PART I

An Epidemiologic Assessment of Needs and Utilization of Services

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The needs assessment approach described in this article is part of a multistage model for comprehensive evaluation research in a community mental health center (CMHC). The model is based on a social systems orientation that assumes that broad social forces, community processes, and human interactions are primarily responsible for mental health and illness. There are five stages in the evaluation model:

1. Description, Conceptualization, and Definition

A center should first describe its facilities and activities, ascertain its catchment area's characteristics, outline the conceptual background for its programs, and define its objectives (based on the national CMHC goals and the center's specific or unique goals). An ecological analysis of the catchment area, using social indicators, will provide much of the information for a description of the catchment area, a rationale for the center's programs, and a definition of its specific goals.

2. Assessment of Need and Utilization of Services

This stage involves two epidemiologic procedures: field surveys with random or other samples of respondents in the community to determine need and utilization, and continued ecological analyses using social indicators—including indices of health, illness, and delivery of services. A small, homogeneous catchment area can assess needs and services by conducting field surveys with about 500 randomly selected respondents. A large catchment area, or one with a heterogeneous population, should survey about 1,000 respondents by random or stratified sampling and possibly oversample certain groups.

3. Comparative Studies

Comparing need with utilization of services, and relating need to the center's stated goals, can provide much of the basic evaluation. These findings should also be compared with the data from the ecologic analyses of the catchment area.

4. Outcome Appraisals

Analyses of the relative effectiveness of various therapeutic intervention programs enable the CMHC staff to continue or expand salutary efforts and to identify those that need modification. Outcome research should include systematic prospective studies, such as those using Goal Attainment Scaling (Kiresuk and Sherman, 1968) or the Denver Community Mental Health Outcome Questionnaire (Ciarlo, *et al.*, 1972).

5. Impact Studies

Epidemiologic studies, particularly follow-up surveys and continued social indicator analyses, can be used to assess the quality of life within the catchment area and, to a limited extent, gauge the CMHC's program effectiveness. These impact studies are more broadly based than the outcome appraisals, and involve larger groups and issues.

STAGE TWO EXAMPLE: ASSESSMENT OF NEEDS AND UTILIZATION OF SERVICES

During the last five years, we have engaged in an epidemiologic study of Alachua County, Florida, to evaluate its mental health needs, examine patterns of health care (both physical and mental), and refine assessment instruments that can be used by CMHCs for evaluation research (Schwab and Warheit, 1972). The 900-square-mile county has a population of 105,000, of whom 75,000 reside near or within the one centrally located city, Gainesville, which is experiencing dramatic growth. As the city limits have extended into the once predominantly rural regions of the county, the influx of educated, technologically oriented newcomers has changed the social hierarchy. In the last decade, desegregation and the emergence of black political power have also influenced the county's social structure. Some of the consequences of the social change are heightened residential mobility, generational differences, and changing values and norms.

The theoretical framework for our study is based on the concept of

marginality, developed by Park (1928) and elaborated by Stonequist (1937), and on the impact of accelerated social and cultural change on mental health and illness in individuals and communities. Our view of mental health and illness includes personal distress, behavioral disorders, and deviance, with their subjective, interpersonal, and societal ramifications. Accordingly, we have developed and are testing the construct, "social psychiatric impairment," which encompasses psycho-social distress along four dimensions: traditional definitions of psychopathology reported as the presence or absence of symptoms; levels of functioning at home, at work, and in the broader social arena; the quantity and quality of interpersonal relationships; and indices of aspiration and satisfaction (Schwab, *et al.*, 1970; Schwab, *et al.*, 1972; Schwab, *et al.*, 1973; Warheit, *et al.*, 1973).

We developed a 317-item interview schedule that yields comprehensive information about family and community life and health and illness. It was administered in 1970 by trained interviewers to a random sample of 1,645 respondents in their homes. The sample was representative of the county's population as compared with the 1970 Census.

RESULTS OF STUDY

Physical and Mental Health Care Needs

A typology of needers and utilizers was developed, based on respondents' self-ratings of physical and mental health and on reports of visits to various professional health care services. All respondents were asked to rate both their physical and mental health on a five-point scale: excellent, good, fair, poor, or bad. Probable physical health care needers were defined as those who gave "poor" or "bad" ratings; possible needers were defined as those who gave "fair" ratings. Mental health care needers were defined as those who gave "fair," "poor," or "bad" ratings. Nonneeders were those who rated their physical or mental health as good or excellent. Thus, "felt need," as expressed by ratings, was equated with health care need in this analysis. Utilizers were defined as those who made three or more professional care visits during the last year. Minimal utilizers were those who made one or two visits; nonutilizers were those who reported no visits. Telephone consultations were not included in the utilization count.

