

Introduction

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These readings take stock of research findings on relationships among social conditions, mental health and mental disorder. They focus either on the “social stress process” as a mechanism in these relationships-- exposure to stress and the use of personal and social resources in coping with stress-- or on the influence of the larger context(s) on the way this mechanism works-- the social conditions of peoples’ lives and the settings in which they interact with others. Some papers report on progress in formulating, testing, and applying preventive interventions both in clinical and educational programs with individuals and through ecological programs, social movements, and social policy resulting from this progress. Some restrict themselves to clarifying the dimensions that link a condition to different mechanisms and different effects, others focus on clarifying the mediating role of individual coping behavior as opposed to the *availability* of social and personal resources in the development of a disorder. Some debate the importance of adding to knowledge of direct effects of social conditions knowledge of indirectly related and interactive effects,-- not only on population disease levels, but also on levels of coping resources and the emergence of new disease outcomes. These clarifications make possible more precise formulation, testing and application of prevention strategies, .as well as the identification of other obstacles to successful translation of basic knowledge into individually efficacious and, ultimately population-effective methods and services.

Compelling documentation is presented from cross sectional and longitudinal studies of human populations on the social contexts of health and disease in North America:

- that both the stress process model and its social contexts relate to disease and to interventions that prevent or interrupt dysfunctional behavioral, cognitive, emotional or biological responses to disease.¹
- that differential exposure to stress plays an important role in health outcomes
- that SES relates inversely to the likelihood of exposure to stress-producing conditions and the unavailability of resources for coping with these conditions.
- that a pervasive, socioeconomically-linked health gradient occurs across diseases
- that both early environments and current environments contribute to the onset and course of disease

This set of overviews also recognizes:

- what is currently reflected in the social science and public health literature about the links of biological processes involved in stress reactions to variations in environmental stress exposure, its quality and duration
- the mediating role of psychological states such as depression, anxiety and stress reactions in physical disorders as well as in other mental disorders
- the need to utilize different models of causation, distal as well as proximal causes, and integrated, multi-level, multidisciplinary research designs
- the need for public policy strategies for improving population health, conceptualized by Adler et al (1999) as...“tempered hierarchal structuring, socioeconomic enhancements, community development, child development and adult self-actualization”

¹ Also see Adler *et al* (1999), Aneshensel & Phelan (1999) and Cohen, Kessler & Gordon (1995) for further elaboration.

The collection is distinctive, however, in its emphasis on substantive socio-economic, demographic and value issues that emerge in a globalizing industrial nation and how they contribute to the clusters of individual thought, feelings and behavior-- at home, at work and in the community-- that have come to be recognized as mental disorders. How these predictive factors and the prevention and early intervention models they generate can, in turn, translate into models of practice, service, policy and monitoring that will reduce the national level of illness, its burdens and its causes, is addressed not only by the researchers but also by planners, practitioners and administrators who comment from often different perspectives that require new research directions. The sections address:

- multidimensional implications of a focus on context as well as process in the social stress model of mental health and mental disorder (Part I)
- socioeconomic disparities in mental health and mental disorder from the perspective of fundamental cause versus mechanism models (Part IIA) and their links to stressful job holding, job loss and job seeking in a globalizing society (Part IIB)
- socioeconomic and cultural models of gender, ethnic and racial disparities in mental health and mental disorder (Part IIIA) and their links to stressful unmarried parenting, working mothers and marital instability in a globalizing society (Part IIIB)
- the movement toward ecological grounding of disconnectedness and economic bifurcation in stress and coping-, mental health- and mental disorder- research that has generated an emerging need for multidimensional and salient concepts of the role of community contexts (Part IV).

Stress exposure takes on far more importance as a mediator in this collection than it has in its more narrow conceptualizations in past population studies of critical life events, with duration, cumulative effects and contextually specific versions of decision-latitude and demand-control qualities of the environment proving to be more strongly associated with disorder outcomes. In addition, studies in work settings have been able to differentiate the path between high demand-low control and low decision-latitude environments and health outcomes into:

...”a path from short-term or intermittent stress to active coping with a challenging demand and adaptive, rapidly resolving adrenal-medullar responses unrelated to later health problems or subjective distress”, and “a path that emerges when an individual has difficulty responding to demands and engages in passive coping such as avoidance, with the small adrenal-cortical arousal response (that accompanies a challenging demand and returns quickly to baseline at the termination of the demand) becoming stronger and associated with fear, anxiety, depression, suppression of immune functioning, and possibly diminished adaptive physiological responses.” (see Ganster, Chapter 5)

In other words, objectively measured biological markers have been linked not only to the duration of specific kinds of stress exposure but also to multiple and differential psychosocial and physical outcomes.

What becomes clear is that disparities in the social distribution of mental health and mental disorders continue to exist in local communities. They are related in part to stress-linked and resource-linked socio-economic conditions, and multiple outcomes that involve physical as well as mental disorders are being documented. The pockets of the population placed at risk by these conditions are increasing-- as is the spread of risk to mates and children. The globalizing society has been implicated in both the macro-level (group) and micro-level (individual) processes involved.

