Commentary.
On the "Social Stress Process Model" in Prevention Research

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Drawing on experiences from the field of drug abuse prevention, this commentary suggests preventive intervention approaches for persons who are at risk of or affected by stress associated with social conditions. The potential benefits of conceptualizing exposure to stress, access to resources and effective use of resources in preventive intervention models are discussed. Three analytic guides for the formulation of strategies are extracted from the preceding chapters: the degree to which the model addresses multiple negative outcomes; common population characteristics and common etiologic pathways; and recognition of the many dimensions of stress and stressors as well as the importance of emphasizing resources. Operational strategies for achieving reductions in stress exposure or acquisition of resources, shaped to the needs of special populations, are proposed. They include "at-risk" differentiation of target populations, community involvement in model adaptation, the use of multiple intervention strategies, and the implementation of environmental and structural interventions to maintain improvement. This is not meant to reflect a complete review of the literature on stress nor to be a comprehensive discussion on the application of findings and concepts that have emerged from these papers.

Background

The term "prevention" is applied generally to interventions before the initial onset of a disorder (Mrazek and Haggerty, 1995). The *science* of preventive intervention, that is, the design of effective models for preventing a disorder, draws heavily from the findings associated with a number of related research areas: epidemiologic research, studies that examine causal or etiologic factors and processes, basic behavioral and social science research, basic biological research, as well as from social science theory and from advances in research and statistical methods.

These fields of research specify for the prevention of research: (a) the characteristics of those most at risk for acquiring the disorder in question, such as their demographic characteristics, behavioral patterns, and experiential circumstances; (b) the distal and proximal etiologic pathways experienced in acquiring the disorder; (c) how to access at risk populations and involve them in the intervention; (d) how to best alter the trajectories of those at risk; and (e) how to demonstrate the effectiveness of the intervention.

For instance, most preventive interventions developed in the area of drug abuse draw on a knowledge base that includes the epidemiology of drug-using behaviors (experimentation, abuse and dependence) as well as the etiologic factors associated with these drug-using behaviors. Information from these studies has greatly influenced preventive intervention models including age at onset (targeting early to middle adolescence); proximal processes for initiation of use (e.g., availability of drugs, attitudes about the social acceptability of drug use (peer relationships to drug-using behaviors), perceptions about the harmful psychological and physical effects of drug use); staging of substance use (tobacco and alcohol use generally precede drug use); and risk factors (e.g., conduct disorder, attention deficit disorder, having parents who are drug *users,* and family dysfunction). The application of behavior change theories, developmental theory, and communication theory has enabled prevention researchers to develop effective intervention models demonstrating lower levels of initiation and reducing the continued use of tobacco, alcohol and illicit drugs among those who begin such use (Botvin, 1995; Hawkins, Von Cleve, and Catalano, 1991; Fla;y, Hansen, Wang & Johnson, 1989, Tobler, 1992).

Opportunities for Preventing Negative Stress-Related Outcomes

In reviewing the monograph papers to develop recommendations for preventive interventions within this framework, three key areas emerged as guides: (a) the degree to which prevention intervention models are sensitive and specific to a disorder, (b) the recognition of the many dimensions of stress and stressors, and (c) the important emphasis on resources.

Generic Preventive Intervention Models

Several papers in this monograph consider the generalizability of the relationship between stress and disease. The major question is: Can we develop a generic model for the prevention of disease or disorder in any population or must the model be more specific to the cause or etiology of the disease? Answering this question depends greatly on a thorough understanding of the natural history of progression to the onset of the disorder. With a simple infectious disease, there usually is a "one germ one disease" model, which suggests that if one eliminates exposure to the germ one can prevent the disease. However, we also know that there are many approaches available to eliminate exposure: the vector for the germ (e.g., kill the yellow fever mosquito), create a barrier (e.g., use condoms during all sexual activities), or build immunity (e.g., flu shots). We also know that not all who are exposed contract the disease; some are protected genetically (e.g., sickle cell trait), and some are protected through immunity.

In the field of drug abuse, there is a movement toward general models of prevention that address not only the initiation of drug use but also other negative behaviors such as dropping out of school, delinquency, and violence. This movement is the outcome of research that indicates common population characteristics and common etiologic pathways for persons involved in these behaviors. In fact, research findings demonstrate that if a person evidences one of these behaviors, there is an increased likelihood that he or she will also be involved in at least one other (Jessor and Jessor, 1977; Johnson and Pandina, 1991; Krohn, 1995). However, it is important to demonstrate a strong relationship among these behaviors and the degree to which their etiologic pathways converge.

The development of one general model may be parsimonious, but other models that have both common conceptual bases or components and unique features more specific to the disease or condition being considered need to be delineated. The disease specific features are particularly relevant for youngsters who may have psychopathology as an etiologic condition, requiring more focused personal and clinical interventions. *For the prevention of etiological stress linked to social conditions, however, generic models as well as models that are specific to some characteristic such as developmental age are necessary.*

Dimensions of Stress

The stress concept was treated in various ways in the monograph papers. In some cases stress was used as a stimulus and in others as a response to stimuli. Stress, although dynamic, is not a process; it is a well defined and measurable psychological and physiological reaction, and has been extensively researched. "Stressors" are the sources of stimulants of the stress reaction. How persons respond to stressors depends on a number of psychological, social, physical, and cultural factors. As the papers suggest, there is variability in one's response to a stressful experience depending on these factors, as well as on the type and number of stressors involved, the duration of the stressful experience, and the intensity and level of specificity, or to use Pearlin's term, the proliferation of the experience-- meaning the degree to which each aspect of an individual's life is involved or affected; (e.g., marriage, family, school, job). *New research in this area should clarify these dimensions and their interactions and guide the choice of intervention to be developed, how long exposure to the intervention should be, and how and by whom the intervention should be delivered. Certainly, what is meant by "stress" and what types of stress or stresses are being addressed, need to be made specific.*

