Improving Mental Health Practices in Primary Care: Findings from Recent Research

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Synopsis ....

This paper reviews restraints on the provision of mental health services in primary health care under the broad categories of physician profile, patient behavior, the nature of psychiatric illness as presented in primary care, and service system characteristics.

An extensive research agenda is proposed toward improving mental health care in primary care settings. Research recommendations focus on the following types of issues: seeking a better understanding of the clinical decisionmaking process when confronted with psychological or emotional problems, designing more focused mental health training for primary care physicians and nurses, providing patient education to encourage communication of psychosocial problems to medical providers, clarifying the nature and course of psychiatric disorder in primary care, designing innovative clinical interventions applicable to primary care, and examining organizational models for better coordination of health and mental health services.

When a young mother complains to her family physician of a sore throat, fatigue, irritability, and insomnia, the practitioner has a choice to make: focus simply on the sore throat or consider, as a further possibility, serious depression. When a taxicab driver whose mother has just died comes in with a queasy stomach, the physician can simply try to alleviate the symptoms, or he can explore further to see if the physical complaint can be related to underlying psychosocial problems. For other patients with vague, multiple physical complaints, extensive diagnostic tests may allow the physician to rule out specific medical conditions, but will not help in assessing emotional problems or mental disorders. Even if features of a psychiatric disturbance have been recognized, the family physician may not have access to a mental health specialist for consultation or referral. This mixture of physical and mental problems makes the mental health role of primary care clinicians quite complex.

Background

Understanding and improving the mental health role of primary care clinicians has been a research interest in the United Kingdom, the United States, and the World Health Organization for nearly 20 years. Michael Shepherd and colleagues (*1*) led the way with research that combined an epidemiologic approach to a patient population with examination of clinical practices of diagnosis, management, and referral. Subsequent research demonstrated a serious gap between the high prevalence of mental disorders among primary care patients and the concomitant low recognition, diagnosis, treatment, or referral practices by primary care clinicians (*2,3*).

With a continued shortage of mental health professionals worldwide and with primary care assuming a potentially important mental health role, the next research step is to test ways of improving mental health practices in primary care settings. The complexity of this problem can be seen by considering its sources and the potential research approaches from four different perspectives: (*a*) physician profile: characteristics, knowledge, and behavior; (*b*) patient behavior; (*c*) the nature of the illness; and (*d*) service system characteristics.

Physician Profile

Possible constraints on a physician's mental health role have been identified. These include the

physician's interests and personality, knowledge and skills, and practice style. With regard to the first, Marks and colleagues (*4*) found a positive association between a conservative personality, low interest in psychiatric problems, and low recognition of mental disorder in patients. Personality is not a reasonable target for change, and recent evidence from a British survey of primary care physicians indicated that interest in providing mental health services has declined in the past decade (*5*). However, in the Marks study, recognition of mental disorder was positively associated with greater skill in clinical interviewing. Research in this area has shown some promise in a study Goldberg and colleagues conducted with family medicine residents at the University of South Carolina (*6*). As one example, this study offers some indication that a focus on physician knowledge and skills may be a more productive avenue for intervention than concentration on the physician's personality and interests.

Adequacy of mental health knowledge and skills has received considerable attention in the literature on training primary care physicians during their residency. A recent review of the American literature on mental health training for primary care physicians revealed a dramatic increase in efforts to teach interviewing skills and interventions in life crises, but failed to report any systematic approach to training in the diagnosis and treatment of mental disorders (*7*); another review paper has elucidated several mental health training models whose effectiveness can be evaluated (*8*).

One major strategy for improving practice through increased knowledge of patient problems has been to use self-report symptom questionnaires in routine clinical practice. The Johnstone and Goldberg experiment (*9*), which provided feedback to the primary care physician on the results of the General Health Questionnaire completed by randomly selected patients in the practice, was replicated in the United States. The replication in a large midwestern practice showed no experimental effect in terms of recognition or treatment by the physicians (*10*). More recently, in research supported by the National Institute of Mental Health at the Johns Hopkins University (*11*), data suggest that General Health Questionnaire feedback to primary care physicians may have slight impact on the physician's recognition of mental disorders among certain patient groups; the greatest effect is for patients 65 years of age and older, with a more moderate one for men, nonwhites, and persons with less than a high school education. Such results are encouraging, given that such patients are less likely to be identified in practice (*4*), but further analysis is needed to interpret the full meaning of these findings.