How to now incorporate what is being found about the influence of socioeconomic context into research on the relationships among multiple forms of stress, social integration or social support and multiple forms of health or mental health emerges as a clear focus for continuing research and development efforts. A complementary but critical focus on incorporation into development and evaluation of programs, services and policy emerges as well. (Part I)

Whether socio-economic conditions are fundamental causes that must be directly addressed to affect multiple, nonspecific, disorder outcomes, stressful environments and coping resources over the long term is a heated debate for which empirical tests are proposed. How to best measure socio-economic conditions linked to major mental disorders-- in particular whether it is necessary to take account of the growing disparities in income that have accompanied globalization-- is another debate requiring empirical resolution. (Part II, Section A)

The related question of how to link the epidemiology and prevention of mental disorders to ongoing evaluations of policy trends and policy interventions takes on more urgency as national trends in “disconnectedness and economic bifurcation” are described and related to stress and adjustment reactions, anxiety, depression, substance abuse, conduct disorders or other forms of distressing cognitive, emotional, behavioral, and biological dysfunction. (Part II, Section B)

It is equally clear that race, ethnicity, gender and age are also relevant to mental as well as physical health and disorder, to multiple as well as single outcomes. (Part III) The predictive power of these ascribed status attributes can in large part be statistically explained by correlated socio-economic factors, but they also hold independent and interactive implications for individual stress loads, the personal and social resources that can be brought to bear, and the form and amount of disease that becomes manifest. On the whole, internalizing versus externalizing disorders are at issue, changing cultural norms regarding economic, family and community behaviors are involved; and dramatically increasing demographic trends lend pressing importance to the next steps. (Section IIIA)

The demographic trends involve the numbers belonging to racial-ethnic minorities and to families headed by separated, divorced, or never-married mothers, as well as women in the workforce (including women with children) and families headed by women who are currently unmarried, working and living in poverty. Discrimination, acculturation, acculturative stress, gender stratification of workplace and family, the intersect of work and family roles, re-creation of gender inequality in socialization, the proliferation of stress throughout the status set that can accompany mobilization to address these stressors, and ecological factors in stress exposure and adaptation over the life course-- all-- are discussed as mediators of one or another form of risk or protection, but culturally salient versions of these concepts are now beginning to get attention as well. (Section IIIB)

Economic conceptualizations of the health effects of individual life trajectories are now prompting explorations of interventions conceptualized or evaluated from this perspective. The expense of stress-linked disease outcomes, the stress-linked degradation of human capital and its accumulation, as well as a growing interest in the relationship between human capital and social capital are involved. The interventions range from methods of altering individual asset trajectories to community development activities. Analytic guides for the selection of strategies² and operations to consider in the implementation/dissemination stage of model development³ are discussed. (Part IV)

Sociologists, social psychologists, community psychologists, preventionists and economists, as well as government planners and research administrators, contributed papers, discussions of new research directions, and commentaries on issues. The result is as interesting for its implications for the selection of strategies for reducing the national level of mental disorders in the face of the dramatically changing organization of services and practice as it is for empirical generalizations about the social contexts of stress-linked mental health and mental disorder. Not only does the potential of preventive interventions emerge as extremely important, but macro-level preventive interventions in particular-- interventions in policy, regulation, community, work and family systems that impact multiple disorder and disability outcomes.

² The degree to which multiple outcomes are addressed, the identification of their common population characteristics and their common etiologic pathways; recognition of the many dimensions of stress and stressors; and the extent to which resources are emphasized

In considering the implications of studies from local communities and special populations for the prevention of mental disorders and the need for new research directions, it is helpful to keep in mind what is known nationally about the distribution of the disorders, their risk factors and their consequences, as well as trends within the mental health service organizations and professions that are expected to conduct or stimulate stress-related rehabilitation, early intervention, and prevention services or policy.

National Monitoring and Evaluation

Many of the findings that emerge from studies of special populations and communities regarding the relationship between social/economic conditions and various mental disorders, or the stress process as mediating mechanism, are supported and extended in more recently available analyses based on the only national probability survey of major mental disorders among Americans. The National Comorbidity Survey (NCS) of households in the contiguous states was conducted among persons, 15 through 54 years of age, between 1990 and 1992.^{4,5} (Kessler et al, 1994). The survey is being replicated in 2000 and 2001 and extended to include teenagers between 12 and 14 years of age and persons over 54 years of age, with core items included in other national surveys based on samples sufficiently large to permit special analyses of racial and ethnic disparities.

³ At risk differentiation of target populations, community involvement in model adaptation, use of multiple strategies; and the interventions to maintain improvements.

