American Journal of Community Psychology, Vol. 5, No. 2, 1977

Money and Mental Disorder: Toward Behavioral Cost Accounting for Primary Prevention

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This paper reviews recent retrospective sociological research suggesting that rises as well as falls in the economy are associated with such indicators of mental disorder as suicide and mental hospitalization. The review emphasizes that a lag exists between economic change and the changes in associated mental indicators. It is suggested that these findings hold promise both for early warning for practitioners and for primary prevention. Also described is a survey in four centers of 93 community mental health workers, indicating that such workers are receptive to the use of such economic indicators but not well-informed about them. Suggestions are made for prospective research to relate economic change to mental disorder through such intervening constructs as life change and stress. Such research, it is hoped, would expand the capacities of community psychologists to account for the behavioral costs of economic policy alternatives.

The ideologies of community mental health and community psychology have both strained without great success toward the ideal of primary prevention (e.g., Baker & Schulberg, 1967; Kessler & Albee, 1975). Approaches to primary prevention have been so numerous and all-encompassing that, as Kessler and Albee (1975) state in their review, "nearly everything . . . has implications . . . for reducing emotional disturbance, for strengthening and fostering mental health" (p. 560). Several primary prevention strategists share the assumption that disordered behavior is at least partially a function of hazardous or stressful events impinging on the individual (e.g., Dohrenwend & Dohrenwend, 1974; Kessler & Albee, 1975; Schulberg & Sheldon, 1968). A corollary of this "stress" approach is that primary prevention should involve systematic interventions aimed at blocking, softening, or, at least, anticipating the occurrence of hazardous life events.

One large class of environmental events would appear to be a most obvious source of personal stress: economic fluctuations. Nevertheless, economic change (as distinct from socioeconomic status) has attracted relatively little attention from community mental health practitioners or researchers. However, some recent sociological research suggests that economic change accounts for an important part of the fluctuation in measurements of mental disorder (Brenner, 1973, for mental hospitalizations; Pierce, 1967, for suicide). In light of these findings and given our recent and continuing economic dislocations, it appears useful to explore further the interface of economic change and mental health service delivery.

This paper treats three topics: (a) Some of the evidence for the economic change–mental disorder relationship are critically assessed. (b) The translation of such socioeconomic research into programmatic action depends in part on the perceptions and attitudes of mental health practitioners. To assess these attitudes, a survey of community mental workers of various professional and paraprofessional levels was undertaken. The procedures and results of this survey are summarized. (c) Finally, some implications for practice and some questions for further research are presented. Much of the economics–mental health research to date has been conducted entirely in aggregate terms or entirely in individual, life events terms. We hope this paper will contribute to a bridging of these two approaches and the development of more interdisciplinary studies of this area.

THE ECONOMY AS STRESSOR

The fact that persons of low socioeconomic status (SES) are more frequently diagnosed as mentally ill than those of the middle and upper classes has been well established (Hollingshead & Redlich, 1958; Srole, Langner, Michael, Opler, & Rennie, 1962). Explaining this epidemiological finding has led to much debate over the direction of causality between poverty and abnormal behavior. Most of the explanations offered have made the tenuous assumption that the division of labor is a constant matrix in which one rises or falls depending on his or her individual characteristics acquired genetically or through social learning and labeling. Due perhaps to recent instability in the domestic economy, several researchers have realized that an individual's economic well-being is grossly affected by economic forces unrelated to his or her personal characteristics. Changes in economic security, moreover, have come to be viewed not only as indicators of how many resources can be brought to bear in coping with stressors, but also as stressors in themselves (Catalano, 1975). This realization has led to the hypothesis that the demand for mental health services will vary longitudinally with the status of the economy. Tests of this hypothesis are producing findings

which have important implications for both remedial services and for primary prevention.

