

ANNOTATIONS

A REVIEW OF MENTAL HEALTH IN THE METROPOLIS

THE MIDTOWN MANHATTAN STUDY

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ALTHOUGH the earliest morbidity surveys are less than 100 years old and no more than 100 such surveys have ever been done, it can be predicted that morbidity surveys will become more common because the conditions which are frequently fatal or are readily reportable are no longer our major health preoccupations. Interest in morbidity is supplanting interest in mortality as the grim reaper's effectiveness is postponed more and more until the later years of life.

Surveys of mental disorders are among the most common type of morbidity survey. At least two dozen such have been done and the most recently reported, *MENTAL HEALTH IN THE METROPOLIS: THE MIDTOWN MANHATTAN STUDY*,* is in some ways the most sophisticated and in other ways the most cumbersome and awkward of the lot.

Investigators planning a morbidity survey must start by defining a population. Sometimes the population of a school system or of army draftees or members of a retirement system is selected. Members of these populations have their names written in lists of members and by picking a particular list the population to be surveyed is characterized, removing any ambiguity regarding who is and who is not a member of the popu-

* Srole, L.; Langner, T. S.; Michael, S. T.; Opler, M. K. and Rennie, T. A. C. Vol. I. New York, McGraw-Hill Book Co., Inc., 1962, 428 pp.

lation being studied. More commonly the population is defined in terms of residence in an area, as are the populations of the United States Census. This is a favorite way of specifying a population for political and certain other purposes. But as the Bureau of the Census knows and election boards can testify there is some ambiguity about the residence of a growing portion of our population. Some people have several homes and do not belong uniquely to any particular locale. This is true not only of those who "have a country and a town estate" but also of students away at college, Fulbright fellows, Guggenheim fellows and of bigamists. There are also some young men and some young women who have no real place of residence at all, having moved from a parental home into transient quarters and continue to move about in transient quarters until they ultimately get married and make a home or become confirmed bachelors and spinsters and set up single housekeeping. In addition, there are the elderly whose children have grown up and established their own homes—particularly the widows and widowers who circulate between married children, sometimes coming for "a visit" and staying for years, and sometimes "moving permanently" each time "it seems sensible under the circumstances." These people simply don't know, in fact, how stable their home placement is, and the enumerator cannot really tell either. Outside of the city limits, residence is further confused by the growing population in "mobile homes," some of which move quite frequently and others of which are mobile only in theory and stay for decades in one spot.

In the survey under review, an area with a population of some 174,000 was outlined on a map of Manhattan's East Side, blocks were randomly sampled, dwellings in the sampled blocks were randomly sampled, people in the sampled dwellings were randomly sampled, yielding a sample of 1,911 people. The people sampled were confined to the age level 20-59 and were limited to people who met certain rules regarding residence. For example, it excluded people in transient hotels and in clubs, but included boarders in other places. (This difference is one of many sources of possible bias which the careful reader may discover.) Of the 1,911 people drawn in the sample 1,660 an-

swered a rather long, structured questionnaire which elicited much personal information about their past and present physical and mental symptoms of illness. A mere 251 (13 per cent) unknowns reflects a conscientious and competent field job.

This survey stemmed from a strong conviction that mental disorders have deep roots in community conditions. The late Dr. Thomas A. C. Rennie, the Cornell psychiatrist who conceived and initiated this survey was convinced that psychiatric patients required—in addition to what a psychiatrist can provide in the way of treatment—the help of social agencies, pastors, general practitioners, their families and their friends. This community orientation was demonstrated by his writings on community psychiatry, his multiple memberships on committees and boards, and by his appointment as the first chairman of New York City's Community Mental Health Board.

The breadth of Rennie's community interests (which was similar to that of Johns Hopkins' first Professor of Psychiatry, Adolph Meyer, Rennie's original psychiatric mentor) accounts for the breadth of the net which Rennie cast in the search for cases of illness in the population. He was interested in those conditions of mental malfunctioning which he had seen bring people in distress to psychiatrists seeking help. The survey looked for complaints or states of functioning which would be regarded as a basis for action by the clinician.

Because physicians (particularly good teachers of clinical subjects) traditionally hesitate to make diagnoses of patients they have not personally examined there was unwillingness to specify the exact nature of the disorders being counted. This unwillingness was strengthened by the fact that psychiatry has always been in an unsettled state regarding the diagnosis and nomenclature of mental disorders. The reasons for this unsettled state are complex and cannot be dealt with in this review, but there can be no doubt that diagnostic classification presents some problems for psychiatry which cannot be solved easily.

A person who is ill can be classified according to:

- a) The disease which makes him ill (Diagnosis)
- b) The extent to which his personal functioning is limited by his illness (Intensity)

- c) The symptoms he is experiencing
- d) The length of time he has had the disease (Past Duration)
- e) The length of time he is likely to have it in the future (Future Probable Duration)
- f) The type of course his illness has had (whether it is of chronic and stable intensity, progressive, remitting or recovering).