Of the 1,645 respondents, 4.1 percent were classified as probable needers of physical health care and 15.5 percent as possible needers—a total of 19.6 percent. A comparable percentage, 18.4 percent, was classified as probable needers of mental health care. Significantly more blacks than whites, more females than males, and more old than young respondents were needers of both physical and mental health care. We found an inverse relationship between socioeconomic status (SES) and need: more than one-third in the lowest SES group were physical and mental health care needers, in contrast to about one-tenth in the upper SES groups.

Physical and Mental Health Care Utilization

Of the 1,645 respondents, 84 percent were utilizers of physical health care services, but only 4.6 percent were utilizers of mental health care serv-

ices. Only slightly larger percentages of whites than blacks and females than males were utilizers of either physical or mental health care services. More of the youngest group, aged 16-29, utilized physical and mental health services than those in any other age group. More upper than lower SES respondents were utilizers of both physical and mental health care services.

Comparisons of Needers and Utilizers

To determine the percentages of needers who also were utilizers, we controlled for need and utilization by grouping respondents into needers-utilizers; nonneeders-utilizers; needers-nonutilizers; and nonneeders-nonutilizers. Most needers were utilizers of physical health care services. The excess of utilization over need was greater for whites than blacks, for the young than the old, and for the high than the low SES respondents; virtually no sex differences existed in the excess of utilization over need. Regardless of need, only very small percentages of any group were mental health service utilizers. Deficits between need and utilization were greatest for the blacks, the females, the older, and the poorer respondents. Figures 1 and 2 illustrate these physical and mental health need-utilization patterns according to age and SES.

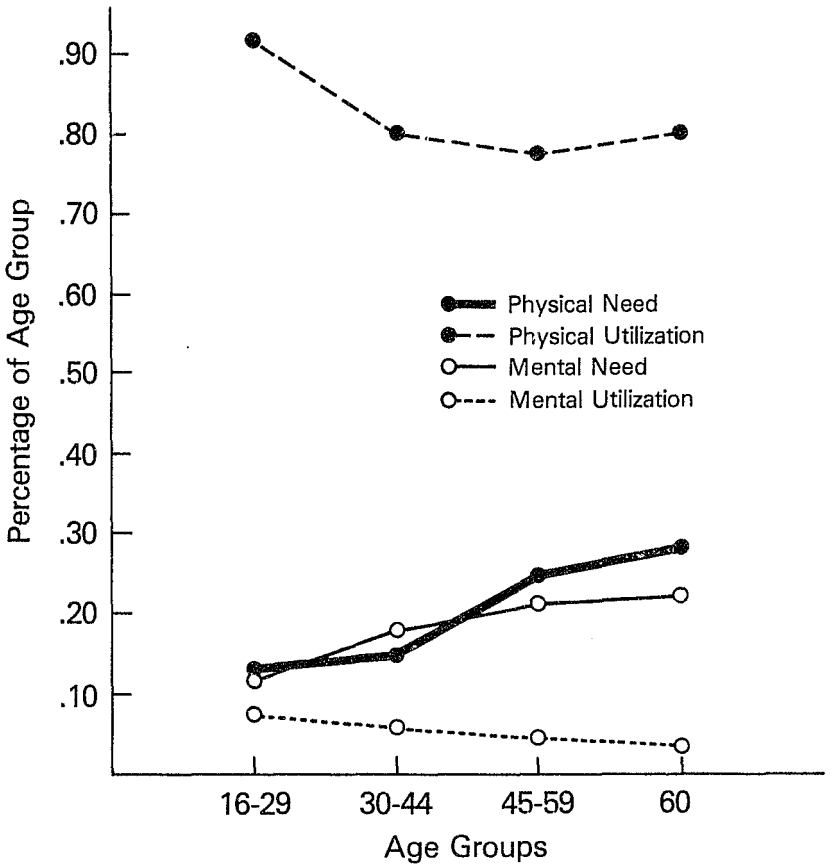
We also analyzed relationships between health ratings, *e.g.*, good or poor mental health, and utilization. Most respondents who rated their mental health as poor used only physical health care facilities. Also, an analysis of the respondents' reported satisfaction with the amount of health care received showed that the presence of *either poor physical or poor mental health was associated with increased dissatisfaction.*

Reliability and Validity

Reliability and validity checks were conducted by processing a random sample of 231 of our respondents at the Multiphasic Screening Center in Gainesville four to twelve months after they had been originally interviewed in their homes. There was almost total test-retest reliability for demographic data *(e.g.,* 96.3 percent agreement for marital status), and high reliability for surgical procedures and physical symptomatology *(e.g.,* 99.5 percent for thyroidectomies, and 96.4 percent for loss of appetite). However, there was less agreement for diffuse symptoms and effective states, such as nervousness (70.8 percent) and hopelessness (75 percent).