The proposition that economic change affects the behavior of a population has been offered by several social scientists (Burgess, 1925; Cottrell, 1951; Durkheim, 1951; Ogburn, 1936). Only in the last decade, however, has this observation been operationalized and rigorously tested. Pierce (1967), tracing his interest to Durkheim, hypothesized that economic fluctuation, both up and down, reduced social cohesion and led to increased frequency of suicide. Using a time series design, the age-standardized U.S. White male suicide rate for the peace-time years 1919 to 1940 was compared with the absolute values of the first differences of the index of common stock prices. Lagging the suicide data 1 year behind the economic change measure, Pierce (1967) found a significant positive relationship ($r = .74$).

Perhaps the most cogent of the studies finding a relationship between economic change and abnormal behavior are Brenner's (1969; 1973) analyses of first admissions to mental hospitals in New York State from 1914 to 1967. Using archival data, Brenner was able to determine the age, sex, educational attainment, and diagnoses of patients admitted to all public and licensed private mental institutions for each of the 54 years. As a measure of economic status, Brenner chose the annual percentage of New York State's eligible work force engaged in manufacturing jobs. This measure was chosen because, of all retrospectively available data, the manufacturing employment index was found to be most highly correlated with more recently devised composite indices of economic well-being. To control for long-term trends which might lead to spurious correlations between the data sets, each set was detrended using line-fitting techniques. To control for short-term cyclic movements, the best fitting harmonic line was also subtracted, leaving short-term fluctuation free from long-term and cyclic trends. The lagged relationship between the two variables was then measured over the 54 years. Brenner found a strong negative relationship between total first admissions for all diagnoses and the economic measure.

The relationship varied when admissions were disaggregated by sex, educational attainment, and diagnostic category. Counterintuitively, good economic times were associated with *increases* in mental hospitalizations for some groups. Brenner found that first admissions for the functional psychoses category of males with grammar school education or higher was negatively correlated with his economic measure. But for those males with less than grammar school education, the correlation was positive. Female first admissions for the functional psychoses category were negatively correlated with the economic index for those with grammar school only and with college educations. The association was strongly positive for females with less than grammar school and with high school education. For the diagnosis of senility, the relationship was strongly positive across all levels of educational achievement for both sexes. All correla-

tions for literates through college-educated for the functional psychoses and senility diagnoses ranged in absolute magnitude from .50 to .88. The use of aggregate retrospective data precludes disentangling the intervening factors between economic change and institutionalization. The findings, however, demostrate that the relationship is more complex than the intuitive "unemployment causes mental disorders" explanation.

Brenner's findings are, the authors believe, extremely important to those who render mental health services. The strength of the relationship between economic change and behavioral measures suggests that it may be possible to predict not only changes in total demand for services, but also the demographic characteristics of the clients and consequently the best treatment modalities. Given that the behavioral impacts lag behind the economic change, there would appear to be sufficient lead time to shape programs and budgets to reflect the expected demand. Further analyses of the behavioral outcomes of economic change, therefore, could allow much more cost-effective management of scarce resources than is possible with the existing mode of program development. The impact such research eventually has on the provision of mental health services depends on two factors. The first is the degree to which analyses can disentangle the intervening variables between economic change and behavioral outcomes. The second is the willingness of mental health professionals to consider economic factors in shaping programs and treatment strategies.

It is possible that community mental health workers, through their intimacy with their clients' lives, informally "know" and fully utilize the recently found economics–mental health relationships. If such clinical insight already exists, it would invite further study to elucidate the psychological dynamics underlying Brenner's and Pierce's findings. On the other hand, lack of familiarity with such principles would suggest further work to translate and disseminate the ideas to mental health workers and planners.

METHOD

During June 1975, the staff members of four southern California community mental health services were asked to respond to a questionnaire entitled Mental Health Service Survey. The brief paper-and-pencil form included items aimed at beliefs and information regarding the impact of economic change and social status on service demand and treatment.

Six principal staff perceptions were studied in this questionnaire. (a) How important were economic conditions believed to be in causing clients to seek or continue psychotherapy? (b) Were economically triggered problems thought to be on the increase? (c) Was any particular social class noticeably increasing its representation among clients? (d) What kinds of information were

staff members receiving to assist them in dealing with the impact of economic change? (e) In particular, of what mental health use, if any, were state and local statistics on economic conditions? (f) Was social status of clients perceived as related to the type of treatment given?