While a desire for neatness and simplicity may make us wish that illnesses had only one of these characteristics, the fact is that each case has all and experience has shown that these characteristics are 'independent variables'. I say they are 'independent variables' because pairs of cases can be found alike on all variables but one, in which they differ. Thus a case of malaria may be identical to a case of tuberculosis on all variables but diagnosis; all fatal cases are equally limited in functioning; the symptoms of a case of schizophrenia and of a case of syphilis can be indistinguishable; many varieties of congenital conditions are lifelong; a new explosive totally disabling case of feverish pneumonia which will die within ten minutes of observation may not be distinguishable on the other variables from one which will drag on for weeks and recover.

In this morbidity survey, intensity of disorder was selected for investigation rather than types of disorder. The investigators classified the population according to the seriousness of psychiatric symptoms found and according to the extent of impairment in living experienced by each person. Symptoms were classified as *absent, mild, moderate, serious*; interference with life adjustment was classified as *none, some, great, and incapacitated*. This two-dimensional classification yields a sixteen-fold table from which a six-point scale was derived.

		<i>Symptoms</i>			
		None	Mild	Moderate	Serious
<i>Interference</i>	None	0	1	2	
	Some			3	4
	Great				5
	Incapacity				6

While "severity of symptoms" are discussed as though they were phenomena quite independent of "interference with life adjustment," the blanks in this table show that either they are not independent in the minds of the investigators or that they are highly correlated in their data. I believe that the relationship between these two dimensions needs closer scrutiny both with respect to the concepts involved and with respect to the ways in which sick people vary in these two ways.

The prevalence of symptoms can be studied from several points of view. One approach might be to recognize that certain characteristics common in sick individuals may also be prevalent in people who are not sick. Criminality, for instance, has been observed in some people with psychotic conditions, but field studies have shown that it is even more common in individuals without psychotic conditions. (In the Midtown report the possibility that some of the symptoms enumerated occur in the absence of mental disorder is not investigated.) Moreover, the notion that certain physical illnesses are *ipso facto* evidence of psychosomatic conditions is very questionable. One might therefore try to determine to what extent certain 'symptoms' are indeed symptoms of an illness. A second approach would be to assume that certain symptoms can be better understood if they are studied in all sorts of people without reference to the diseases present; this consideration would justify studies of suicide, alcoholism or insomnia, to give a few examples. Finally, one can simply take the presence of certain symptoms as a crude index of the presence of disorder. The Midtown study adopted this last viewpoint; it counted the number of people classified as having a specified severity of symptoms and a specified level of impairment in social functioning.

Case finding in morbidity surveys almost always involves a review of clinical records of the medical facilities which service the population. Sometimes they stop there. Redlich and Hollingshead's "Social Class and Mental Illness" was based entirely on clinical records of patients in psychiatric treatment. The survey of Baltimore's Eastern Health District conducted by Lemkau and his colleagues added to this method social agency record searches and independent appraisal of the sig-

nificance of these records. The Onondaga County survey of the mentally retarded done by the New York State Mental Health Research Unit used a similar method.

For those who go further there are three additional steps which can be taken. One of the oldest is to ask all the professionals in contact with the population to nominate candidates for being counted as sick. One of the most extensive studies of this kind was the United States Census of 1880 which actually tried to count all the helpless people in the United States including the mentally ill and the mentally defective. Other surveyors have used such nominations as a first screen and then gone on to examine the candidates more intensively through direct contact. This method was used by Roth and Luton in their study of Williamson County, Tennessee and has been favored by many of the European investigators. This method of case finding has the appeal of a relatively inexpensive first stage (collecting nominations) and a relatively intense second stage. The investigators end up with a very discriminating set of conclusions about those identified as sick. This method was used with success by Strömngren, Brugger, Lin (in Formosa), Bööck in Sweden and a number of other psychiatric surveyors.

This key informant plus clinical evaluation method has two major disadvantages. First, it is appropriate only in closely knit communities where it is reasonable to expect every ill person to be known to at least one key informant and the number of key informants is limited. It is manifestly inappropriate in a metropolitan complex like New York. In Midtown Manhattan information about the sample of 1,911 persons might require interviews with several thousand key informants if one wished to contact their physicians, pastors, school teachers, policemen, their children's school teachers, etc. The second disadvantage is that the key informant screen does not require an explicit, equally intense scrutiny of each member of the population. The key informants do not review the whole membership but only that portion they are acquainted with. They do not give information about all members they are acquainted with but only those they know sufficiently well to nominate as possibly ill. Hence one is left uncertain as to the possibility

that some members of any studied population are not sufficiently well known to any of the key informants to be properly screened at all. Roth and Luton found more cases in a subsample that they scrutinized carefully than had been found by following up on the suggestions of key informants.

