

MENTAL ILLNESS AND THE ECONOMY¹

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Studies on various aspects of mental health and the economy have established links between mental health and economic well-being, have suggested that hospital outpatient treatment of psychiatric patients is cost-effective, and have shown that psychological support services can reduce medical care costs. Where these diverse findings will lead in the future is uncertain, but they seem likely to attract increasing attention and to influence the training and practice of health professionals.

Introduction

Discussions of mental illness and the economy have traditionally emphasized the relationship between mental disorders and the economic well-being of individuals and groups. Among the most consistent of the research findings in psychiatric epidemiology, for example, is that the prevalence of mental disorders is inversely related to socioeconomic status. The explanations for these findings, however, are somewhat less definitive. These have tended to cluster into two reconcilable points of view known as the "life stress" theory and the "downward drift" hypothesis. The "life stress" theory suggests that life is more stressful for people at the bottom of the socioeconomic ladder, and that the greatest prevalence of mental illness is therefore found among them. The "downward drift" hypothesis, on the other hand, argues that people who are already mentally ill function less effectively. As a result, they have menial jobs, make less money, drift downward in the social strata, and remain at lower levels.

These findings and theories have been explored well in the literature of psychiatric epidemiology. Indeed, they constitute the frame of reference within which discussions of the relationship between mental illness and the economy have generally taken place.

Mental Illness and Economic Downturns

Interest in mental illness and the economy took a somewhat different turn in the early 1970s, however, with the 1973 publication by Harvey Brenner (1) of his research on economic stress and mental hospital admissions. Brenner studied all admissions to mental hospitals in the state of New York for 127 years—from 1841 to 1967. He found that even minor economic recessions were the single most important factor in increased rates of admission to mental hospitals and, conversely, that an economic upturn slowed admissions. Brenner also found that this pattern was relatively stable during the entire period of the study.

In accordance with these findings, Brenner pointed out that feelings of failure resulting from such things as unemployment may trigger attitudes and events that result in hospitalization. Notwithstanding the pervasive belief in the United States that hard work, individual initiative, and the like are the keys to economic success, Brenner suggested that the destiny of even the most industrious people is to a great extent influenced by changes in the economy that are beyond their control; that people are victims of economic conditions determined by others, conditions that limit their options and have a major effect on their mental status and their lives. So despite advances in mental health theory and practice, downturns in the national economy, if severe enough, can cause hospitalization and can substantially undermine one's ability to do

¹Also appearing in Spanish in the *Boletín de la Oficina Sanitaria Panamericana*.

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well in a competitive society. Moreover, not only are mental hospital patients economically unproductive for their period of hospitalization, but when they are discharged their potential is often diminished and their future earning capacity may be substantially reduced.

In this sense, much mental illness is socially determined and at least in part substantially affected by changes in economic policy. That means decisions affecting the economy at national or regional levels have profound implications for the mental status of individuals. Government policies that result in economic downturns, therefore, have associated with them not only the traditional economic and social costs of those downturns but also the increased use (and therefore the increased cost) of mental health services, as well as the cost of decreased productivity among those who are hospitalized for mental illness caused or exacerbated by economic distress. And finally, in cases where such disorders have some long-term effect, the future productivity of the individual and the economy may be reduced.

For professionals in the mental health field, the implications of this approach are very important. During times of economic decline, when mental hospital admissions increase, the resources needed to provide the additional mental health services are not likely to be available because of the economic constraints. This is especially true because even though increased government spending has often been used as a cure for economic malaise, it has not generally been directed toward mental health services. Thus, those in charge of national and regional mental health programs, mental hospitals, and other psychiatric facilities are at a substantial disadvantage in trying to cope with increased need at a time of shrinking or at best stable resources. So, while mental health professionals in all countries tend to be familiar with problems of unlimited needs and limited resources, periods of economic stress can be particularly frustrating.

Brenner's work also suggests that the traditional twin views of mental illness as either a derivative of some organic problem to be treated

biologically or the result of interpersonal conflicts amenable to remediation by verbal psychotherapy must be joined to another view of it—as a byproduct of economic change. This makes it more difficult to accept the view that government policy and its effects on the social system are irrelevant for the development of personality, or to explain increases in mental hospitalization in terms merely of prevailing theories of mental illness, or to be satisfied with the relevance and effectiveness of traditional psychiatric practice. For notwithstanding the current enchantment with biological psychiatry, it appears that effective "treatment" may lie as much in solutions to the social disruption caused by economic instability as in direct psychiatric intervention.

This "economic determinism" suggests a causal chain in the relationship between mental illness and the economy. Negative changes in the economy such as unemployment, reduced productivity, and recession cause economic stress that can result in feelings of personal failure and a deflated self-image. If severe enough, these changes can lead to an increase in mental disorders and admissions to mental hospitals. In turn, these disorders and admissions result in economic costs to society, both direct and indirect. The direct costs generally include the expenses of treatment and rehabilitation of the mentally ill, together with the costs of medical care, criminal justice, and the like. Indirect costs include unemployment, absenteeism, disability, and other costs associated with loss of future productivity by those who may be permanently impaired.