Resources

The final concept of interest relates to the discussion of resources. This issue bears on the core of any preventive intervention approach taken. "Resources," as discussed in these papers, includes a wide array of both interpersonal tools (e.g., social supports, maintaining employability) and instrumental tools (e.g., knowledge needed to perform tasks, having job skills) to deal with stress and stressors. *It is clear from the monograph material that social conditions affect access to resources. It is important to understand how, once the resource is accessed or taught, it is effectively used.*

Access to and effective use of resources becomes important when an individual or group is challenged by a stressful experience. These resources can form the focus of a poststress intervention. *To prepare the target population for future stressors, however, it is important to develop preventive interventions prior to any specific stressful experience*. *For example, life transitions may be accompanied by economic, social, and personal challenges that can be sources of stress for many individuals*; (e.g., entering college or the job market, marriage, parenthood, retirement, or widowhood*).* *Interventions or training in coping and adaptation skills beginning early in life and continuing into late adulthood would ease these transitions.*

The Conceptualization of Preventive Interventions

Intervention Objectives and Operations

Three conceptual areas, (a) exposure to stress, (b) access to resources, and (c) effective use of resources, are amenable for preventive intervention. *These concepts should be integrated into comprehensive prevention theory*. *The great challenge, however, is to turn theory into practice by designing operational strategies that will reduce stress exposure or improve resource acquisition and will address the needs of special populations such as women, ethnic or cultural groups, and age groups*. The evaluation of the intervention would assess the extent to which these objectives are achieved and the extent to which these achievements relate to favorable outcomes.

"At-risk" Differentiation of Target Populations

The field of prevention has moved to new definitions of interventions based on the target population and the degree to which the target population is at risk for specific outcomes. These include *universal, selected*, and *indicated* interventions. *Universal interventions* target populations that are heterogeneous relative to the risk factors in question, while the *selected* and *indicated interventions* target populations that are either at greater risk for a negative outcome or already affected by the outcome.

Universal interventions are protective and innoculative.-- They prepare populations for untoward experiences, reducing exposure to stress or enhancing the ability to deal with a stressor. These interventions can be policy interventions such as improved law enforcement against drug trafficking, alcohol taxation, and establishing a minimum age for purchasing alcohol or tobacco products. They could include entitlement programs such as Medicaid.

A universal intervention approach that I have not yet seen is one that trains groups to interact and negotiate medical and other social service delivery systems including schools. The papers in this monograph suggest changing the interaction between the individual and our socialization agents by providing specific resources such as community media, information, or educational campaigns to enhance parenting skills, particularly for families living in compromised social and economic settings or for families with challenging children, such as those with conduct disorders. *There already are effective intervention models that change school, peer, and community norms regarding the use of tobacco, alcohol, and illicit drugs among children and adolescents. There are also models that train teachers and parents to work together to increase children's feelings of success in school, thereby reducing absenteeism and improving academic performance. The mediating mechanisms are the social bonds formed between family and school and the increased social support available to the child.*

Selected and indicated interventions.-- *For those who have already experienced a stressor or stressors*, selected and indicated approaches *could include focused crisis interventions* for job loss, divorce, rape, and other forms of victimization or for natural disaster. *Preventive interventions must address the source of the stress, resource loss resulting from the crisis, and lack of personal and instrumental resources that may have the crisis.*

Community Involvement

When directing any of these intervention approaches to specific community groups (using "community" to mean populations that share an identifying characteristic whether area of residence or another demographic characteristic), it is important to reach out to develop their trust and to engage them in modifying the intervention model, in order to make it relevant and understandable. *Ethnographic approaches combined with input from community leaders and representatives help identify what is salient to the community, define existing sources of stress, establish current patterns of response, and assess available physical and social resources.* This information can be used to develop the intervention approach.

Multiple Intervention Strategies

We also have learned that some negative outcomes, such as drug abuse and HIV, demand multiple intervention strategies. *The need for several different types of strategies that target a number of behaviors or populations recognizes the broad nature of the problem and its proliferation (more than one aspect of one's life is affected*). It also acknowledges that the etiology of disorders such as drug abuse or HIV consists of several separate and interdependent pathways (e.g., HIV is not only transmitted through the sharing of injecting equipment but also through unprotected sexual activities). Furthermore, *when the population in a community is heterogeneous relative to the risk for a disorder, it is important to have universal, selected, and indicated interventions that are interrelated*. For example, a preventive intervention program for drug abuse should include strategies that target children's knowledge and attitudes about drugs as well as their skills to resist drug use and to cope with stresses in their environment. The program would need to establish antidrug norms in the school and community and arm parents so they can discuss drug abuse issues with their children.

Environmental and Structural Interventions to Maintain Improvement

Finally, on a cautionary note, it is important to include, wherever possible, environmental or structural interventions along with the educational components to maintain desirable behaviors skills. For example, many current HIV programs reach into underserved populations, providing factual knowledge about the transmission routes for infection, offering testing and counseling services, handing out condoms or sterile injection equipment and bleach, and teaching the skills needed to use them. However, nothing is being done to ensure that the target populations will access condoms and bleach themselves when the program leaves the community. An important component of these interventions then is to ensure that residents have easy access to these items in their own communities.

We are fortunate to draw from more than two decades of research that identifies the effective components of preventive interventions. Such experience and knowledge can aid in the development of effective interventions for stress-related mental health symptoms and disorders.

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