceful copers, however, but persons who encounter exceptionally high levels of secondary stress.

Pearlin (Pearlin et al., 1990) maintains that explanations relying on the dynamics of differential vulnerability to stress are misguided to the extent that variation in the outcome, emotional distress, is instead a result of differential exposure to secondary stressors. He concludes that we run the risk of mistakenly attributing exposure effects to vulnerability effects if we fail to account for the full range of exposure to adverse situations. Simply put, those whose problems mushroom into other spheres of life are encountering a heavier burden of stress exposure than those whose problems are contained within their original boundaries.

The concept of stress proliferation, therefore, identifies an entirely new realm of consequences: the creation or intensification of other stressors, especially those located in areas of life that seemingly are separate from the primary source of stress. This perspective entails a radical shift in the standard used to evaluate the impact of stress: from damage to mental health to the expansion of problematic life circumstances. Earlier in this chapter, I noted that the impact of coping upon the environmental component of stress, that is, actions that alter the source of stress, can be seen legitimately as a consequence of exposure to stress, a type of consequence that has not received substantial systematic inquiry. The concept of stress proliferation takes this notion one step further. Specifically, it sets an additional standard for evaluating the consequences of stress, namely the creation or intensification of stress in other areas of life.

The concept of stress proliferation also sets a second standard for evaluating the efficacy of coping efforts (Pearlin et al., 1990; Aneshensel
Thus, in conclusion, the effect of stress upon health is significant in understanding the complex relationship between stress and physical health. The psychological stressors can have a profound impact on overall health, leading to the development of various physical conditions. It is essential to recognize the role of stress in health and to implement strategies to manage stress effectively. By addressing stress-related problems, we can improve our overall health and well-being. Therefore, the integration of stress management techniques into daily life is crucial for maintaining optimal health.
As discussed previously, care-related stress also is related to the emotional well-being of the caregiver. Emotional distress, however, is not independently related to the risk of placement, and hence, does not mediate the impact of care-related stress on the risk of placement. Care-related stress affects whether or not the dementia patient is admitted to a nursing home irrespective of any damage it inflicts upon mental health. As such, nursing home admissions can be seen as an independent outcome of caregiver stress.

It is imperative that outcomes such as nursing home placement be recognized as independent consequences of stress. Stress-induced emotional distress simply is irrelevant to some outcomes. In such instances, routine inclusion of mental health as a mediator would impose unnecessary constraints on the assessment of the costs associated with exposure to stress. In essence, it artificially confines the realm of possible outcomes. Establishing the existence of outcomes that are independent of mental health is imperative to expanding the definition of a universe of stress outcomes.

**IMPLICATIONS**

Stress research usually is oriented toward a single focal outcome or consequence. This perspective is well suited to explaining the occurrence of a specific outcome. For example, the examination of the relationship between exposure to stress and symptoms of depression assesses the prescriptive impact of psychosocial stress. The observed association is informative about the psychosocial antecedents or causes of depression. It is useful in understanding the consequences of exposure to psychosocial stress.

Consideration of the consequences of stress, as distinct from the antecedents of depression, requires a fundamentally different orientation. Questions being asked, after all, intrinsically differ. Unfortunately, so two questions all too often have been confused with one another, and interchangeably (Aneshensel, Rutter, & Lachner, 1991). That the depressive consequences of exposure to stress have been equated implicitly with the general consequences of stress. This confusion has introduced substantial bias into the assessment of the consequences of exposure to psychosocial stress (Aneshensel et al., 1991). In particular, concrete outcomes models count many of those hurt by exposure to stress unhurt because they manifest stress as a different condition. This classification results in a substantial undercount of the costs incurred by exposure to stress.

Equally important, it distorts estimates of the magnitude of the effects of stress. In simplest form, these effects are quantified by comparing the
rate at which an outcome occurs under two conditions, presence versus absence of the stressor. This technique is suitable for etiologic research where the focus is quite legitimately on a discrete disease entity compared to the absence of that disease, as distinct from the absence of any disease. This is not the case for the comprehensive assessment of the consequences of stress. In this instance, the misclassification of those who have other stress-related conditions necessarily attenuates observed associations, that is, underestimates the impact of stress (Aneshensel et al., 1991).

The examination of the consequences of psychosocial stress requires that the outcomes examined represent the full universe of potential outcomes. This universe includes but is not limited to depression or other manifestations of emotional distress or maladaptive behavior.

Missing or understudied elements include reactions to obstructive stressors, such as closed opportunity structures or inequity in distributive systems. As discussed previously, reactions to this type of stress may differ qualitatively from reactions associated with the presence of an aversive condition. Thus, more attention needs to be directed toward stress responses that seek to remove the obstruction or circumvent it, and to the circumstances under which individuals forgo goal striving. These consequences, of course, need not be negative; social action, individual inventiveness, and community empowerment illustrate potential beneficial responses.