Of the four centers studied, three were regional teams in Orange County; one was a community mental health center in Los Angeles County. Prior to and during the period of this study, bad economic news was as commonplace in southern California as in the rest of the United States. During June 1975, seasonally adjusted unemployment in Los Angeles County was 9.9%; in Orange County it was 8.9%. Inflation was continuing high, with the cost-of-living index up 11.8% in May 1975 from May 1974 in the Los Angeles–Orange County area. Mortgage foreclosures were among the highest in the nation in some new Orange County developments.

The responding subjects represented a cross-section of mental health workers. They were 44 males and 49 females whose ages ranged from 22 to 60 years. The largest number of respondents (44%) held masters' degrees (most commonly the MSW). Paraprofessionals (defined as submaster's degree level) accounted for about one-third of the respondents. Psychologists (PhD) and psychiatrists (MD) were equal in number and accounted for about one-fifth of the respondents. Over one-half of the respondents were younger than 33 years old, and over two-thirds had 6 or fewer years experience since their most recent degree. The studied mental health centers deal primarily with clients from the lower end of the economic spectrum. Respondents frequently noted that they had difficulty commenting on items involving interstrata comparisons. A greater difficulty with these results has to do with the incompleteness of the returns (about 50% of the contacted staff completed the survey). Presumably some of the nonreturns can be attributed to random absences or indifference, perhaps increased by the beginning of summer vacations in June.

Baker and Schulberg (1967) have demonstrated the existence of staff differences in community mental health ideology. The present questionnaire is somewhat related to the Baker and Schulberg scales which pertain to the belief in societal causation of mental disorders. The decision to complete or not to complete the questionnaire may have been systematically related to such attitudes as tapped by the questionnaire. To minimize this kind of bias, the questionnaire was given a neutral title, and the whole first page was devoted to demographic items such as age and sex.

RESULTS

Only 5.4% of the respondents regarded economic conditions as unimportant in causing their clients to seek or continue psychotherapeutic services. Of the

remainder, 17.2% saw economic conditions as very important; 37.6% saw them as quite important; and 39.8% considered economic factors as somewhat important. Thus over one-half of the respondents (54.8%) considered economic factors as quite or very important in precipitating demand for mental health service. Even more respondents (62.4%) reported noticing an upturn in economically triggered presenting problems.

Respondents were almost evenly divided on the question of the changes in the social status make-up of their clients. Over half (52.7%) indicated no particular social class as increasing its representation. Of the remainder, most thought they noticed an increase in either the lower middle (26.9%) or upper middle class (12.9%), with few identifying either the lower (6.5%) or upper class (1.1%).

From the above finding, it appears that about half of the respondents perceived a changing SES make-up of their clientele. Whether such a perceived change is actual is not indicated by these data. However, Brenner's (1973) work suggests that different social classes are differentially susceptible to economic change. Studies have indicated that patients of different social classes actually receive differential kinds of treatment (e.g., Hollingshead & Redlich, 1958) or should receive differential kinds of treatment (e.g., Goldstein, 1973). A majority (ranging from 63.4% to 76.3%) of the mental health workers in this study reported no difference in treatment between upper and lower class patients on seven tested dimensions. Among those who did perceive social class differences, treatment given upper class clients was described as more inner/dynamic, affective/cognitive, nondirective, long-term, verbal, focused on self-exploration, and interpretive.

Despite the apparent importance of economic conditions for their work, 43% of the staff members reported receiving no information or guidance regarding the impact of economic change during the last year. Another 19% reported, at most, some related reading in lay periodicals or newspapers. Just 36% reported either in-service training or reading in professional journals pertaining to economics and mental health.

When asked of what use state and local economic statistics were in their direct or preventive work, just 4.3% said "considerable use currently." However, when asked to specify this use, still fewer chose to articulate what they meant by "considerable." Another 18.3% could not foresee the use of such statistics. Currently 41.9% reported using such statistics informally, while 34.4% who were not using such statistics thought it would be desirable to use them. Taken together, these last two categories of respondents (76.3% of the mental health workers) would like to be able to make use of economic statistics or were already doing so in an "informal" manner.