The Economic Costs of Alcohol Abuse, Drug Abuse, and Mental Illness

Some examples from the United States experience may help demonstrate the magnitude of the cost to society of alcohol abuse, drug abuse, and mental illness. According to the U.S. Alcohol, Drug Abuse, and Mental Health Administration, for the year 1975 the total economic cost of alcohol abuse was estimated at nearly US\$43 billion, of drug abuse at US\$10 billion,

and of mental illness at about US\$32 billion.

In the case of alcohol abuse, \$20 billion, or about 46% of the total, was attributed to the indirect cost of lost production; \$13 billion (30%) was attributed to medical care costs; \$5 billion (12%) was attributed to motor vehicle accidents; and the rest was attributed to violent crime, fire losses, criminal justice, etc. A total of \$864 million was spent on treatment of alcoholism, including research and training activities.

With regard to drug abuse, roughly \$5 billion (52% of the total) was attributed to the indirect cost of lost production arising from absenteeism, incarceration, and death. The direct costs (48% of the total) included about \$1 billion for prevention, treatment, and rehabilitation; of this, nearly \$500 million was spent for medical care associated with drug abuse. The combined direct and indirect costs attributed to heroin abuse alone were estimated at \$6.4 billion, 62% of the total attributed to all forms of drug abuse.

Regarding mental illness not associated with drug or alcohol abuse, the indirect cost of lost productivity was estimated at \$17 billion (54% of the total). The remaining \$14 billion was expended on treatment, research, and training.

Put another way, these estimates indicate that every person living in the United States paid an average of \$52 for drug abuse, \$155 for mental illness, and \$214 for alcohol abuse in 1975.

Costs for Psychiatric Hospital and Support Services

Another aspect of the relationship between mental illness and the economy has to do with the relative costs and effectiveness of various kinds of treatment. Several studies (2, 3) have indicated, for example, that patient groups matched for psychiatric diagnosis, severity of illness, previous inpatient admissions, age, and sex were much less expensive to treat as outpatients at a day hospital than as inpatients, with no significant difference in clinical outcome. Indeed, the cost of treating the inpatients was three times greater than that of treating the day

hospital patients. Many such studies are now being done in the United States and, despite the methodologic difficulties, are yielding helpful information. Obviously, the more efficiently we can provide psychiatric treatment, the less costly will be its effect on the economy.

More recently, various interesting studies have examined the relationship between mental health services and the utilization of medical care. Some of these have indicated a decline in the utilization of medical care when mental health services are available, a decline that appears to be true of outpatient as well as inpatient medical care.

Also, while most studies of the effects of psychotherapy on the use of medical services have dealt with ambulatory patients, there is recent evidence that the patient's emotional status may influence the time it takes to recover from episodes of severe illness or even from surgery. In this regard, emotional factors seem to influence the course of existing disease as well as recovery from medical crises. For example, one study of 54 adult patients admitted for open heart surgery (4) found mortality to be highest among patients who had been identified as depressed prior to surgery, although those patients were not any more at risk on the basis of age, intensity of illness, or any other factors. Similarly, studies of women admitted for abdominal surgery found that high levels of fear prior to the operation were associated with slow recovery. In addition, other studies found that low morale among patients five days after admission to intensive coronary care units was a significant predictor of death. Although in this instance cause and effect relationships may not be clear, it is noteworthy that 10 of the 12 study subjects who died within six months of discharge (5) were characterized as suffering from unresolved emotional stress and depression.

Medical Cost-Reduction by Psychological Support Services

Mumford, Schlesinger, and Glass analyzed 34 controlled experimental studies, both pub-

lished and unpublished, that assessed the effects of psychological support for patients facing surgery or recovering from heart attacks (6). The psychological interventions studied included activities performed by mental health professionals as well as by surgeons, nurses, and others. Patients suffering illness or facing surgery were given information and emotional support. Some of the activities were quite simple and modest, while others were more complex and involved special programs.

In one such study, which sought to examine the influence of psychological preparation for surgery (7), the evening before surgery 25 male patients discussed their concerns and fears within a small group led by a nurse. They were told what to expect and how to assist their own recuperation. This group was compared with another 25 patients who had similar surgery, but with no prior psychological help. The study indicated that patients in the first group slept better, experienced less anxiety the morning of the surgery, and had less postoperative urinary retention. They also required less anesthesia and pain medication, and were discharged sooner than the control patients.