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The World Health Organization (WHO) Collaborative Study on Strategies for Extending Mental Health Care has also shown that use of screening questionnaires, in combination with limited training for targeted mental health conditions, resulted in increased mental health care by physicians and ancillary personnel in developing countries (*12,13*). Further, Linn and Yager (*14*) and Zung and colleagues (*15*) have shown that screening questionnaire feedback about a specific type of disorder, namely depression, increased clinicians' sensitivity to the disorder. In the Zung study, telling the physician that the patient was "clinically depressed" (based on screening results and a clinical interview) resulted in a diagnosis of depression in 68 percent of the identified group, but in only 15 percent of the control group; treated patients in the identified group also were much more likely to have improved at followup. Finally, several authors (*16,17*) have proposed the use of clinical protocols to improve physician knowledge and skills, but the gain in skills and knowledge has not been subjected to research evaluation. A lack of consensus among mental health professionals regarding the appropriate treatment for specific disorders may make this approach difficult to pursue.

A third aspect of physicians' behavior affecting their mental health role is practice style (such things as length of visit and tendency to order diagnostic tests and to refer to specialists). The practice of medicine is shaped initially by training and later by the demands of the practice situation. The amount of time spent with patients is particularly relevant to mental health care, since it influences the extent to which verbal exchanges allow the physician to assess patient distress, life situation, and functioning. In one comparison of four family physicians and ten

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internists seeing more than 1,400 patients, we found that internists were more likely than family practitioners to identify mental disorder because the internists' visits usually lasted longer than the practitioners'. First visits to family physicians tended to be consistently short; therefore, initial recognition rates were low but caught up with those of the internists over the course of multiple visits (*18*).

In addition to a general tendency for brief medical visits, which is not unique to patients with mental disorders, clinical practices relating specifically to mental disorders appear to differ from those for medical illness. The low rates of diagnosed mental disorder in visits to office-based physicians found in previous analyses prompted additional examination of the National Ambulatory Medical Care Survey (*19*). In searching for further signs of recognition of mental disorders, NIMH staff members examined data on reason for visit and provision of mental health treatment (psychotherapy or therapeutic listening and prescription of psychotropic drugs, excluding valium for muscle spasms). Altogether, 11.6 percent of visits could be seen as having a mental health component, in contrast to around 5 percent of visits in which a primary or secondary diagnosis was made. This much higher rate of recognition is accounted for largely by mental health treatment (psychotropic drugs specifically) in visits when a mental disorder diagnosis was not made. In medical illnesses, this practice of undocumented reasons for treatment is not consistent with prescribing drugs like penicillin, digoxin, and cimetidine.

Psychiatrists, by contrast, invariably diagnose mental disorder and do not prescribe drugs without such a diagnosis. In addition, referral of patients to mental health professionals was previously avoided due to concern about negative consequences to patients. Although patients seem to be more receptive to referral than in the past, referral patterns vary widely for general medical physicians (*20*). One implication from this finding is that research must take into account such differences in the practice of primary care medicine as well as differences in attitudes toward mental health specialists.

Patient Behavior

A second factor influencing a clinician's mental health role in primary care relates to the behavior of patients. Although the clinical literature indicates that patients with mental health problems may have somatic rather than psychological complaints, there has been little research evidence to this effect.

In the Epidemiologic Catchment Area studies in the United States, NIMH staff have had an opportunity to examine respondent-reported behavior concerning medical contacts. Among people in one of the areas studied (Johns Hopkins' heavily black urban population) with a diagnosed mental disorder and having visits to a general medical physician during the preceding 6 months, only 26 percent told their physician that they had a mental health problem. Whether such limited communication is related to lack of patient awareness about their mental condition, fear of labeling, or limited mental health expectations of primary care physicians is unknown. Although a causal link cannot be inferred, a clear association between telling a physician about mental health concerns and seeing a mental health specialist was observed.

It is impressive that among persons who reported mental health concerns to a nonpsychiatric physician, 25 percent saw a mental health specialist during the same 6-month period, while among the 75 percent who did not relate mental health concerns to a primary care physician, less than 4 percent received any specialist mental health care. Thus, when mental health concerns were communicated to a general medical physician, a person was many times more likely also to receive mental health treatment. These data have not been controlled for severity of diagnosis.