⁴ The principal source of data on the prevalence of psychiatric disorders in the prior decade was the Epidemiologic Catchment Area Study, in which more than 20,000 respondents were interviewed in a series of 5 community surveys around *DSM-III* "major" disorders (American Psychiatric Association, 1980). The two noncontiguous States and the territories were pragmatically excluded from the sampling universe for the National Comorbidity Survey, since the numbers were projected to be too small to affect national rates. The omission of the elderly, children, institutional populations, and group living arrangements (other than students in college dormitories) also limits its generalizability. Although national data are unavailable for the most rapidly growing age sector of our population—the elderly—community surveys suggest a relatively low prevalence (13%) for those over 64 years of age. A national survey that did not employ a structured psychiatric interview schedule estimates a prevalence rate for children and adolescents close to that of the adult population; some 22% of those in households have experienced mental health *problems* (Zill and Schoenborn, 1990), a rate fairly similar to that extrapolated from community epidemiological surveys utilizing a structured psychiatric interview and generating clusters that meet selected diagnostic criteria. (Bird et al, 1988; Costello et al, 1988) Studies currently underway will address these deficits in the new decade.

⁵ Retrospective self-reports on the Composite International Diagnostic Interview (CIDI)

Experiencing a major mental disorder in the course of a year is common (31%)-- though little more so than cardiovascular disorders-- and in the course of a lifetime, very common (50%). Of the disorder symptoms described for a 12-month period, various forms of anxiety disorder are the most frequent (19%), substance use disorders and affective/mood disorders tie for second place (11%), and nonaffective psychoses such as schizophrenia, schizophreniform and schizo-affective disorders, delusional disorder, and atypical psychosis occur infrequently (2-3% based on screening interview, less than 1% of clinician classifications). (Kessler, Bergland, Zhao, et al, 1996)

- These national household data indicate without proviso that the 12-month prevalence of the “major” disorders declines with increasing income, education, and age (between 15 and 54), that men are significantly less likely to report major affective or anxiety disorders, and that women are significantly less likely to experience substance use or antisocial personality disorders. (Kessler, 1995) On the whole, the same social conditions protect against experiencing a major mental disorder over a lifetime⁶, against a severe and persistent mental disorder, and against high levels of comorbidity, though the cutting points for the predictions may vary somewhat. Although comparative data on ethnicity, urbanicity and region are not clearcut, the direct relationships between SES, marriage, age, and gender and major mental disorders that emerge in community and special population studies are supported in 12-month national data. (Kessler et al, 1994)
- Not only do NCS data support previously reported links between social conditions and various “major” DSM III-R and DSM-IV disorders, but subsequent analyses also indicate that insecure adult attachment styles (insecure, avoidant, anxious), current personality characteristics (including low self-esteem and external locus of control), or childhood adversity (loss events such as parental divorce or death, parental psychopathologies such as maternal depression, interpersonal trauma such as rape and other forms of violence) mediate this connection, confirming the relevance of the social stress process model to monitoring and reducing the national level of mental disorder. Controlling for other factors, relationships between childhood adversity and the recurrence of depression is specific to those with chronic interpersonal stress in adulthood. At this point in the analyses, the national data support the relevance of the social stress process model to monitoring and reducing the national level of mental disorder, though the analyses are still partial. (Kessler & Magee, 1993; Michelson et al, 1997)

⁶ *Ibid.* Data for nonaffective psychoses do not appear.

- Note that the inverse association between social class and a large number of physical diseases, inactive life expectancy, and mortality rates has been long known to be stable across time, measures and geographic place, and many physical diseases are gender- or age- specific (Kaplan, 1994; Hall, Altman & Blumenthal, 1996). Generally, however, the risk for physical disease increases with age, whereas the risk for adult mental disorder appears to be inverse, peaking in late adolescence and the early adult years-- a fact that generates the hypotheses that stress exposure is unusually high and coping resources inadequate among young adults, but that cumulative and chronic stress and the erosion of coping resources which accompanies cumulative and chronic stress interact over time with both mental and physical systems in undermining physical health outcomes.
- NCS data also indicate that co-morbidity is pervasive for pairs of disorders defined without the diagnostic hierarchies⁷ employed in prevalence data that can subsume more than one cluster of symptoms under a single label. Over and above a general component of co-morbidity among the major disorders over 12 months, there appears to be an anxiety-depression comorbidity component and an antisocial personality-substance abuse component, with non-affective psychoses related to both. In addition, anxiety, depression, drug addiction, and various emotional states have been identified in a growing literature as problems contributing to the onset and course of a variety of physical illnesses. Conversely, depression is often first discovered following the diagnosis of a chronic disease, such as coronary artery disease, cancer, HIV infection or diabetes. In sum, this comorbidity may reflect common causes, as the social correlates of the 12-month, NCS major disorders suggest, but it may also reflect reciprocal effects or effects of one disorder on another, a hypothesis supported by retrospective, self-report data in the NCS.(For secondary prevention implications, see Kessler & Price, 1993)

⁷ Diagnostic procedures in which other diagnoses are superceded by the presence of a particular set of symptoms

- Whichever causal model holds, earlier mental and/or physical disorder and their consequences may be antecedent in the relationships between current social/economic conditions and current mental disorders. NCS data, for instance, tell us that individuals affected by a “major” mental disorder are at unusually high risk for social disability and risk-laden life trajectories, as well as for the development of other psychiatric disorders. Impaired educational achievement, a lower probability of marriage or early and unstable marriage, and teenage childbearing are more likely (Kessler, Walters & Forthofer, 1998), as are reduced employment rates, absenteeism, job loss, lower work hours, and lower personal income-- all with implications for financial security, social support and mental health (Ettner, Frank & Kessler, 1997). In fact, half of all “major” lifetime psychiatric disorders in the general population occur to people with a prior history of some other major psychiatric disorder (Kessler, 1997; Jayakody, Danziger & Kessler, 1998; Kessler & Price, 1993).