The studies analyzed also made comparisons between groups that received some psychological intervention and groups that did not with regard to the number of days hospitalized. The average difference in days hospitalized was about two days less for the members of groups receiving intervention. That is, those patients who had some psychological help stayed in the hospital two days less, on the average, than patients who did not. This favorable effect was observed even though the psychological interventions were generally quite modest and were not tailored to the specific needs of individual patients.

The economic implications of these studies are quite clear. Health care costs in the United States have been growing rapidly and now constitute about 11% of the gross national product. Chief among the contributors to these costs is hospitalization. Thus, any interventions that can significantly reduce the length (and therefore the cost) of hospitalization must be seriously con-

sidered, particularly those that are relatively inexpensive.

Unfortunately, current health care practice in the United States does not yet encourage the use of psychotherapy or other psychological techniques in caring for physically ill patients. That may be because the studies cited above are quite recent and the funds provided for such support activities are limited. Beyond that, however, the training of physicians and other medical care personnel does not generally include the kinds of things that would enhance their interpersonal skills, equip them to do counseling, or incline them to be particularly receptive to these approaches. Nor are there enough mental health professionals who are comfortable (or welcome) in medical settings and who are equipped to work with people who are physically ill, despite the recent growth of interest in medical psychology and behavioral medicine.

There seems to be little doubt that emotional factors play a significant role in disease processes and in their treatment. Illness can be caused or aggravated by emotional distress; emotions influence the body's ability to recover from sickness and surgery; and an individual's emotional state can influence the way he cares for himself. In this regard, a number of studies have demonstrated that all these things have an effect upon the nature of a disease, upon its course, upon recovery, and upon the use of medical services.

It is also clear that a large number of people seeking medical care (accounting for perhaps as much as 60% of all ambulatory medical visits) have little or nothing organically wrong with them, but instead have problems that are primarily psychosocial. They therefore misuse medical care, make repeated visits needlessly, and risk unneeded surgical procedures as well as excessive medication. All of these things increase the costs of health care and have an adverse effect on the economy.

An analysis of 11 studies assessing the effects of psychotherapy on subsequent utilization of medical care indicates a 25% decrease in later medical care utilization by those receiving psychotherapy. Other studies have shown that the median decline in medical care utilization

among subjects receiving psychotherapy is as high as 20% (8).

Studies dealing with the effects of psychotherapy on specific illnesses are also impressive. For example, a study examining the effects of psychotherapy on asthma found a 14% reduction in medical care utilization (9). Also, 12 studies assessing the impact of treatment for alcoholism on medical care utilization found treatment to reduce hospital days by 69%, outpatient visits by 40%, and outpatient-inpatient costs by 27 to 48% in the group studied (8). With regard to indirect costs of alcoholism, psychological interventions were found to reduce sick days between 38 and 47%, and to reduce sickness and accident insurance payments between 33 and 48%.

In addition, a research study published in the April 1983 issue of the *American Journal of Public Health* (10) indicated that people who had at least seven sessions of outpatient psychotherapy and who suffered from one of four chronic physical illnesses—ischemic heart disease, hypertensive heart disease, airflow limitation disease, and diabetes—incurred costs for medical services that were 66% lower than the costs incurred by similarly ill people who did not have psychotherapy. Specifically, 722 people who received psychotherapy were compared with 1,186 who did not during the period 1974-1978. The researchers found that those who received psychotherapy had reduced hospital costs because of fewer admissions and shorter stays, and they suggested that people receiving psychotherapy were more likely to improve their health-related behavior. They also found that the psychotherapy seemed most cost-effective when it involved a moderate number of psychotherapeutic outpatient visits ranging from about seven to 20. The greater the number of visits over 20, the closer the psychotherapy's cost came to equaling the saving in medical costs.

Concluding Remarks

To summarize, the relationship between mental illness and the economy has various aspects.

One, commonly referred to in psychiatric epidemiology, involves the finding that people in lower socioeconomic groups tend to have a higher prevalence of mental disorders than others, although there is some disagreement about whether the disorders constitute the cause or the effect of the subjects' socioeconomic status. Another aspect involves the estimated economic cost to society of mental illness. The determination of this cost has evolved from making measurements that had primarily to do with the direct costs of maintaining facilities and staff for the treatment of the mentally ill to including measurements of such indirect costs as lower productivity, accidents, and absenteeism.

Studies seeking to determine the most cost-effective ways of providing mental health care (i.e., services research) are dealing with yet another aspect of the relationship between mental illness and the economy. This area is relatively undeveloped, and the potential here for more efficient and less costly care is relatively great.

Another aspect, emphasized by Brenner's work (1) involves the extent to which the economic costs of mental illness are caused by the economy itself—a process in which economic downturns increase admissions to mental hospitals, admissions that have an economic cost. This cost is both indirect (since people in mental hospitals are unproductive) and direct (since they require care and maintenance in the hospital). The hospitalization also may have longer-term economic effects—in that it may cause those who are discharged to be much more difficult to employ; or else, if they are employed, they may be forced to work at a significantly lower level than their customary level before hospitalization.