Subsequent analyses of these data were conducted to see if the responses were related to such variables as the age or diagnosis of clients, or the training, experience, theoretical orientation, or sex of the mental health worker. Surpris-

ingly, these analyses recorded no significant relationship between the respondents' characteristics and their responses.

In summary, it appears that in at least the present sample, mental health workers regard economic variables as pertinent to their clients' problems. While these findings do not establish an actual relationship between economic change and mental disorder, they do show that mental health workers consider economic factors to be relevant to the distress of their clients. The fact that level of training and professional role are unrelated to the perception of economic factors in mental disorder may be partially due to the relative absence of attention to economic factors in the curricula of the mental health disciplines.

DISCUSSION

Given that mental health professionals would be receptive to increased use of economic data in structuring programs, the burden is on researchers to devise models which can generate demand- and need-predictions from economic data. In order to identify and disentangle the factors intervening between economic change and behavioral outcomes and to develop predictive models, future research would have to differ from the Pierce and Brenner investigations in four important ways.

1. *Economic changes and behavioral outcomes should be monitored prospectively.* Retrospective analyses depend on historical data which do not describe either economic conditions or behavior at the appropriate level of analysis or over long enough time periods to disentangle intervening variables. Prospective monitoring and surveying free investigators from archival data making the following differences possible.

2. *Economically rather than politically defined communities should be used as the units of analysis.* Pierce and Brenner, due to the retrospective designs of their investigations, were forced to use national and state data to measure the relationship between economic fluctuations and behavioral outcomes. Neither national nor state economic data, however, measure discrete regional economic systems which most directly affect the lives of the population. New York State's unemployment rate, for example, may be 9.5%, but this measure is based on aggregate data which does not describe any discrete socioeconomic system. The Rochester metropolitan area may only have 2% of its work force unemployed, while the New York City–northern New Jersey area might have an 11% unemployment rate.

To ensure that the independent economic measures actually describe an economic community, further research should use the Bureau of the Census standard metropolitan statistical area (SMSA) criteria to bound the unit of analysis. The SMSA concept was designed to allow the delineation of discrete

communities based on economic and social interdependence rather than political boundaries (Klove, 1952); SMSAs are areal units consisting of counties selected for their participation in an economy centered in a city of 50,000 or more. The decision rules governing the inclusion of counties are based on such measures as characteristics of the work force, commuter movement for work and retailing, information exchange, and cash flows.

3. *Behavioral outcomes less catastrophic than suicide and institutionalization should be measured.* Again due to their retrospective designs, Pierce and Brenner used archivally available measures of behavioral outcomes. These measures are, therefore, extreme examples of maladaptation which are not typical of the experiences of most families and individuals affected by economic change. In addition to considering such archival measures as suicide, crime, and demand for mental health services, future studies should monitor a sample of families, to gather outcome data describing the incidence of stressful life events (Dohrenwend & Dohrenwend, 1974), subclinical behavioral problems, and untreated clinical symptoms. Prospective monitoring of a sample of families would also allow observation of adaptive and maladaptive responses to economic stress. Families as well as individuals should be monitored, because recent findings indicate that an individual's adaptation strategies affect the behavior of his significant others. Brenner (1973), for example, found that, while the breadwinner might lose or change jobs, the attendant stress is sometimes manifested by institutionalization of other family members.

4. *Coping strategies should be observed to clarify intervening variables and facilitate remedial interventions.* Unlike retrospective studies based on archival data, future studies should observe the processes which lead to successful as well as unsuccessful adaptation to economically precipitated stress. Such monitoring would help determine which of the several explanations offered for complex findings such as Brenner's are correct. Does an economic downturn lead to more abnormal behavior? Does it reduce tolerance of behavior previously accepted? Or does it force families to commit members they can no longer afford to care for at home? Does an economic upturn lead to more abnormal behavior, or does it allow families to seek remedies previously considered too expensive? Why do economic changes affect different sex and educational groups differently?