Treatment Services

In spite of their projected burdens and considerable progress in the development of efficacious treatment models involving biological, psychosocial, and combined interventions (e.g. National Institute of Mental Health, 1999), relatively few episodes of major mental disorder are treated (21-25% utilization of professional services for major 12-month disorders among 15 to 54 year olds in the community). Most of the hospitalization and outpatient services that do take place over a 12-month period are slightly more likely to be provided outside the specialty mental health and addictive care sector than inside (16% vs 21%; Kessler et al, 1994). Outpatient services over the past year are twice as likely to be provided outside the specialty mental health and addictive care sector (6% vs 12%). On the other hand, the mean number of visits was 4 times higher in the specialty mental health and addictive disorders sector (13 vs 3), and this in spite of the fact that the external self-help sector averaged 27 visits. (Kessler, Zhao, Katz et al (1999), (Witkin et al, 1998)

- Although retrospective reports indicate that the probability of no lifetime treatment contact or delays in contact among people with early onset disorders across cohorts is unusually high, particularly for those with childhood-onset mood or anxiety disorders (known to be more severe and disabling than later onset disorders), the majority of other persons who experience a major disorder eventually do seek treatment-- between 6 and 14 years later on average, depending on the disorder. (Kessler, Olfson & Berglund, 1998). Comorbidity does appear to be part of this process, increasing the likelihood of both 12- month (to 34%) and lifetime (to 42%) treatment contact. However, the costs of this delay in additional illness and distress, psychosocial disability, and risk laden life trajectories, and its implications for designing preventive strategies, are still being untangled in the national data set.
- What is known is that the *likelihood* of comorbid substance use, service use, frequent service use and service use in the mental health specialty sector and in self-help groups increases markedly when severity and persistence of the disorder or level of associated role impairment is taken into account (among 18-54 year olds), but that persons in treatment for other psychiatric disorders are much more numerous. As a result, those who are “seriously ill” by virtue of being severely and persistently disordered or seriously role impaired constitute less than a third of service visits for psychiatric problems in the prior 12 months, less than a quarter of all people in treatment, and little more than a tenth of all lifetime major psychiatric disorders (Kessler, Berglund et al, 1996⁸).
- These other demands, among 15 to 54 year olds, come from people with other major disorders (35%), from people who seek professional help for symptoms that do not meet criteria for one of the “major” disorders measured in the national epidemiological survey (26%), and from people who have had a “major” disorder in the past but whose current symptoms do not meet criteria for one of the “major” disorders (16%) (Kessler, Berglund et al, Tble. 5.4). Not only the distress and dysfunction implicit in the presenting symptoms of those who do not meet epidemiological criteria for a major disorder (Kessler, Sonnega et al, 1995; Kessler, Zhao, Katz, et al, 1999), but also heightened risk for progression to a more serious disorder is involved. (E.g. Kessler, Zhao et al, 1997; Judd et al, 1998; Kessler, Stang et al, 1998; Kessler, Stang et al, 1999; Kessler, Nelson et al, 1996; Merikangas et al, 1998)

⁸ 18-54 year olds

- Even simplistic extrapolations of the unmet need for services among those in the community with an epidemiologically unmeasured psychiatric disorder in their lifetime, or in remission from an earlier disorder, are difficult to find. However, some 53% of the community population that met the definition for a serious mental illness in the past 12 months had not sought professional help, and some 82% of those who met the definition of some other epidemiologically measured psychiatric disorder in the past 12 months had not sought professional help, i.e. approximately 17% of the community population had diagnosable, epidemiologically measured, major disorders but had not sought professional help. So far, we do know that for those who met the criteria for a serious mental illness, youth (18-34) and an income under \$70,000 distinguished them from those who had sought help. (Kessler, Berglund, et al, 1996).
- Although retrospective reports indicate that the probability of no lifetime treatment contact or delays in contact among people with early onset disorders across age cohorts is unusually high, particularly for those with childhood-onset mood or anxiety disorders known to be more severe and disabling than later onset disorders, the majority of other persons who experience a major disorder eventually do seek treatment—on average between 6 and 14 years after the original symptom onset, depending on the disorder. (Kessler, Olfson & Berglund, 1998). Comorbidity does appear to be part of this process, increasing the likelihood of both 12-month (to 34%) and lifetime (to 42%) treatment contact. Although the costs of this delay in additional illness and distress, psychosocial disability, and risk laden life trajectories, and its implications for designing preventive strategies, are still being untangled in the national data set, both early onset disorders-- particularly mood or anxiety disorders-- and persons who have experienced a major disorder in the past 6-14 years without seeking treatment have been identified as high risk populations for intervention development.