Nevertheless, research on patient education, focused on helping patients communicate their concerns more explicitly to medical providers, such as that being conducted by Roter (*21*) at the Johns Hopkins University, may be relevant. Also, information about specific mental disorders might be provided directly to patients in primary care settings to encourage further communication. Such a need was manifested in a survey of health maintenance organization patients where, among a wide range of health education topics, anxiety-stress and depression received the greatest interest (*22*).

The Nature of Psychiatric Illness

Another issue which has been reported to stand in the way of adequate attention to mental health problems by primary care providers is related to the conceptualization and classification of mental disorder in primary care (19). The traditional International Classification of Diseases (Section V) disorders are often neither comprehensible to primary care clinicians nor applicable to patients with a somatic component to their mental illness.

The definition of a psychiatric case in general practice has been aptly reviewed by Goldberg (23) who identified three patient groups: (*a*) those with major psychiatric illness for whom physical treatments are valuable, (*b*) psychological distress syndromes that are likely to remit without intervention, and (*c*) psychological distress syndromes which require intervention. The problem with this classification, acknowledged by the author, is that the research to differentiate between patients in groups b and c has not been done. There are some indications that psychological symptoms remit without treatment for significant groups of patients, but that symptoms persist when associated with certain diagnoses. Among prepaid group practice enrollees with depressive symptoms on the Center for Epidemiological Studies-Depression Scale (CES-D), symptoms remitted for half of the patients and persisted for the other half after 1 year (24). Barrett and Hurst (25) addressed the same question with volunteer subjects who had specific psychiatric disorders (as defined by Research Diagnostic Criteria) and were not in treatment. They found a differential effect of disorder on spontaneous symptom reduction; for major depressive disorder, panic and combined panic-phobia disorders, symptom reduction was less likely to occur over the course of 1 month than for other less serious types of disorders.

Steps toward identifying those problems, syndromes, or disorders that are responsive to treatment in primary care may involve further study of traditionally defined disorders. Of equal importance may be epidemiologic and clinical research in primary care on relationships between somatic and psychological symptoms for the purpose of identifying previously unclassified syndromes or disorders. Research by Eastwood and Trevelyan (26) and more recently by Hankin and Shapiro (27) and Kessler and co-workers (28) has demonstrated strong associations between the co-occurrence of medical and psychiatric conditions in addition to an extensive psychosomatic literature which examines such relationships. Toward this end, the World Health Organization, in conjunction with the National Institute of Mental Health and the Rockefeller Foundation, have proposed a triaxial classification for primary health care to record problems on physical, psychological, and social axes (29). Use of this system will ultimately permit analysis of interaction among problems on all three axes, and in the future it should be possible to study combinations of presenting problems and psychiatric disorders to predict treatment outcome, as has been done in one study with psychiatric patients (30).

Service System Characteristics

Finally, organizational factors influence the mental health role of primary care clinicians. The separate organizations for health and mental health services have created physical and psychological barriers that limit accessibility and result in low referral rates even when mental health specialist resources are available locally (31). This fragmented approach makes it very difficult for health and mental health clinicians to coordinate care.

In contrast, when health and mental health services are brought together through integrated attachment schemes or linkage models (32–36,12,37), two kinds of findings have been observed. Primary care practitioners are more likely to identify mental disorder in their patients and to use mental health specialists for consultation and referral. In addition to the issue of organization of health and mental health services within specific primary care practice settings, the particular organizational and resource characteristics of mental health services within geographic areas influence how primary care clinicians interface with the mental health system. The Epidemiologic Catchment Area studies will permit examination of organizational and resource issues in relation to population use of the general medical and specialist mental health services (38).

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Experimentation on the best way to reimburse primary care practitioners for mental health services has not been aggressive. The complaint from fee-for-service providers is that payment based on "procedures" discourages physicians from spending the necessary time for psychosocial evaluation and treatment. One notable exception has occurred in the Canadian health insurance system, which reimburses physicians for providing psychotherapy at a competitive rate. Following the introduction of such reimbursement, a dramatic rise in the amount of psychotherapy provided by general practitioners was observed (*39*).