More recently, examination of the relationship between psychiatric care and the economy has taken a somewhat different turn, with researchers suggesting that mental health services, provided in a timely and appropriate fashion, can help the economy by reducing the inappropriate utilization of much more expensive general medical care. Particularly as the costs of medical care continue to rise, these researchers' findings suggest that increased expenditures on

mental health services can save substantially more than they cost.

All in all, it appears that the effects of the economy on the well-being of people throughout the world, and the relationship between mental illness and the economy, are important areas for research and public concern—ones that are too

frequently neglected. The studies cited here, and others like them, seem to have great potential. Where they will lead and what they will ultimately demonstrate are not yet clear. It seems likely, however, that they will receive increasing attention and will influence the traditional training and practice of health professionals.

SUMMARY

One can view the relationship between economics and mental health in various ways. Traditionally, discussions of the subject have stressed links between mental health and economic well-being, and have drawn attention to the fact that the prevalence of mental disorders tends to be inversely related to socioeconomic status. Since 1973 considerable interest has also focused on evidence presented by Brenner (1) that indicates mental hospital admissions increase during economic downturns.

Another way of looking at the relationship is to consider the costs of mental problems. According to the U.S. Alcohol, Drug Abuse, and Mental Health Administration, in 1975 the direct and indirect costs of alcohol abuse totaled US\$43 billion, those of drug abuse totaled US\$10 billion, and those of mental illness totaled \$32 billion.

It is also possible to examine the cost-effectiveness of various kinds of psychiatric treatment. Several studies of this type have found that it was much cheaper to treat psychiatric subjects as hospital outpatients than as inpatients, and that the two types of treatment produced no significant differences in terms of clinical outcome.

In addition, various studies have examined the capacity of mental health services to reduce medical care costs. Some of these studies have found that

emotional factors seem to influence patients' recovery from medical crises. Among other things, they have found that psychological interventions improved the performance of patients suffering illness or facing surgery and reduced the average number of days hospitalized.

It also seems clear that many people seeking medical care have primarily psychosocial rather than medical problems. In this regard, it has been found that psychotherapy tends to significantly reduce subsequent demands for medical care among those receiving psychotherapeutic treatment. More specifically, one recent study reported that subjects suffering from ischemic heart disease, hypertensive heart disease, airflow limitation disease, or diabetes who had at least seven sessions of outpatient psychotherapy incurred medical costs 66% lower than comparable patients who did not have psychotherapy.

In sum, it appears that the effects of the economy on human welfare and the relationship between mental illness and the economy are important areas for research and public concern. Just where the studies cited in this article will lead is still uncertain, but it seems likely that they will receive increasing attention and will come to influence the training and practice of health professionals.

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RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE

Rheumatic fever and rheumatic heart disease are problems of major importance in many parts of the world. Rheumatic fever, triggered by a streptococcal sore throat or tonsillitis, is typically a disease of childhood and adolescence, generally affecting subjects five to 15 years old. Most cases of tonsillitis can be treated and cured easily. However, two or three weeks after developing streptococcal sore throat infections, a few patients develop hot, painful, and swollen joints accompanied by fever—hence the name “rheumatic fever.”

Unfortunately, whether severe or mild (even when it passes unnoticed), rheumatic fever can cause permanent damage to the heart, particularly the heart valves, leading to a serious chronic condition known as rheumatic heart disease. The consequences of chronic rheumatic heart disease include continuing damage to the heart, increasing disability, repeated hospitalization, and premature death—usually by the age of 35.

Available mortality statistics in developing countries show that rheumatic heart disease ranks high among the causes of death in the 15-24 year age group. Indeed, in many developing countries rheumatic heart disease accounts for over 30% of the cardiac cases admitted to hospitals, and in many places it is second only to accidents as a cause of death among those 15 to 24.

In some ways, rheumatic fever can be regarded as a “social” disease. Linked to poverty, overcrowding, poor housing conditions, and inadequate health services, it declines sharply when the standard of living is improved. Nevertheless, even in the most affluent countries there are areas where the disease still occurs.

Of all serious, chronic conditions, rheumatic heart disease is one of the most readily preventable. Two prevention approaches are possible. One consists of preventing rheumatic fever before it occurs by identifying all patients with streptococcal throat infections and treating them with penicillin. This approach has some serious practical, logistical, and technical drawbacks, particularly in developing countries.

The other approach, which is more feasible, especially in developing countries, consists of identifying those who have had rheumatic fever and giving them one injection of penicillin every three to four weeks. This prevents streptococcal sore throats and therefore prevents the recurrence of rheumatic fever and rheumatic heart disease. The cost of this secondary prevention is estimated at US\$15 per patient per year.