- Comparative study of the 1990 U.S. National Comorbidity Survey and the 1990 Mental Health Supplement to the Ontario Health Survey does tell us that Americans with the lowest incomes and high morbidity are much less likely to receive services for mental health problems than a similar group of Canadians who have universal and comprehensive insurance coverage, but that Americans with relatively high socioeconomic status and low levels of mental morbidity, as defined by the survey criteria for “major” disorders, are much more likely to receive services for mental health problems than a similar group of Canadians. Lack of insurance coverage for low income Americans and a greater prevalence of “perceived need for care”-- awareness of symptom implications and readiness to act-- among Americans of higher socioeconomic status statistically explain most of the differences between the two populations. (Katz, S.J. et al, 1997).

The Changing Practice Context

The fact that the number of disorders clinically recognized in current diagnostic guidelines of the American Psychiatric Association (1994) and by the World Health Organization (1992) is considerably larger than the number included as “major” in epidemiological surveys in this country lends additional importance to the availability and utilization of prevention strategies to reduce service need. Both stress and adjustment reactions and psychosocial problems based on prevailing clinical assumptions are included in the APA and WHO diagnostic systems, but excluded from the major disorder outcomes measured in the NCS and community epidemiological studies. Both hierarchical diagnostic rules and subjective criteria limit the use of the two diagnoses.

- Clinical diagnoses (Axis I) consider psychosocial problems, but distinguish between cases in which they are the primary focus (i.e. no other mental disorder, another mental disorder but unrelated to the problem, severity warrants attention independent of the disorder) and those in which they are not. If primary, the psychosocial problem is differentiated into: coping styles, maladaptive health behaviors and stress related physiological responses that significantly affect the course or treatment of a medical condition; relational problems associated with a mental disorder or general medical condition; problems pertinent to victimization through abuse or neglect; inappropriate behavioral responses to treatment of a mental disorder or general medical condition; antisocial behavior not due to a mental disorder; age-related cognitive decline not attributable to a specific mental disorder or neurological condition; phase of life problems involving transitions or identity problems that engage the person in multiple issues related to moral values, group loyalties, and long-term goals, but that are not due to a mental disorder or sufficiently severe to warrant independent clinical attention (e.g. bereavement); or various problems in meeting behavioral or belief standards in academic, occupational, spiritual, or cultural adjustment, not due to a mental disorder or sufficiently severe to warrant clinical attention.
- Another Axis (IV) characterizes psychosocial and environmental problems regardless of the primary clinical diagnosis. The presence of such problems is defined by the presence of a negative life event, an environmental difficulty/deficiency, or a familial or other problem relating to the context in which a person's difficulties have developed. Positive stresses are listed only if they constitute or lead to a problem. The definition is not limited to problems contributing to the initiation or exacerbation of a mental disorder, however; problems that develop as a consequence of a person's psychopathology or that should be considered in the overall management plan are also included. (American Psychiatric Association, 1994, p.29) In practice the axis is seldom used in clinical reporting, and probably will not be unless it is incorporated into the information required for insurance reimbursement. (M. Furst, personal communication, January 25, 1999)

- It is, however, the *International Classification of Mental and Behavioural Disorders (ICD)* that is used by the federal Health Care and Financing Administration for Medicare and Medicaid reimbursements, with official crosswalks (translations) from DSM-IV diagnoses to ICD diagnoses available. The ICD-10 (World Health Organization, 1992), which is being clinically modified for reimbursement coding in the United States, includes diagnoses focused on common reactions to severe stress and adjustment problems that involve severe distress and interference with functioning. They range from acute and post-traumatic stress reactions to brief- and prolonged- depressive reactions to adjustment problems, mixed anxiety and depression, as well as other emotions, and conduct disturbances associated with adjustment reactions. These diagnoses are grouped in a major category with various forms of anxiety, dissociation, and somatoform reactions largely because of their historical association with the concept of neurosis and psychological causation. Nonetheless, where the presumptive etiological importance of a stressful event or continuing unpleasantness of circumstances is unclear or “less severe,” other diagnoses are utilized, and the psychosocial context is largely lost to an emphasis on underlying biochemical processes and treatments.

The Public Health and Social Science Research Communities

Historically, sociologists and epidemiologists have focused on events and experiences associated with substantial adaptive demands but ignored the psychological and biological paths through which these influences move. Psychologists have studied cognitive reframing or reappraisal of stressful environmental demands, as well as emotional or behavioral responses in disorder risk, while biological stress researchers focused on the links between environmental demands and physiological responses, and between physiological responses and disorder risk. The result has been a disciplinary compartmentalization of the scientific knowledge base (Cohen, Kessler & Gordon, 1995).

