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Leta M. Adler
University of Arkansas, Fayetteville

James W. Coddington
University of Arkansas, Fayetteville

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SOME METHODOLOGICAL ASPECTS OF THE ARKANSAS
MENTAL HEALTH SURVEY

By Leta M. Adler and James W. Coddington
University of Arkansas

One out of every twelve babies born in 1940 in one of our urban states will spend some of his life in a mental institution if our present high admission rates continue. There are 600,000 patients in American mental hospitals at the present time, as many patients as are hospitalized for all other illnesses combined. In Arkansas there were 4768 patients in the State Hospital in January, 1949, almost 3 out of every 1000 persons in the State. In the 19 year period from 1930 to 1949, there were about 33,000 admissions to the State Hospital or 9 out of every 10,000 persons in the State were admitted each year. We do not know how many people in Arkansas have mental disabilities for which they have not been hospitalized. That is one of the questions which the Arkansas Mental Health Survey will attempt to answer. For the country as a whole, the United States Public Health Service estimates that in addition to hospitalized cases there are five million persons in this country suffering from psychoneuroses, another two and a half million with disorders of character and behavior, and from 20 to 30 million individuals with borderline or passing emotional disturbances. These figures will serve as sufficient indication of the seriousness of the health problem presented by mental illness.

Against this picture of mental health needs, we must juxta-
pose a picture of over-crowded, inadequate mental institutions most of which are not worthy of the name of hospital, of tremendous shortages in professionally trained psychiatric personnel off-set by poorly paid and poorly trained personnel, of the total absence of local psychiatric facilities in many areas, and of far too few mental health guidance centers and clinics to help people solve their problems before they become hospital cases.

Neither the general public, nor the medical profession, nor even the families of persons in need of psychiatric care have been sufficiently informed about this problem to give it appropriate attention. The public has been generally apathetic to the state of psychiatric care, though the publicity given the psychiatric problems of the returning veteran, the example set by the psychiatric hospitals of the Veteran’s Administration, and the federal government’s hospital construction program, are now apparently producing some concerted thinking and even action in the improvement of the care of the mentally disabled. The families of the mentally ill frequently have not been aware of the need for professional treatment, even where it is available. It is well-known that one of medicine’s most neglected research areas is mental illness. The federal appropriation recently recommended by the U.S. Senate for control of mental disease is only $11,612,000 compared with a $66,267,000 appropriation for cancer and heart disease. Nevertheless, it is claimed that available medical knowledge has outstripped by perhaps a generation the application of that knowledge to the treatment of the mentally ill.

What can the sociologist and allied social scientists contribute to the solution of the problem of the care of the mentally ill? Of course, sociology and other social sciences have already collected much knowledge of social relationships the application

1. U.S. Bureau of Census, Patients in Mental Institutions, 1946. p. 6-7
of which to social life would greatly reduce for participating individuals the tensions arising therefrom. The large literature on marriage and family life, the growing literature on social relations in industry, the forthcoming four volumes on the sociological and psychological aspects of military life, the extensive monographic literature on race and minority relations, need only be cited as examples. Such knowledge can be used to modify social situations so that they produce less emotional conflict in individuals, thus helping to prevent mental illness. But this knowledge also should be put to use in the treatment of psychiatric patients, particularly those suffering from the psycho-neuroses. The psychiatric patient should be considered in the context of his family and other social relationships not, as so many psychiatrists tend to do, as an isolated personality. This need has been recognized for a long time by such psychiatrists as Harry Stack Sullivan and J.L. Moreno, and the point of view is being increasingly accepted that psychiatric treatment of one patient really entails the treatment of his entire family with a psychiatric team which performs psychological testing and sociological counselling as well as the psychiatric treatment itself.

In view of the generally recognized role of social and cultural factors in mental illness, a recognition for which the neo-Freudians deserve considerable credit, sociology has not only a right, but an obligation to carry on research in the field of mental health. There are a number of facets of mental health research in which social scientists have interested themselves. One phase of sociological research is the investigation of the relation between the social environment and mental illness. One of the more interesting contributions in this field is the Faris and Dunham study which demonstrated that the distribution of admissions to mental hospitals from urban areas of different social and economic character is patterned with regard to type of disorder.2

Another phase of sociological investigation is illustrated by the Bateman and Dunham study of the social organization of the mental hospital, which by a type of participant observation discovered that certain established patterns of behavior among the attendants of the mental hospital actually militate against the recovery of the patient since the chief aim of the attendant culture is control of patients irrespective of their welfare.3 Anthropologists like Margaret Mead and Ralph Linton have been investigating, by comparative culture studies, the emotional tensions arising from various cultural patterns and their effects on personality organization.

The purpose of this paper is to describe another type of social science contribution to the field of mental health research, namely, the mental health survey. While social scientists have been working on various phases of mental health, it still represents a relatively new research field and therefore one which might profit by an over-view of the entire problem. Not only does the survey approach have scientific value, but it is a near necessity at the present time for the purpose of planning a concerted attack on the problem of mental illness. A survey is (a) a more or less comprehensive inquiry into numerous aspects of a situation, (b) as its exists at a given time in a given area, (c) with rather definite educational, informational and

2. R.E.L. Faris and H. Warren Dunham, Mental Disorder in Urban Areas. (Chicago 1939)
ameliorative purposes. It differs in several respects from most medical research in the psychiatric field.