The obvious way to avoid this danger is to skip the nominating process of the key informant and go directly to the whole sample population. In surveys of mental disorders this has actually been done only twice. Essen-Møller and two colleagues personally interviewed every adult in two Swedish parishes one summer and not only identified them in terms of clinical diagnoses but also classified each and every person regarding a series of personality traits which they wanted to study. (Unfortunately the classification, by Sjorbring, is one which is of interest to only a small clique of professionals.) Johannes Bremer, who has since completed his training in psychiatry, was assigned as a young government physician to a small fishing village in northern Norway and was unwillingly forced to extend his tour of duty by Hitler's occupation. He helped to while away the years by conducting a morbidity survey of the whole village, every member of which he knew personally as well as professionally, since he was the only physician available to any of them for any variety of medical care.

The alternative to a personal clinical contact by a trained psychiatrist with every member of the sample (of which Essen-Møller's is the only example), is a personal contact with every member of the population by some other person who conducts some sort of routine scrutiny. Nonpsychiatric interviewers have been used in a number of surveys to collect information about the sample population's health. They can ask if the respondent has had certain illnesses and record the answers. They can also ask whether other members of the household have had these illnesses or symptoms. This is the method used by the National Health Survey and was used in Hunterton County, New Jersey. Calibration studies have been done in both by more detailed examinations of random samples and there is currently considerable uneasiness about the validity and reliability of such data. However, validity and reliability of all

scientific data are relative characteristics and it is important to recognize that sometimes the criteria being used for calibrating such data have only more prestige at the moment and have not themselves been shown to have great validity or reliability.

The Midtown Study used a specially-created standard interview questionnaire administered by highly trained non-medical professionals. The questionnaire was structured and included questions regarding specific symptoms experienced and attitude questions believed to be of clinical significance. Interview data can be taken by themselves and analyzed. This is done by the National Health Survey. It was done by Gurin, Veroff and Feld in a nationwide survey (*AMERICANS VIEW THEIR MENTAL HEALTH*) and by several other studies.

Interview data can also be rated by clinicians. This is the method used in the Midtown Study. The data from these interviews were systematically reviewed by psychiatric clinicians who rated the respondents on the basis of these documents. In the Leighton Stirling County Study the interview data is supplemented by key informant data where available. In *A MENTAL HEALTH SURVEY OF OLDER PEOPLE* in Syracuse, New York, the interview data were less structured than in the Midtown and Stirling County data, and relied heavily on trained observations of interviewers: the interviewers answered a semi-structured questionnaire in contrast to the Midtown, Stirling and Americans View Their Mental Health surveys, where the respondent answered a structured questionnaire. In both situations there are two sets of data: the record of responses to the questionnaire and the ratings of clinically-trained raters who have studied the filled out questionnaire.

These two-stage methods involve problems of (1) interviewer variability, (2) rater variability and (3) rating validity. Interviewer variability can be estimated by two methods: first, a subsample can be repeatedly interviewed or, second, each interviewer can be assigned a random subsample of the whole population and the distribution of findings derived from different interviewers or groups of interviewers can be compared. The Midtown survey assigned interviewers in accordance with their presumed identification with and skill at achiev-

ing rapport with different classes of respondents (e.g. national or economic subsamples of the population) and thus sacrificed an opportunity to estimate interviewer variability by the second method. Nor was a subsample re-interviewed; but re-interviewing was planned and the report expresses hope that knowledge of this plan acted as a damper on interviewer bias. In the Syracuse survey of older people interviewer variability was encouraged and raters were expected to be unaffected by it. The effects were estimated by examining subsamples of the data, treating data from two classes of interviewers as separate sources of data.

Rater variability is dealt with in the Midtown report both by the social scientists who analyzed the data (Srole and Langner) and by the psychiatrists who developed the rating methods and did the rating. (Kirkpatrick and Michael). The variability is presented in terms of correlation coefficients and contingency probabilities for each rating.

From the contingency values in Table 1, it is clear that the psychiatrists who reported them were in close agreement in rating people well, totally incapacitated or severely impaired. But they were much less consistent in discriminating between the middle three categories and, I believe, that calculations based on these discriminations, judging from the limited data presented on their reliability, are not worthy of interpretation.

Table 1. Contingency values between raters: (Factor expressing the number of "times more often than would be predictable by pure chance" concordance on the given rating was achieved).

SEVERITY OF SYMPTOMS	DIFFICULTY IN FUNCTIONING	"CONTINGENCY VALUE"	FINAL CATEGORY	DISTRIBUTION (PER CENT)
0 None	None	4.3	Well	18.5
1 Mild	None	1.6	Mild Symptom Formation	36.3
2 Moderate	None	1.8	Moderate Symptom Formation	21.8
3 Moderate	Some	1.8	Marked Symptom Formation	13.2
4 Serious	Some	3.9	Severe Symptom Formation	7.5
5 Serious	Great	9.5	} Incapacitated	2.7
6 Serious	Incapacitated	45.0		