Most of the work on stressful environmental demands now takes account of psychological paths to disorder, and physical paths are increasingly incorporated into these models. Although much of the research on social conditions that increase the risk of experiencing a mental disorder has concentrated on a single risk factor or a single disorder (Cohen, Kessler & Gordon), these parallel approaches have improved our understanding of the damage that can accompany social risk factors and have led to preventive interventions that are being tested in a burgeoning number of small-scale, randomized control trials and a growing number of large-scale community trials. The interventions already have been found to significantly reduce the experience and impact of psychosocial risk factors among participants (Price et al., 1988; Mrazek & Haggerty, 1994). Efforts designed to yield additional effective interventions are growing, and program infrastructures have developed to quickly move efficacious models to population testing, dissemination and technical assistance.

However, promising questions with particularly high payoffs remain to be answered. They involve the specific benefits of reconceptualizing a wider range of risk factors and outcomes, and assessing the feasibility and value of broadening theoretical models to include the indirect and interaction effects of antecedent conditions such as socioeconomic status. The goal is to ultimately translate this knowledge into population-wide prevention strategies-- whether they focus on the self actualization of individuals or community development and policy-- and to inform the provision of technical assistance to other national partners, state and local communities and consumers.

The Changing Service Context

These issues are taking on considerable significance to federal, state, and local governments as mental health services become part of the recent growth of managed care into the dominant mechanism for funding and organizing the general provision of health services, with monitoring, regulation, and supplementation becoming governmental concerns. Fifteen percent of the American population (40 million persons) is currently estimated to be without health insurance. However, most of the population (85%) is now covered: 182 million (70%) through private insurance, usually through plans developed by employers, unions, or voluntary associations; 33 million through Medicare; and 32 million through Medicaid. Although the inclusion, adequacy and quality of mental health services in this insurance coverage are only partially known at this point (Center for Mental Health Services, 1996, 1998), the importance of this funding source in the provision of services for mental health problems is apparent in a recent report that \$79 billion was spent on treatment for mental health and substance abuse problems in 1996. Government funding (Medicare, Medicaid, and other federal, state and local government programs) paid for the majority of treatment for alcohol, drug or mental health problems-- the lowest governmental share being 53% of treatment costs for mental disorders⁹. (MEDSTAT, 1996)

The term, “managed care,” usually refers to either a health maintenance organization, “with a predetermined payment for providing an established range of benefits over a specified period,” or to a utilization management organization, which monitors, reviews, and guides insured processes of care.

In the mental health and substance abuse fields, managed care organizations have generally taken the form of “carve out” firms that provide utilization review only for mental health and substance abuse problems. Since 1990, these firms have expanded their operations to include provision of services through directly owned or contracted networks of providers. Collectively these activities are being referred to as behavioral health care (Manderscheid & Henderson, 1996, pp.17-18).

⁹ A 1985 analysis of the economic costs of alcohol and drug abuse and mental illness in 1985 is available. For detail, see Rice et al, 1990.

Behavioral health care has been based, to a large degree, on groundwork laid by federal legislation between 1963 and 1981. The original Community Mental Health Centers Act (PL88-164) expanded the National Institute of Mental Health (NIMH) by adding new missions to its research, training, and research-translation activities with the states: to provide acute care in local communities as an alternative to state and county hospitalization, to reduce the number of those at risk of mental disorders, and to increase community awareness of sound mental health practices. The intent was more to keep people healthy or to restore and maintain their health in the community than to replace state and county hospitals in the care of the severely and persistently ill. (Foley and Sharfstein, 1983)

This mission began to change as realization of the opportunities for cost-cutting that accompanied the human and legal benefits of de-institutionalization swept the country, and people with severe and persistent mental disorders were discharged into the community by state and county hospitals, often without coordination or transfer of funding or personnel to progressively strained mental health and social service programs in the local community (Mechanic, 1980). In 1980 the Mental Health Systems Act (PL96-398) specifically provided both for community services for people with severe and persistent mental disorders-- with special attention to needs such as support and shelter for patients discharged from state hospitals as "better but not well"-- and for a categorical prevention grant program and a prevention office, along with services involving early detection and intervention, and prevention of risk factors for mental illness. At that point, multidisciplinary personnel had become available, with psychologists, social workers, counselors, psychiatric nurses and paraprofessionals supplementing physicians and psychiatrists to provide the bulk of services. Both personnel and services had been redistributed to better serve populations in which they had been previously rare (nonwhites, youth, aged, rural residents). The accessibility of mental health services had been increased in many communities. Federal dollars had stimulated a substantial local financial stake in community-based service organizations. And the process of developing and testing prevention methodologies and services was under way, if not yet clear-cut in effect. (Foley and Sharfstein, 1983)

Less than a year later, a new administration with a different philosophy of federal-state relations substantially repealed the Mental Health Systems Act of 1980 and put in place the 1981 Omnibus Budget Reconciliation Act. A block of services funds for severe and persistent disorders was provided to the states rather than to local communities; the federal role was changed from that of directing the program to channeling funds to the states and stimulating services demonstrations, with the 1980 funding markedly reduced. In 1992 P.L. 102-321, the ADAMHA Reorganization Act, moved the mental health block grant service program and service demonstration activities into the new Administration on Substance Abuse and Mental Health Services; NIMH research activities were reorganized to emphasize severe and persistent mental disorders and placed in the National Institutes of Health.