One of the principal differences between the kind of studies that have been done by medical researchers and the survey relates to the size and adequacy of the sample. The comprehensive survey provides a large sample which can be employed to test hypotheses involving a large number of factors. Medical research, on the other hand has generally been based on small samples of case histories. While an intensive case history gives the insight into a particular individual necessary for therapeutic purposes, and study of small numbers of case histories may provide the investigators with insights that may be used as valuable hypotheses, investigations based on small samples of case histories do not meet rigorous scientific standards for two reasons. First, the smaller the sample, the more likely it is that findings represent a chance occurrence which would not appear in another sample and do not represent the actual situation in the universe from which the sample was drawn. Second, a very small sample makes impossible the control of factors by statistical techniques. While it is more difficult in the psychological and social sciences to set up an experimental situation with laboratory controls, it is possible to gain some measure of control by statistical techniques which measure variations in the dependent variable among segments of the sample which are made relatively homogeneous with regard to relevant independent variables or contingency factors. The larger the number of factors controlled, the larger must be the sample. Further difficulty with much medical research has been that samples have been drawn from clinical records where a selective factor in patient-load violated sampling theory which requires random sampling.

As an illustration of these difficulties, Dr. Thomas A.C. Rennie’s follow-up study of the level of adjustment achieved by 456 schizophrenics can be cited though it is by no means the worst offender in these respects nor is it lacking in worthwhile findings. It illustrates very well the necessity for fairly large samples, for after he had divided his patients into four recovery levels, he did not have enough cases to investigate to any extent the factors associated with the achievement of different levels of adjustment.

The major differences between the usual medical investigation and the mental health survey relate to their scope and function. The former generally deal with the etiology, symptoms, and success of treatment of specific kinds of disorders for the purpose of improving treatment techniques. A mental health survey does not attempt to displace medical research but supplements it. The survey really is "a series of investigations undertaken with the purpose of emphasizing the relationship of the findings." The mental health survey includes not only the extension of purely medical knowledge, but a study of the extent of mental disorder, the factors related to patterns of incidence of mental disorder, the availability of preventive and treatment facilities, the adequacy of the latter, and reasons for inadequacies. The result of a survey includes scientific generalizations, and also a picture of the mental health needs and resources of the area.

5. Thomas A.C. Rennie, "Follow-up of Study of Five Hundred Patients with Schizophrenia admitted to the Hospital from 1915 to 1923," Archives of Neurology and Psychiatry. Volume 45, No. 6, November 1939, pp 877-891.
surveyed, recommendations for future mental health programs, and information usable in the education of the public with regard to mental health.

There are two studies made by psychiatrists in administrative positions and, in at least one case, with the advice of a sociologist, which have some of the characteristics of a survey. These studies based on the State Mental Hospital records of New York and Massachusetts respectively cover rather extended time periods and, incidentally illustrate a frequent characteristic of the survey, namely, that they partially—and increasingly as public records improve—depend on routinely collected statistical data. One of these studies directed by Dr. Neil A. Dayton, was based on the records of 89,190 patients who were admitted to the state mental hospitals of Massachusetts between 1917 and 1935. Dayton describes this study in these words:

Rather than go behind the scenes and subject individual patients to the microscope, we chose to stand back and regard these 90,000 patients as one huge individual. What has happened to this giant previous to admission? The fact of admission to a mental hospital will be considered, not as the beginning but as the result. From this point we retrace our steps and study certain common influences which affected all patients before their admission to a mental hospital.

The New York study made by Benjamin Malzberg covered almost 30,000 first admissions to New York state mental hospitals between 1929 and 1931.7 Both studies relate the trend in first admission rates to historical events and investigates the relation of age, nativity, marital condition, alcoholism—and in the case of the New York study race, urban or rural place of residence, and birth order also—to the probability of being admitted to a mental hospital.

As an example of a more comprehensive mental health survey than these, I would like to describe the Arkansas Mental Health Survey which is just now getting well under way. It is a cooperative project of the Arkansas State Hospital for Mental and Nervous Diseases, the Arkansas State Health Department, and the University of Arkansas. The University, through its Institute of Science and Technology, is responsible for conducting the study. This survey has five major aspects.

The first is to obtain basic information from the Hospital records on the 32,614 patients admitted to the State Mental Hospital between 1930 and 1948. The analysis of these records, punched on IBM Cards, will parallel the New York and Massachusetts studies in that it will relate hospital admission rates to such background factors as age, sex, race, urban or rural residence, and marital status, but will be more extensive. Our preliminary findings indicate that with regard to age and sex, admissions to the State Hospital follow the national pattern, though the preponderance of 60% in male admissions is greater, which is particularly surprising in view of the fact that the national average includes the veterans' hospitals. With regard to age, the rate of first admission rises almost continuously from childhood to old age. In the period from 1940–44, for which our data are now available, the rate increases from less than one per 10,000 children under 10 years to 32 per 10,000 adults 70 years and over. The middle age range contributes the largest percentage of admissions.