A second addition to the realm of stress consequences concerns avoidance, containment, or elimination of environmental components of stress, including halting stress proliferation. Although the person component of stress has dominated in previous research, the environmental component requires explication because stress originates in the mismatch between person and environment. The presence of stress typically is assumed implicitly as a given. Yet, exposure to stress is not uniformly distributed throughout the social system; instead, location in the social system influences the types of problematic life conditions likely to be encountered (Aneshensel, 1992). This differential density almost certainly entails clustering of stressors due to a common cause, such as poverty, and processes of stress proliferation. Thus, more systematic attention needs to be given to the manner in which stress is self-perpetuating and to the mechanisms by which stress breeds more of the same.

The costs of psychosocial stress also have been undercounted by a tendency to gloss over intermediary outcomes of psychosocial stress. By and large, intermediary outcomes like social support and self-efficacy have been treated as ancillary to mental health outcomes. The impact of stress on these mediating factors has been measured by the extent to which it is consequential to mental health. The effects of social support
self-efficacy are not restricted to mental health, however, but extend to various facets of individual and social well-being. These additional implications need to be traced forward to other end points such as role or occupational achievement, participation in social roles such as age and parenthood, and so forth.

Multiple outcomes need to be examined not merely because there are various possible manifestations of stress, but because people who have different social and economic characteristics are also likely to have different modes of manifesting stress (Pearlin, 1989; Aneshensel, 1992). An exclusive focus on select types of outcomes runs the risk of targeting social groups as especially vulnerable to social stress, a suspect conclusion if groups actually are similarly injured but exhibit damage in more appropriate to their social position. For example, Johnson (1991) suggests that psychological distress reduces primary social relationships among men rather than women because the expression of distress is less appropriate for men and therefore more likely to be socially sanctioned.

The universe of stress outcomes also must consider the cost of individual exposure to a social network or larger social system. Social beings are affected by the adverse conditions impinging upon others for whom they care. As we have seen, inimical events occurring to parents are consequential to their children and are often indirect, mediated by their impact upon parental well-being and behavior. Although the cost of caring for others, or, for that matter, being the donor of social support, has been recognized for some time, the full extent of such consequences has not been tabulated.

In sum, the calculation of the consequences of psychosocial stress requires that a more comprehensive and inclusive approach be taken to identifying potential outcomes or costs.

It should be noted that this conclusion applies to the field of stress in general, not to each individual inquiry. Assessing the full range of potential consequences clearly exceeds the scope of any one investigation. Moreover, not all potential outcomes are relevant in every situation. The nature of the stressor or the composition of the sample make some outcomes extraneous. Nevertheless, alternate outcomes can receive the same type of systematic examination accorded mental health outcomes.

Although not quite so readily apparent, the comprehensive sampling universe of psychosocial stressors also is crucial to identifying the additional outcomes or costs of such stressors. As noted above, the consequences of exposure to stress are evaluated, in simplest terms, by comparing outcomes in the presence of stress versus its absence. The benchmark for evaluating the impact of psychosocial stressors is the state with these conditions do not prevail. That is, the impact of exposure to
stress should be assessed with regard to the absence of exposure. More
typically, however, it is assessed with regard to a combined condition
composed of the absence of exposure to a specific type of stressor and
the presence of exposure to a different class of stressor. This approach
underestimates the cost of stress and the magnitude of its impact.

Consider the definition of stress as the presence of noxious conditions
or the absence of desired ones. From this perspective, stress exposure
has four potential states: the presence of something bad, the absence of
something good, both of these conditions, and neither of these conditions.
The “neither” state is especially important to the assessment of the conse­
quences of stress because it is the proper referent for the other three
conditions, each of which signify the presence of stressful conditions.

If only the presence of undesirable states is assessed, the referent is
the absence of these states, irrespective of whether desired states are
present or absent. That is, the “unexposed” condition contains those who
are indeed not exposed to any stressors and those who have encountered
obstructive stressors. The latter are, in essence, misclassified as being
stress free. This type of misclassification attenuates estimates of the im­
pact of stress on any given outcome and on outcomes in general.

In conclusion, while psychosocial stressors have a ubiquitous presence
in ordinary daily life, their consequences typically have been rather nar­
ovely construed. We know that these stressors exert a malevolent impact
upon mental health, especially emotional functioning and maladaptive
behavior. The total cost of psychosocial stress, however, has not been
counted because the full spectrum of its consequences has yet to be
determined.

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