Today, however, many states are shifting their Medicare and Medicaid funds into managed care organizations to further reduce the costs of providing service to people with severe or persistent mental disorders, and cost containment and marketing pressures in behavioral health are refocusing attention on consultation, education and prevention in stable managed care organizations where long-term cost offsets in both mental health and medical services can accrue (E.g. Katon et al, 1997). Emerging issues¹⁰ include:

- Providing access for those without insurance and providing parity of mental health coverage for those who do
- Improving availability, quality, accessibility, and monitoring of health promotion and disease prevention services in managed care organizations, particularly in the mental health area, given the diversity of organizational goals and objectives, structures, management strategies and regulatory relationships¹¹
- Reconciliation of the long-term payoffs expected from introduction and expansion of prevention services with the short-term and cost reduction priorities of the for-profit organizations that dominate the “carve out” industry

¹⁰ For detailed discussions, see Center for Mental Health Services (1998) and NIMH (1998a, 1999).

¹¹ Mechanic (1996) has suggested that with the complexity of managed care arrangements, the many difficulties in conducting research on the ground of a highly competitive industry, and the high financial stakes involved, the most useful research is likely to involve guidance “to managed care providers about best practice, [to] purchasers about what and how to buy and how to evaluate products, and [to] regulators as to those practices requiring close surveillance or of those amenable to change.” (pp. 17-18)

- Working out arrangements that maximize potential cost offsets by integrating medical and mental health services-- clinically identifying and dealing with the role of physical disorders in the onset and course of mental disorders, and the role of mental disorders in the onset and course of physical disorders-- given the time and cost containment pressures on physicians in many managed care settings and the “carve out” trend in the provision of mental health services
- Determining the feasibility of incorporating into service design, translation and monitoring the shifting service paradigms reflected in movements toward accountability and consumer/family involvement¹²

However, recent federal parity legislation (P.L. No.104-204) overrides exclusions that had exempted from State-level parity legislation at least one-third of the population covered by self-insured employers. The State Children’s Health Insurance Program under Title XXI of the Social Security Act (P.L. No.105-33) now enables States to provide health insurance coverage for uninsured children through an enhanced Federal match of State expenditures, and the coverage includes the parity requirements of the Mental Health Parity Act.¹³ This shifting of government funds into managed care as well as cost-containment and marketing pressures in behavioral health are increasing attention to consultation, education, and prevention—at least in stable managed care organizations, where long-term cost offsets can accrue from reductions in demand for both mental health and medical services. Altogether the possibility is emerging that prevention strategies implemented in the community as well as in clinical settings, around multiple diagnoses in multiple systems, are not so much part of the problem in funding mental health services as part of the solution-- a solution serving the interests of both social justice (Seligman, 1998) and fiscal prudence (Shine, 1998). The ensuing ethical issues involved in implementing or not implementing prevention strategies are just beginning to crystallize, though the National Institutes of Health are now scrutinizing more closely the operations of Institutional Review Boards in this as well as other areas and the drug abuse field already has developed a network of state and local ethicists.

¹² See Manderscheid (1998)

¹³ See Center for Mental Health Services (2001), Center for Mental Health Services, 1998; and National Institute of Mental Health (1998).

Economic Benefits of Preventive Strategies

For policy purposes, multiple indicators of the burden of disorder can be bundled into a utility loss model that conceptualizes disability as a loss of time spent in productive work and permits relative rankings of different disorders to inform decisions about the deployment of resources. Recently, for instance, the World Health Organization (WHO) recognized the need to take non-fatal conditions and their risk factors into account along with premature death in assessing a population's health status.

- In their *Global Burden of Disease* (Murray & Lopez, 1996), disabling burdens of health conditions such as those described in the NCS-- and their sequelae-- are converted into a statistic on years of healthy life lost to disability, and combined with a statistic on years of life lost to premature death¹⁴ in a single number that can be compared across illnesses by policymakers: Disability Adjusted Life Years (DALYS). "The leading causes of disability are shown to be substantially different from the leading causes of death, thus casting serious doubt on the practice of judging a population's health from its mortality statistics alone." (Ibid, p.21)
- Moreover, this more complex measure of health indicates that the relative burden of psychiatric conditions had been heavily underestimated in the past. In 1990, of the 10 leading causes of disability worldwide, five were psychiatric conditions; although their burden was highest in the established market economies (including the United States), the five psychiatric conditions made the most important contribution to years lost to disability in all regions except Sub-Saharan Africa. Anxiety was the most prevalent of the psychiatric conditions, but unipolar major depression, a mixture of anxiety and depressive symptoms, was reported to be the leading cause of disability. Given the procedures used to estimate first approximations of both disease incidence and disability-adjusted life years in this groundbreaking study, however, the findings should be treated as tentative.