The extent and nature of political and social mandates to provide mental health services in primary care represent another systems issue. Such mandates often may be inferred from reimbursement policies. Nevertheless, when health services are provided by the government, or by health maintenance organizations, and a specific fee for a service is not a consideration, special policies or incentives may still be needed to encourage the provision of mental health services. In fact, in many developing countries, general medical clinicians often constitute the sole resource for psychiatric disorders. Despite a mental health service mandate, other pressures, such as size of patient population and extent of life-threatening illness, minimize time for treatment of mental illness. Toward this end, the World Health Organization is engaged in consultation to countries to set priorities for mental health care within general medical services and to assess the impact of such policies (*40*).

Recommendations for Future Research

There are multiple issues within each of the four factors just discussed in addition to the effects of interaction among them. A major dilemma in thinking about how to improve mental health care has been to identify where the greatest impact might be. For example, would training clinicians, educating patients, improving the classification of mental disorders, or ensuring adequate reimbursement for psychotherapeutic services in primary care offer the most critical place to start? Fortunately, there is sufficient interest in the problem that some work is underway in all areas. Since future directions will be dependent on governmental and investigator interests, we have attempted to delineate a broad array of research efforts which build on prior work.

Research focused on the behavior of health providers represents the most extensive agenda. At the most basic level, descriptive studies are needed to understand the clinical process that primary care practitioners pursue when confronted with psychological or emotional problems in their patients. The following questions need attention:

- What kinds of clinical practices facilitate recognition of psychosocial problems in patients?
- What patient cues alert the physician to psychological issues?
- What level of symptomatology moves a physician toward some form of psychiatric treatment?
- How can the physician-patient relationship be used for psychotherapeutic purposes?
- What factors prompt primary care clinicians to seek consultation or to refer patients to mental health specialists?
- What strategies can be designed to help mental health professionals relate more effectively to primary care clinicians?

The rich literature on clinical decisionmaking offers some clues to research directions to address these questions (*41*).

Research on training represents another high priority, assuming that it is possible to design training programs that are oriented to the diagnosis and treatment of specific disorders and are placed in the context of patient history, functioning, coping ability, social supports, and physical health. The use of continuing education to alter mental health practices would benefit from well-designed evaluations.

Following further validation of screening tools and development of additional research measures (for example, measures of functioning), it should be possible to design outcome studies to assess the specific primary care interventions for frequently occurring disorders like anxiety and depression. This will require testing clinical protocols. High-risk populations such as the elderly—whose emotional problems and mental disorders most often are neither recognized nor treated (*42*)—may be a sensible starting place. Such studies need to determine what types of intervention are feasible, appropriate, and effective within primary health care. In this vein, the value of computerized tools to assist in screening and diagnosis would benefit from further evaluation (*43*).

The second factor, patient behavior, gets little attention, perhaps appropriately so. Educating patients to request help for problems that health professionals are not prepared to manage only creates frustration for both groups. Nevertheless, as mental health skills improve, clear patient-physician communication is essential for detecting emotional

problems. It is not too early to consider and assess approaches to patient education which may encourage patients to relate appropriate psychosocial issues to medical providers.

Research to clarify the nature of psychiatric illness in primary care may need to be symptom-oriented and derived from two perspectives: (*a*) an epidemiologic approach to identify previously unclassified syndromes that combines somatic and psychological features (a proposal for such research can be found in a recent World Health Organization report (*44*)) and (*b*) examination of clinical practices relevant to such syndromes, possibly making use of the triaxial classification being field-tested by WHO (*29*). Epidemiologic research on the course of disorders, combined with research on clinical practice, will contribute to a determination of conditions for which intervention is appropriate. Recent improvements in the psychiatric nomenclature (*45*) which has made operational the criteria for diagnosis of the major disorders is potentially an aid to primary care practice, and the usefulness of it could be studied.

Examination of the relationships between the structure and organization of health care systems and mental health practices is very much needed. Country and cross-country comparisons of different models for organizing health and mental health services could potentially address issues such as the impact on patient outcome of separately organized versus integrated or linked health and mental health services: What kind of service organizations promote comprehensive care and facilitate referrals to mental health specialists? Such comparisons also need to examine the effect of different legislative and fiscal policies on the level and quality of mental health services in health care settings. In this vein, the feasibility of reimbursing primary care clinicians for mental health services and mental health specialists for consultation needs further investigation. Within the health care system, the mental health role of nonpsychiatric clinicians needs to be differentiated from that of mental health specialists (*46*).