Prospective monitoring of family coping strategies would also determine whose behavior is disordered by the experience of economic change – those experiencing the direct or the indirect impact of job changes. The clerk at the unemployment office, for example, may be forced to work overtime and under added stress during economic contraction. He or she may change eating and sleeping habits and reduce interaction with family. The spouse, in turn, may spend more time alone and consume more alcohol, leading to arguments and to resolution in the form of help-seeking or of separation. An expansion of the local economy, on the other hand, may bring promotions and new opportunities

to much of the work force. The individuals affected assume new responsibilities at work as well as new financial obligations such as new homes or autos. These added concerns may prove stressful to those individuals as well as their families.

Prospective monitoring would not only help clarify the relationship between economic change and catastrophic measures such as suicide and institutionalization; it should also help identify successful and unsuccessful coping strategies. Such information would be invaluable to mental health workers who deal with families seeking help and to agencies attempting primary prevention in school, work, and home environments.

Suggested Research

Work toward these goals should interrelate a variety of economic and behavioral measures. Operational measures for the size and structure of a metropolitan economy could include, besides changes in employed/unemployed work force, changes in the payroll of employed work force, per capita disposable income, savings, mix of economic base (exogenous industries), mix of standard industrial sectors represented, and capital investment by private sector. Each of these measures is tied to changes in the size and diversity of the division of labor and the capability of families to secure services.

Measures of behavioral outcomes could be of four types. The first might be the number of stressful life events experienced by the sample population. By using subsamples and the several instruments pioneered by Holmes and Rahe (1967) and Dohrenwend (1974), a profile of response to economic change by socioeconomic class, sex, and age cohorts could be constructed enabling investigators to identify high and low risk groups. A second class of measured outcomes might be experienced symptoms, e.g., the Health Opinion Survey (Macmillan, 1957). A third class of dependent measures could be the coping strategies pursued by sample families. Of particular interest would be the way in which the sample seeks counseling in formal and informal ways to obtain relief for their stresses. Gurin, Veroff, and Feld (1960) found that help was often sought from nonprofessionals either in "gatekeeper" roles or as ultimate sources of assistance (e.g., ministers, physicians). The midtown Manhattan (Srole et al., 1967) study documented (as have many other studies) the discrepancy between needy and treated cases. Given the growing social service network which provides overt or covert mental health assistance (e.g., family counseling for delinquents diverted at first offense in the criminal justice system), one might expect such coping by seeking counsel to be grossly underestimated by service-delivery statistics from mental health organizations. A fourth class of measured outcomes might be the demand for services from public mental health departments and private practitioners. Other social service agencies whose demand could be monitored include

the criminal justice system, social welfare, and public health departments. Survey research combining two or more of the latter types of variables is laborious but necessary and, encouragingly, becoming more common (see Dohrenwend & Dohrenwend, 1974).

Application: Improved Service and Behavioral Cost Accounting

The survey results described above indicate that mental health service agents are interested in having further information on the behavioral impact of economic change and would like to have the capability of translating economic statistics into better planning and treatment. Such data could provide lead time for the development of primary prevention programs in schools, factories, and unions in communities where economic change is anticipated or occuring. Predictive models could also help improve secondary intervention with clients who might be expected to suffer from economically generated stress. A better understanding of economically generated stress would be of help in the allocation of resources among mental and other health and treatment services at the state and national level. The state of California has utilized social indicators for more equitable distribution of resources already allocated to mental health (Sorkin, Weeks, & Freitag, 1973). These social indicators include static economic measures largely related to the economic class of residents of counties. The research suggested above should proved more refined and dynamic indicators for use in allocating funds. Moreover, epidemiological projections should help service agencies better anticipate and define their needs in future time periods.

Finally, the proposed research would help account the human costs of economic policy alternatives. As federal, state, and local governments become increasingly involved in the regulation of investment of public and private resources, decision makers need more thorough accounting of the human costs and benefits of alternative courses of action. The behavioral costs of economic change are among the least understood, and research such as that proposed above would provide data prerequisite to their accurate accounting. Such an accounting of economic policy alternatives in human cost terms might prove to be a major step toward timely primary prevention.

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