¹⁴ Death before the age to which the dying person could have expected to survive were they Japanese, the world's longest-surviving population

- In addition the WHO analyses focus on the cross cutting risks of individual behavior, the physical environment, occupational class, and other diseases as contributing factors amenable to change in reversing this disease burden. Again a single statistic was developed, this time to compare the burdens of multiple diseases linked to each of 10 risk factors¹⁵ and each of 10 antecedent diseases.¹⁶ The researchers report marked differences between regions and between men and women in the burdens of most risk factors, but volume IX. Quantifying Global Health Risks is not yet available and the Summary does not go into sufficient detail to permit thoughtful elaboration here. In a parallel effort the World Bank is conceptualizing the social capital required for the development of the kind of physical- and human- capital identified as protective factors in The Global Burden of Disease, studying the relationship between various forms of community and trust and the success of crosscutting interventions at macro (population) as well as micro (individual) levels (World Bank Social Capital Initiative, 1999; Feldman & Assaf, 1999; Cullen & Whiteford, 2001).

National economic studies of mental illness that utilize data on adverse outcomes of major mental disorders in the United States, as well as data on the degree of causality involved in the links between mental disorders and outcomes, have been ongoing for at least 40 years. In general they too have taken a utility loss approach, usually employing a prevalence-based, human capital methodology and measuring the loss of national resources due to disease-related reductions or loss of productivity, e.g. premature death, reduced time in productive work, and leaving the workforce-- indirect measures to which cost values are assigned. A supplemental direct cost measure is usually employed to assess the loss of national resources through expenditures for the treatment of disease, with untreated cases assumed to lead to an increase in the percentage of indirect costs. (Rupp, A. et al, 1997)

¹⁵ Malnutrition, poor water supply, sanitation and personal and domestic hygiene, and air pollution; unsafe sex, tobacco use, alcohol use, illicit drugs, physical inactivity; hypertension; and occupation

¹⁶ Chagas disease, onchocerciasis, trachoma and hepatitis B and hepatitis C; cataracts, glaucoma, and diabetes mellitus; sexually transmitted diseases; and unipolar major depression.

Two of the early efforts in this tradition extrapolated national epidemiological data from American community studies to estimate national costs.

- Fein (1958) focused on the aggregate cost of mental illness, providing diagnosis-specific information only for indirect cost estimates
- Rice et al (1990) provided both indirect and direct cost estimates, by major DSMIII diagnosis.
- More recently, Harwood, Fountain and Livermore (1998) have provided both indirect and direct cost estimates for alcohol and drug abuse or dependence, employing 12-month prevalence data from the 1992 National Household Survey on Drug Abuse.
- Greenberg et al (1999, 1996) have estimated indirect and direct national costs for major anxiety disorders (including post traumatic stress) as well as for depression *in the employed population*, using NCS (1990-92), 12-month prevalence data, supplemented by extrapolations from other data sources for adults over 54 years of age.

The populations, purposes, measures and assumptions of these studies have been varied.

- The earlier work was largely designed to facilitate policy regarding services within the mental health system and linkages with medical, criminal justice, social service and self-help/family sectors, with a progressive emphasis on reducing indirect: direct cost ratios, reducing cost ratios of residential: nonresidential service components, and identifying problematic patterns. The resulting profiles of lost productivity, services, and costs for major anxiety, drug abuse, alcohol abuse, depressive and nonpsychotic disorders were distinctive and informative. Multi-system, total cost estimates were as high as \$273 billion dollars in 1988 (Rice et al).
- The more recent work by Greenberg and his associates has focused on *indirect worksite costs* in reduced productive capacity due to “excess” absenteeism and reduced productive capacity while at work, for both major depressive disorders and major anxiety disorders. These studies reflect a number of methodological improvements, although the use of direct cost data based on earlier epidemiological data, the restriction of indirect costs for anxiety disorders-- with their delayed treatment seeking and long-term effects-- to a 1-year period, and the treatment of age, gender, education and comorbid psychiatric conditions as confounds obscuring independent estimates of indirect costs is disappointing for those who are interested in the costs of altered life trajectories linked to joint effects.

- Even more to the point of the fiscal prudence of preventive intervention strategies, however, is the general absence of national estimates of potential reductions in costs-- direct or indirect-- that might be expected to accrue across disorders from various risk factor interventions. Given their unavailability until recently, even the use of national estimates of potential reductions of costs, pathology or risk that might be expected to accrue for a single major disorder by addressing particular risk factor interventions is a standard difficult to find in evaluations of model interventions in both special populations and community populations.
- Most such evaluations of indicated, preventive interventions-- designed to improve the course of existing disorders and their consequences-- focus on short-term outcomes of alternative intervention models (e.g. Goldberg, 1991; Hout & Reynolds, 1984; Weisbrod, 1983; Bond et al, 1988; Jerrell & Hu, 1983 relative to The Program of Assertive Community Treatment (PACT); .Revicki, Smith & Sorensen, 1999 re neurologic-based, antidepressant therapies.)
- Economic evaluations of universal and selected, i.e. risk-based, preventive intervention models are beginning to move beyond direct cost analyses to employ indirect cost models as well. (For example, see: Karoly et al, 1998).

The expansion of this work at both national and local community levels is increasingly important to responsible policy decisions.

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