The recommendations for research on mental disorder in primary health care constitute a long-term agenda. The foremost aim is to improve the quality of mental health services in the primary health care sector, while taking into consideration the full range of issues which impact on the provision of care. Careful thought and support will need to come from many countries, research organizations, and from the World Health Organization. Varying perspectives from different types of health care systems and types of health and mental health clinicians will be needed to cross-fertilize and enrich the thinking and research which needs to be done.

References

1. Shepherd, M., Cooper, B., Brown, A. C., and Kalton, G.: Psychiatric illness in general practice. Oxford University Press, London, 1966.
2. Regier, D. A., Goldberg, I. D., and Taube, C. A.: The de facto U.S. mental health services system. Arch Gen Psychiatry 35: 685–693 (1978).
3. Hoeper, E. W., et al.: Estimated prevalence of RDC mental disorder in primary medical care. Int J Ment Health 8: 6–15 (1979).
4. Marks, J. N., Goldberg, D. P., and Hillier, V. F.: Determinants of the ability of general practitioners to detect psychiatric illness. Psychol Med 9: 337–353 (1979).
5. Cartwright, A., and Anderson, R.: General practice revisited. Tavistock Publications, London, 1981.
6. Goldberg, D. P., Steele J. J., and Smith, C.: Teaching psychiatric interview techniques to family doctors. Acta Psychiat Scand 62 (supp. 285): 41–47 (1980).
7. Burns, B. J., Scott, J. E., Burke, J. D., and Kessler, L. G.: Mental health training of primary care residents: a review of recent literature (1974–1981). Gen Hosp Psychiatry 5: 157–169 (1983).
8. Pincus, H. A., Strain, J. J., Houpt, J. L., and Gise, L. H.: Models of mental health training in primary care. JAMA 249: 3065–3068, June 10, 1983.
9. Johnstone, A., and Goldberg, D. P.: Psychiatric screening in general practice. Lancet No. 7960: 605–608, Mar. 20, 1976.
10. Hoeper, E. W., et al.: The usefulness of screening for mental illness. Lancet No. 8367: 33–35, Jan. 7, 1984.
11. Shapiro, S.: Secondary prevention with adult patients in primary care settings. Final report. National Institute of Mental Health contract No. 278-81-0025(DB), 1983.
12. Harding, T. W., et al.: Mental disorders in primary health care: a study of their frequency and diagnosis in four developing countries. Psychol Med 10: 231–241 (1980).
13. Climent, C. E., et al.: Mental health in primary health care. WHO Chron 34: 231–236 (1980).
14. Linn, L. S., and Yager, J.: The effect of screening, sensitization, and feedback on notation of depression. J Med Educ 55: 942–949 (1980).
15. Zung, W. W., Magill, M., Moore, J. T., and George, D. T.: Recognition and treatment of depression in a family medicine practice. J Clin Psychiatry 44: 1 (1983).
16. Essex B.: A problem-oriented approach to management of mental illness in developing countries. J R Coll Gen Pract 30: 648–655 (1980).
17. Climent, C. E., and Burns, B. J.: Practical psychiatry for the health professional. Spectrum Publications, New York, 1984.
18. Kessler, L., Hoeper, E. W., and Burns, B. J.: Management of emotional problems by internists and family practitioners. Paper presented at the annual meeting of the American Public Health Association, Nov. 15, 1982, Montreal, Canada.
19. Regier, D. A., Kessler, L. G., Burns, B. J., and Goldberg, I. D.: The need for a psychosocial classification system in primary care settings. Int J Ment Health 8: 16–29 (1979).