The rate of admissions for negroes is slightly lower than for whites in the State as a whole, but it was higher in one third of

7. Benjamin Malzberg, Social and Biological Aspects of Mental Disease (Utica, N.Y. 1940).
the counties between 1940 and 1944. The negro admission rate for
the combined counties having less than 100 negro residents each
was very markedly higher than for counties which had larger negro
communities.

While the question of who is admitted to mental hospitals is
in itself interesting, it should be remembered that these differ-
tences do not necessarily represent differences in susceptibility
to mental disorder for the reason that admissions are influenced
by the varying efficiency of referral agencies, varying tolerance
of mental peculiarities, admission policies of the hospital, and
many other factors not related to the number of persons actually
suffering from mental disorders.

The spatial distribution of counties with high and low ad-
mission rates reveals that the twenty-five counties with the high-
est admission rates form a diagonal band across the State start-
ing with Lawrence and Craighead counties in the Northeast, passing
through Pulaski, Garland, and Jefferson counties with their rela-
tively large centers of population, down to Sevier and Miller
counties in the southwest corner of the State. The twenty-five
lowest counties are preponderantly in the Ozark area with a few
scattered in the southern section of the State. The twenty-five
middle counties are preponderantly in the southern part of the
State and bordering the Mississippi River. Accessibility to the
State Hospital in Little Rock would seem to be one of the factors
determining this distribution. Another factor which seems to be
important in determining the number of admissions from a county
is the number of doctors in the county. It is hoped that further
investigation of the regional patterning of admission rate will
eventuate in an equation for the prediction of county admission
rates. While this analysis of the social characteristics of
mental hospital patients is barely under way the other aspects of
the survey are still in the blue print stage.

The second major aspect of the survey is to be a follow-up
study of patients released from the State Hospital. This will
provide a description of the extent to which released patients
are able to readjust themselves to life in their communities. We
shall find out how they fit into their family group, whether they
are able to carry on their occupation, whether they participate in
church and community activities, and similar information. From
these data we shall score the former patient on the adjustment
level he has achieved taking into consideration his adjustment
prior to his illness. Adjustment scores will be correlated to
various factors relating to the pre-onset history, the illness,
the treatment, and the post-hospitalization situation of the
patient. If our findings make it feasible, we shall construct an
instrument for predicting the probability of successful readjust-
ment of released patients. To obtain data on adjustment of
patients, personal contact will be made with each patient's family
or other acquaintances either by interview or by mailed ques-
tionnaire.

The third major aspect of the survey is not limited to
patients of the mental hospital. A subject of general interest
is the amount of mental illness which is not treated and therefore
does not become a part of our mental health statistics. The
actual extent of mental disability in Arkansas will be measured
by complete enumeration of every family in samples of small areas
throughout the State selected in such a way that they can be con-
sidered as representative of the State as a whole.

The fourth major aspect of the survey will be a study of the
Hospital itself. Comparison of present staff with national
averages and the standards of the American Psychiatric Association both as to patient-staff ratio and training and comparison of its plant and equipment with the standards established by the United States Public Health Service will be undertaken. A study of the record system of the Hospital is also to be made, and modifications will be suggested on the basis of the survey’s findings as to the factors which are significant for predicting level of recovery. The amount, types and quality of therapy available to patients and the standards of general care—nutrition, recreation, ward care, social service functions, and so on—will be investigated.

Finally, it is expected that the findings and analyses resulting from this survey will constitute the primary factual information to be used in planning a comprehensive program of mental health for Arkansas. Such a plan will include the improvement of existing mental hospital facilities, with regard to personnel, plant, treatment, and record-keeping to assure that they fulfill the needs of Arkansas. It will include recommendations for the expansion of mental institutions and psychiatric services on the basis of needs demonstrated in the survey findings. Recommendations may well have reference to further segregation of patients according to type of mental difficulty, expansion of social service functions to include supervision of patients on parole, establishment of guidance centers and psychiatric clinics. According to established standards, superficial knowledge of present psychiatric care in Arkansas, and the experience of other states, it seems apparent that we need these things. The survey will verify these needs, but more important, will tell us where, for whom, and for how many. The mental health program can be integrated with the state hospital plan already developed by the Arkansas State Health Department and the Institute of Science and Technology in determining, for example, the extent to which general hospitals in the various regions of the State should provide facilities for rapid treatment of psychiatric patients.

Another aspect of a mental health program to which the survey will make substantial contribution is the education of the public concerning the nature and extent of mental illness and what is considered necessary to adequately deal with this problem. Our findings will be published and printed reports made available to interested organizations as well as to other media of public opinion formation. A representative government such as ours takes action in new fields only when a large segment of the public is concerned that such action be undertaken.

S. James W. Coddington, Helen M. Robinson, Mary T. Wright, Hospital and Health Services in Arkansas. University of Arkansas Research Series Number 12, (Fayetteville, 1947).