A comparison of self-report of selected conditions, such as glaucoma and heart disease, with the results of clinical laboratory tests showed generally higher percentages of abnormality in the laboratory findings than in the self-reports of the related conditions, but the discrepancies were in the 10 percent range or less. Although the testing for reliability and validity was somewhat indirect in that it evaluated specific items rather than the respondents' global health ratings, the data obtained by the field surveys appear to have an acceptable level of reliability and validity. We think that an individual's report of his physical and mental health can be used for an assessment of health needs.

FIGURE 1
Physical Health Care Need and Utilization Compared to Mental Health Care Need and Utilization by Ages

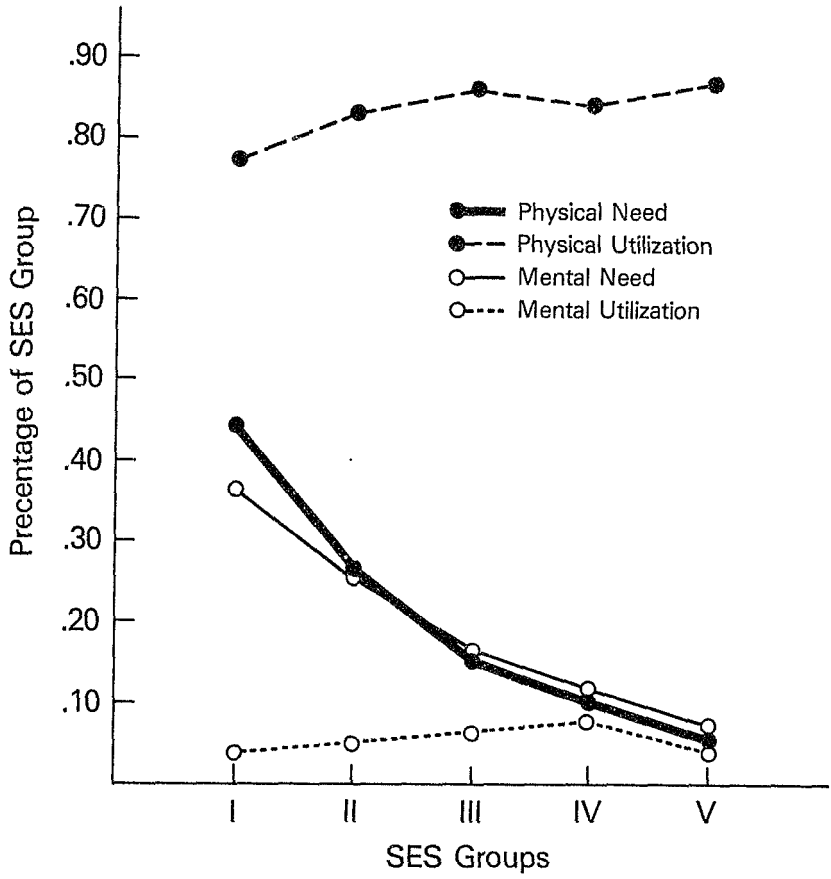


THE YIELD OF AN ASSESSMENT PROGRAM

The results illustrate some of the types of information a community mental health center can obtain by an assessment of need and utilization of services as part of its evaluation research program. For this purpose, epidemiologic methods are necessary because they are designed for studying patterns of illness and delivery of health services in groups within an ecological setting.

A field survey of the general population in a catchment area can identify specific high-risk groups, can differentiate between need and demand, and can delineate target groups and locales for mental health care priorities. For example, blacks and the elderly in our study were found to have the highest levels of mental health need and the lowest utilization of existing services.

FIGURE 2
Physical Health Care Need and Utilization Compared to Mental Health Care Need and Utilization by SES



With such data, a center can develop specific programs geared to meet the needs of blacks and the elderly, which might require the hiring of more black mental health workers, providing transportation or mobile units, and initiating measures to combat the loneliness and isolation of senior citizens. In contrast, the findings suggest that the young respondents, of whom a smaller percentage were health care needers, had greater access to the health delivery system. Thus, a center that allocates a disproportionate share of its resources to the highly visible, publicized problems of the young might be remiss in meeting the less apparent needs of the elderly, who all too often reside outside the spotlight of public concern. Also, our findings suggest that comprehensive programs might be more efficient than separate mental and physical

health care services, in view of the concurrence of mental and physical illness and the apparent overreliance on physicians for treatment of emotional distress. A comparison of needs and services, therefore, supplies a center with fundamental information for the second and third stages of our evaluation model and baseline data for the fourth and fifth stages.

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