20. Hull, J.: Psychiatric referrals in general practice. Arch Gen Psychiatry 36: 406–408 (1979).
21. Roter, D. L.: Altering patient behavior in interaction with providers. *In* Research in psychology and medicine, edited by D. J. Oborne, M. M. Gruneberg, and J. R. Eiser. Academic Press, London, 1980, pp. 230–237.
22. Nicklason, J. H., Donaldson, M. S., and Ott, J. E.: HMO members and clinicians rank health education needs. Public Health Rep 98: 222–226 (1983).
23. Goldberg, D.: The concept of a psychiatric "case" in general practice. Soc Psychiatry 17: 61–65 (1982).
24. Hankin, J. R., and Locke, B. Z.: The persistence of depressive symptomatology among prepaid group practice enrollees: an exploratory study. Am J Public Health 72: 1000–1007 (1982).
25. Barrett, J. E., and Hurst, M. W.: Short-term symptom change in outpatient psychiatric disorders. Arch Gen Psychiatry 39: 849–854 (1982).
26. Eastwood, M. R., and Trevelyan, M. H.: Relationship between physical and psychiatric disorder. Psychol Med 2: 363–372 (1972).
27. Hankin, J. R., and Shapiro, S.: The demand for medical service by persons under psychiatric care. *In* Social consequences of psychiatric illness, edited by L. Robins, P. Clayton, and J. Wing. Brunner/Mazel, New York, 1980, pp. 17–32.
28. Kessler, L. G., Tessler, R. C., and Nycz, G. R.: Co-occurrence of psychiatric and medical morbidity in primary care. J Fam Practice 16: 319–324 (1983).
29. Lipkin, M., and Kupka, K., editors: Psychosocial factors affecting health. Praeger Publishers, New York, 1982.
30. Longabaugh, R., Fowler, D. R., Stout, R., and Kriebel, G. J.: Validation of a problem-focused nomenclature. Arch Gen Psychiatry 40: 453–461 (1983).
31. Goldman, H. H., Burns, B. J., and Burke, J. D.: Integrating primary health care and mental health services: a preliminary report. Public Health Rep 95: 535–539 (1980).
32. Borus, J. F., et al.: Coordinated mental health care in neighborhood health centers. Series DN, No. 3, DHHS Publication No. (ADM) 80-996, U.S. Government Printing Office, Washington, DC, 1980.
33. Burns, B. J., and Regier, D. A.: A neighborhood health center model of integrated and linked health and mental health services. *In* Mental health services in primary care settings: report of a conference, edited by D. L. Parron and F. Solomon. Series DN, No. 2, DHHS Publication No. (ADM) 80–995, U.S. Government Printing Office, Washington, DC, 1980, pp. 49–56.
34. Coleman, J. V., and Patrick, D. L.: Integrating mental health services into primary medical care. Med Care 14: 654–661 (1976).
35. Cooper, B., Depla, C., Harwin, B. G., and Shepherd, M.: An experiment in community mental health care. Lancet No. 7893: 1356–1358, Dec. 7, 1974.
36. Corney R. H.: Factors affecting the operation and success of social work attachment schemes to general practice. J R Coll Gen Pract 30: 149–158 (1980).
37. Regier, D. A., et al.: Specialist/generalist division of responsibility for patients with mental disorders. Arch Gen Psychiatry 39: 219–224 (1982).
38. Eaton, W. W., Regier, D. A., Locke, B. Z., and Taube, C. A.: The Epidemiologic Catchment Area Program of the National Institute of Mental Health. Public Health Rep 96: 319–325 (1981).
39. Richman, A., Brown, M. G., and Hicks, V.: Reimbursement by Medicare for mental health services by general practitioners—clinical, epidemiological and cost containment implications of the Canadian experience. *In* Mental health services in primary care settings: report of a conference, edited by D. L. Parron and F. Solomon. Series DN, No. 2. DHHS Publication No. (ADM) 80–995, U.S. Government Printing Office, Washington, DC 1980, pp. 122–150.
40. Sartorius, N.: The research component of the WHO mental health programme. Psychol Med 10: 175–185 (1980).
41. Eisenberg, J. M.: Sociologic influences on decision–making by clinicians. Ann Intern Med 90: 957–964 (1979).
42. Butler, R. N., and Lewis, M. I.: Aging and mental health. C. V. Mosby Co., St. Louis, MO, 1982.
43. Greist, J. H., Klein, M. H., and Erdman, H. P.: Routine on–line psychiatric diagnosis by computer. Am J Psychiatry 133: 1405–1408 (1976).
44. World Health Organization: Current state of diagnosis and classification in the mental health field. Report from the WHO/ADAMHA Joint Project on Diagnosis and Classification of Mental Disorders and Alcohol- and Drug-Related Problems. WHO/MNH/81. World Health Organization, Geneva, 1981, pp. 83–92.
45. American Psychiatric Association: Diagnostic and statistical manual of mental disorders. Ed. 3, Washington, DC, 1980.
46. Burns, B. J., Regier, D. A., Goldberg, I. D., and Kessler, L. G.: Future directions in primary care/mental health research. Int J Ment Health 8: 130–140 (1979).